As filed with the Securities and Exchange Commission on January 15, 2021.

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

SENSEI BIOTHERAPEUTICS, INC.
(Exact name of Registrant as specified in its charter)

Delaware	2834	83-1863385
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

1405 Research Blvd, Suite 125
Rockville, MD 20850
(240) 243-8000
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

John Celebi
President and Chief Executive Officer
Sensei Biotherapeutics, Inc.
1405 Research Blvd, Suite 125
Rockville, MD 20850
(240) 243-8000
(Name, address, including zip code, and telephone number, including area code, of agent for service)

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Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement is declared effective.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☐

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒ (Do not check if a smaller reporting company)	Smaller reporting company	☒
		Emerging growth company	☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☐

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities To Be Registered	Proposed Maximum Aggregate Offering Price(1)(2)	Amount of Registration Fee(3)
Common Stock, $0.0001 par value per share	$100,000,000	$10,910.00

(1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended, or the Securities Act.
(2) Includes the aggregate offering price of additional shares that the underwriters have the option to purchase, if any.
(3) Registration fee will be paid when registration statement is first publicly filed under the Securities Act.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS (SUBJECT TO COMPLETION)
Issued , 2021

SHARES

COMMON STOCK

This is an initial public offering of shares of common stock of Sensei Biotherapeutics, Inc. We are selling shares of our common stock. We currently expect that the initial public offering price will be between $ and $ per share of common stock.

We have granted the underwriters an option for a period of 30 days to purchase up to an additional shares of common stock to cover over-allotments, if any.

We have applied to list our common stock on the Nasdaq Global Market under the symbol "SNSE."

Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page 12.

We are an "emerging growth company" as defined under the federal securities laws and, as such, we have elected to comply with certain reduced reporting requirements for this prospectus and may elect to do so in future filings.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

	Per Share	Total
Initial public offering price	$	$
Underwriting discounts and commissions(1)	$	$
Proceeds, before expenses, to Sensei Biotherapeutics, Inc.	$	$

(1) See the section titled "Underwriting" for additional information regarding compensation payable to the underwriters.

The underwriters expect to deliver the shares against payment on or about , 2021 through the book-entry facilities of The Depository Trust Company.

Citigroup **Piper Sandler** **Berenberg**

Oppenheimer & Co.

Prospectus dated , 2021.

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Prospectus

Through and including , 2021 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

We have not authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses we have prepared. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of shares of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

For investors outside the United States: Neither we nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside of the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of our common stock and the distribution of this prospectus outside of the United States.

Sensei Biotherapeutics, Inc. and our logo are our trademarks and are used in this prospectus. This prospectus also includes trademarks, tradenames and service marks that are the property of other organizations. Solely for convenience, our trademarks and tradenames referred to in this prospectus appear without the ™ symbol, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights, or the right of the applicable licensor to these trademarks and tradenames.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. You should read this entire prospectus carefully, especially the risks of investing in our common stock discussed under the heading "Risk Factors," and including the sections titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes included elsewhere in this prospectus, before making an investment decision. Our fiscal year ends on December 31. Unless the context otherwise requires, all references in this prospectus to "we," "us," "our," "the company" and "Sensei" refer to Sensei Biotherapeutics, Inc. and our subsidiaries.

Company Overview

We are a clinical-stage immunotherapy company engaged in the discovery and development of next-generation therapies with an initial focus on treatments for cancer. Our proprietary ImmunoPhage platform is a powerful, self-adjuvanted and highly differentiated immunotherapy approach that is designed to utilize bacteriophage to induce a robust, focused and coordinated innate and adaptive immune response. We are engineering our ImmunoPhage product candidates to directly target antigen presenting cells, or APCs, and modulate the tumor microenvironment, or TME, through the targeted use of nanobodies which further enhances therapeutic activity. We believe our ImmunoPhage platform has the potential to deliver personalized, off-the-shelf product candidates tailored to a patient's specific tumor. The versatility of our ImmunoPhage platform allows us to design product candidates in a modular fashion, based on a cocktail of common and patient-specific antigens built from our proprietary library of ImmunoPhages, which we refer to as Phortress. We are currently conducting an ongoing 30-patient Phase 1/2 clinical trial of our lead product candidate, SNS-301, in combination with the PD-1 inhibitor pembrolizumab, as a potential treatment for squamous cell carcinoma of the head and neck, or SCCHN. As of December 10, 2020, we have enrolled 11 patients in the trial, of which ten patients were evaluable for efficacy. We have observed disease control in seven of the patients evaluable for efficacy, including one patient with a partial response, or PR, and two patients who have achieved longstanding stable disease, or SD, for greater than 36 weeks following treatment. Treatment with SNS-301 has generally been well tolerated. We anticipate reporting topline data from this trial by the end of 2021. If the results of this trial are positive, subject to feedback from the U.S. Food and Drug Administration, or FDA, we intend to initiate a randomized, registration-enabling trial for SNS-301. We are leveraging the insights from our experience with SNS-301 to expand our development pipeline to include SNS-401 for the treatment of Merkel cell carcinoma, or MCC, as well as a human monoclonal antibody, or mAb, program targeting the novel immune checkpoint VISTA, or V-set immunoglobulin domain suppressor of T cell activation.

Monoclonal antibodies targeting the programmed cell death protein 1, or PD-1, and its related ligand, or PD-L1, have emerged as one of the most promising classes of therapeutics for the treatment of cancer. However, in a majority of patients they generally fail to produce meaningful results. Drugs utilizing PD-1 blockade have been approved by the FDA to treat at least 20 different types of cancer and, in 2019, generated sales of approximately $19.4 billion worldwide. By 2024, the total global market for drugs utilizing PD-1 blockade is estimated to exceed $36 billion. Two of the most common reasons for non-response to PD-1 blockade treatment include a lack of tumor infiltrating lymphocytes, or TILs, or the presence of alternate immunosuppressive mechanisms such as VISTA. To address these mechanisms of non-response to PD-1 blockade, there has been considerable focus on the development of therapies that induce the body's immune system to mount a response towards tumor antigen targets. Our ImmunoPhage platform is designed to address the challenges of converting PD-1 blockade non-responsive tumors into responsive ones by triggering the generation of tumor antigen-specific T cells and circumventing immunosuppressive pathways.

Pioneering work with bacteriophage led to our discovery of their utility as a powerful, self-adjuvanted immunotherapy platform. The foundation of ImmunoPhage is the bacteriophage lambda, or lambda phage, which

we selected for its native immunostimulatory capabilities, large and tractable genome, and tolerability profile. The highly immunogenic nature of bacteriophage promotes a balanced, coordinated and robust response by both the innate and the cellular and humoral components of the adaptive immune system. We believe that the unique features of bacteriophage, including the ability to generate both T cell responses and B cell mediated antibody responses, give it the potential to be used in the development of differentiated treatments for cancer. The modularity of the ImmunoPhage platform allows for personalized, dynamic substitution of particular phage components to optimize patient therapy. Our creation of a phage cocktail expressing multivalent antigens along with the integration of nanobody technology is designed to enhance the utility, precision and therapeutic activity of our product candidates. This allows for an adaptive clinical trial design, which we have discussed with the FDA. To date, we have constructed over 25 unique ImmunoPhage configurations in-house in accordance with current good manufacturing practices, or cGMP, and we are continuing to expand our Phortress library of ImmunoPhages.

SNS-301 is an ImmunoPhage product candidate that we are developing as a treatment for locally advanced unresectable or metastatic SCCHN. Head and neck cancer is the sixth most common malignancy worldwide, accounting for approximately 6% of all cancer cases, and is responsible for an estimated 1% to 2% of all cancer deaths. An estimated 650,000 cases of head and neck cancer are diagnosed annually worldwide, including approximately 50,000 cases in the United States. Human papilloma virus, or HPV, infection accounts for an estimated 70% of SCCHN cases in the United States. The current standard of care in our target patient population is PD-1 inhibition as a single agent or in combination with chemotherapy. Despite improvements in diagnoses and disease management, long-term survival rates for patients with SCCHN have not increased significantly over the past 30 years and are among the lowest for major cancers.

We selected SCCHN as our first indication based on a high unmet patient need, robust scientific rationale, a clearly defined regulatory path and accessibility of these tumors for biopsy. SNS-301 has been engineered to produce a targeted immune response against the tumor associated antigen, or TAA, aspartate b-hydroxylase, or ASPH. ASPH is found to be overexpressed in 70% to 90% of human malignancies, including SCCHN. Expression of ASPH is related to cancer cell growth, invasiveness, and disease progression through the Notch signaling pathway. As SCCHN tumors are often lacking intratumoral CD8 T cells, we believe that the addition of SNS-301 has the potential to generate and expand ASPH specific anti-tumor T cells and thereby enhance PD-1 blockade activity.

We are currently evaluating SNS-301 in combination with the PD-1 inhibitor pembrolizumab in a 30-patient Phase 1/2 clinical trial. As of December 10, 2020, we have enrolled 11 patients in the trial, of which ten patients were evaluable for efficacy. The trial includes patients with locally advanced unresectable or metastatic SCCHN who have been treated with PD-1 blockade for at least 12 weeks with the best overall response being SD or unconfirmed progressive disease, or PD. Patients who achieved a PR, complete response, or CR, or confirmed progression on PD-1 blockade, are not eligible. Based on an initial assessment of the ten evaluable patients, SNS-301 in combination with pembrolizumab has been well tolerated and has shown promising anti-tumor activity, including a PR in one patient with a PD-L1 negative tumor who achieved SD as best overall response on PD-1 inhibition alone as well as SD in six patients. Of the six SD patients, one patient previously had PD on PD-L1 inhibition and two patients have achieved longstanding SD for greater than 36 weeks following treatment. We anticipate reporting topline data from this trial by the end of 2021. If the results of this trial are positive, subject to feedback from the FDA, we intend to initiate a randomized, registration-enabling trial for SNS-301.

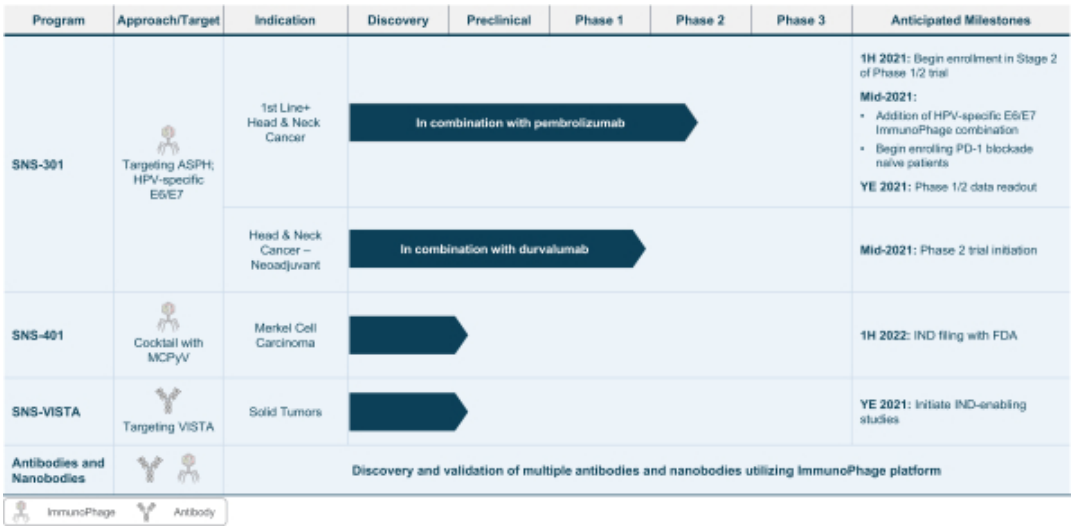
Based on the results we have observed to date, we also intend to evaluate the addition of SNS-301 to pembrolizumab in PD-1 blockade naïve SCCHN patients as part of our ongoing Phase 1/2 trial, with enrollment in this additional treatment arm expected to begin in mid-2021. We intend to use an ImmunoPhage cocktail targeting the E6/E7 antigens of HPV, in combination with SNS-301, in HPV positive patients in our ongoing trial of SNS-301, which we expect to incorporate in mid-2021. In addition, we are currently planning two Phase 2 trials to evaluate the safety and efficacy of SNS-301 in combination with durvalumab for patients with locally

advanced resectable SCCHN in the neoadjuvant setting and ASPH positive patients with locally advanced unresectable or metastatic solid tumors. We intend to initiate the first trial in patients with locally advanced resectable SCCHN in the neoadjuvant setting in mid-2021.

In addition to SNS-301, we are currently developing our next ImmunoPhage candidate, SNS-401, for the treatment of MCC. SNS-401 is in preclinical studies and we plan on submitting an investigational new drug application, or IND, for SNS-401 in the first half of 2022. We are also developing a mAb therapy targeting VISTA. Through the use of proprietary functional and in vivo assays, we intend to select a product candidate and initiate IND-enabling studies for our lead mAb by the end of 2021.

Our Pipeline

We are utilizing our pioneering ImmunoPhage platform, which harnesses the intrinsic immunostimulatory characteristics and capabilities of bacteriophage, to develop a pipeline of product candidates with an initial focus on treatments for cancer. We have worldwide commercial rights for each of our product candidates. Our current portfolio of therapeutic initiatives is presented in the diagram below:



Our Strategy

Our goal is to transform the treatment of cancer and other diseases by leveraging our ImmunoPhage platform to discover, develop and commercialize transformative immunotherapies capable of eliciting a robust, focused and coordinated innate and adaptive immune response. Key components of our strategy include the following:

- Rapidly advance our lead ImmunoPhage product candidate, SNS-301, through clinical development in patients with SCCHN and other solid tumors.
- Leverage our proprietary ImmunoPhage platform and Phortress library to design differentiated product candidates with enhanced activity through a cocktail therapy approach.
- Strengthen our position in the immunotherapy field through the continuous innovation and expansion of our ImmunoPhage platform.

- Expansion of our ImmunoPhage manufacturing capabilities.
- Seek strategic partnerships for selected product candidates.

Our Team

We are led by an experienced team with deep experience in immuno-oncology, biologics, drug discovery platform technologies, clinical development, general management and business development. Collectively, our management team has a track record of managing product development programs that have received regulatory approval and been successfully commercialized, including Keytruda and Kisqali, as well as building companies that have initiated innovative investigational new drug programs.

Summary of Risks Associated with our Business

An investment in our common stock involves numerous risks described in "Risk Factors" and elsewhere in this prospectus. You should carefully consider these risks before making a decision to invest in our securities. Key risks include the following:

- ***Risks Related to our Financial Position***
  - We have incurred significant losses in every year since our inception. We expect to continue to incur losses over the next several years and may never achieve or maintain profitability.
  - Our independent registered public accounting firm has included an explanatory paragraph relating to our ability to continue as a going concern in its audit report included in this prospectus. Even if we consummate this offering, we will need additional funding to complete the development of our product candidates. A failure to obtain this necessary capital when needed could force us to delay, limit, reduce or terminate our product development or commercialization efforts.
  - Our business, operations and clinical development plans and timelines could be adversely affected by the effects of health epidemics, including the recent COVID-19 pandemic, on the manufacturing, clinical trial and other business activities performed by us or by third parties with whom we conduct business.
- ***Risks Related to the Development of our Product Candidates***
  - Our development efforts are in the early stages. All of our product candidates are in clinical development or in preclinical development. If we are unable to advance our product candidates through clinical development, obtain regulatory approval and ultimately commercialize our product candidates, or experience significant delays in doing so, our business will be materially harmed.
  - The development of product candidates with our ImmunoPhage platform represents an emerging approach to the treatment of cancer and infectious diseases and faces significant challenges and hurdles. We may not be successful in applying our ImmunoPhage platform to the discovery and development of commercially viable products.
  - Our business is highly dependent on the success of our lead product candidate, SNS-301 and any other product candidates that we advance into the clinic. All of our product candidates may require significant additional preclinical and clinical development before we may be able to seek regulatory approval for and launch a product commercially. If the clinical trials of any of our product candidates fail to demonstrate safety and efficacy to the satisfaction of the FDA or other comparable regulatory authorities, or do not otherwise produce favorable results, we may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.

- Interim data from our clinical trials that we announce or publish from time to time, such as the data from our Phase 1/2 clinical trial of SNS-301 for the treatment of SCCHN described in this prospectus, may change as more patients are enrolled and additional data become available.
- We depend on timely enrollment of patients in our clinical trials for our product candidates. If we encounter difficulties enrolling patients in our clinical trials, our clinical development activities could be delayed or otherwise adversely affected.
- Clinical trials are difficult to design and implement, can be lengthy and expensive, involve uncertain outcomes and may not ultimately be successful.

- ***Risks Related to our Dependence on Third Parties***
  - We collaborate with third parties in connection with the development of our product candidates, and may depend upon future collaboration partners to commit to the research, development, manufacturing and marketing of our product candidates.
  - We rely, and expect to continue to rely, on third parties to conduct the preclinical and clinical trials for our product candidates, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such trials or failing to comply with applicable regulatory requirements.
- ***Risks Related to Regulatory Approval of our Product Candidates and Other Legal Compliance Matters***
  - Healthcare legislative reform measures may have a material adverse effect on our business and results of operations.
- ***Risks Related to the Commercialization of our Product Candidates***
  - If we are unable to establish sales, marketing and distribution capabilities for our product candidates, or enter into sales, marketing and distribution agreements with third parties, we may not be successful in commercializing our product candidates, if approved.
  - We operate in a rapidly changing industry and face significant competition, which may result in others discovering, developing or commercializing products before or more successfully than we do.
  - Even if any of our product candidates receives marketing approval, it may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success.
- ***Risks Related to our Intellectual Property***
  - If we are unable to obtain and maintain patent protection for our ImmunoPhage platform and phase-based cocktail technology and product candidates, or if the scope of the patent protection obtained is not sufficiently broad, our competitors could develop and commercialize technology and biologics similar or identical to ours, and our ability to successfully commercialize our technology and product candidates may be impaired.
  - Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain and could significantly harm our business.
- ***Risks Related to our Business Operations***
  - We will need to grow the size of our organization, and we may experience difficulties in managing this growth.
  - Our future success depends on our ability to retain key members of senior management and to attract, retain and motivate qualified personnel.

- ***Risks Related to this Offering, our Securities and our Status as a Public Company***
  - An active trading market for our common stock may not develop and you may not be able to resell your common stock at or above the initial offering price, if at all.
  - The trading price of our common stock may be volatile, and you could lose all or part of your investment.
  - If you purchase common stock in this offering, you will suffer immediate dilution of your investment.
  - If we fail to implement and maintain an effective system of internal controls to remediate our material weaknesses over financial reporting, we may be unable to accurately report our results of operations, meet our reporting obligations or prevent fraud, and investor confidence in our company and the market price of our common stock may be materially and adversely affected.

Corporate Information

We were originally incorporated as Panacea Pharmaceuticals, Inc., or Panacea, under the laws of the state of Maryland in 1999. In December 2017, in order to reincorporate in the state of Delaware, we entered into an Agreement and Plan of Merger, or Merger Agreement, by and among us, Panacea and our wholly owned subsidiary, PPI Acquisition I Corp., a Delaware corporation, or Merger Sub. Pursuant to the Merger Agreement, Merger Sub merged with and into Panacea and Panacea became our wholly-owned subsidiary. In connection with our reincorporation in Delaware, we changed our name to Sensei Biotherapeutics, Inc.

Our principal executive offices are located at 1405 Research Blvd, Suite 125, Rockville, MD 20850. Our telephone number is (240) 243-8000. Our website address is www.senseibio.com. Information contained on, or that can be accessed through, our website is not incorporated by reference into this prospectus.

The Sensei design logo, “Sensei”, “ImmunoPhage”, “Phortress” and our other registered or common law trademarks, service marks, or trade names appearing in this prospectus are the property of Sensei Biotherapeutics, Inc. Other trade names, trademarks and service marks used in this prospectus are the property of their respective owners.

Implications of Being an Emerging Growth Company and a Smaller Reporting Company

As a company with less than $1.07 billion in annual gross revenue during our last fiscal year and since we have not issued more than $1.0 billion of non-convertible debt in any three-year periods, we qualify as an “emerging growth company”, or EGC, as defined in the Jumpstart Our Business Startups Act of 2012, or JOBS Act, enacted in April 2012. An emerging growth company may take advantage of reduced reporting requirements that are otherwise applicable to public companies. These provisions include:

- being permitted to present only two years of audited financial statements and only two years of related Management’s Discussion & Analysis of Financial Condition and Results of Operations in this prospectus;
- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We may take advantage of these provisions until the last day of our fiscal year following the fifth anniversary of the date of the first sale of our common equity securities pursuant to an effective registration statement under the Securities Act of 1933, as amended, or the Securities Act. However, if certain events occur prior to the end of such five-year period, including if we become a "large accelerated filer," our annual gross revenues exceed $1.07 billion or we issue more than $1.0 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company prior to the end of such five-year period.

We have elected to take advantage of certain of the reduced disclosure obligations in the registration statement of which this prospectus is a part and may elect to take advantage of other reduced reporting requirements in future filings. As a result, the information that we provide to our stockholders may be different than you might receive from other public reporting companies in which you hold equity interests.

In addition, the JOBS Act provides that an "emerging growth company" can take advantage of an extended transition period for complying with new or revised accounting standards. This provision allows an emerging growth company to delay the adoption of some accounting standards until those standards would otherwise apply to other public companies that are not "emerging growth companies." We have elected not to "opt out" of such extended transition period, which means that when a standard is issued or revised and it has different application dates for public or private companies, we will adopt the new or revised standard at the time private companies adopt the new or revised standard and will do so until such time that we either (i) irrevocably elect to "opt out" of such extended transition period or (ii) no longer qualify as an EGC. Therefore, the reported results of operations contained in our consolidated financial statements may not be directly comparable to those of other public companies."

We are also a "smaller reporting company," meaning that the market value of our shares held by non-affiliates plus the proposed aggregate amount of gross proceeds to us as a result of this offering is less than $700 million and our annual revenue was less than $100 million during the most recently completed fiscal year. We may continue to be a smaller reporting company after this offering if either (i) the market value of our shares held by non-affiliates is less than $250 million or (ii) our annual revenue was less than $100 million during the most recently completed fiscal year and the market value of our shares held by non-affiliates is less than $700 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company, we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

THE OFFERING

Common stock offered by us	shares
Underwriters' option to purchase additional shares of common stock offered by us	shares
Common stock to be outstanding immediately after this offering	shares (shares, if the underwriters exercise their option to purchase additional shares in full)
Use of proceeds	We estimate that our net proceeds from the sale of our common stock that we are offering will be approximately $ million (or approximately $ million if the underwriters' option to purchase additional shares in full), assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses. We intend to use the net proceeds from this offering to fund the clinical development of SNS-301, the preclinical and clinical development of SNS-401 and SNS-VISTA, the development of our ImmunoPhage platform and other pipeline programs, and for working capital and other general corporate purposes. See the section titled "Use of Proceeds" for additional information.
Directed share program	At our request, the underwriters have reserved for sale, at the initial public offering price, up to five percent of the shares offered by this prospectus for sale to some of our directors, officers, employees, business associates and related persons through a directed share program. If these persons purchase reserved shares, this will reduce the number of shares available for sale to the general public. Any reserved shares that are not so purchased will be offered by the underwriters to the general public on the same terms as the other shares offered by this prospectus. In addition, we have requested that the underwriters make issuer directed allocations to certain existing investors. See the section titled "Underwriting" for additional information.
Risk factors	See "Risk Factors" and other information included in this prospectus for a discussion of factors that you should consider carefully before deciding to invest in our common stock.
Proposed Nasdaq Global Market symbol	"SNSE"

The number of shares of our common stock to be outstanding after this offering is based on 1,082,802,314 shares of common stock outstanding as of January 14, 2021 (including shares of all of our convertible preferred stock on an as-converted basis), and excludes:

- 96,973,105 shares of common stock issuable upon the exercise of stock options outstanding as of January 14, 2021, under our 2018 Stock Incentive Plan, as amended, or the 2018 Plan, at a weighted-average exercise price of $0.14 per share;
- 22,535,202 shares of common stock issuable upon the exercise of warrants outstanding as of January 14, 2021, at a weighted-average exercise price of $0.20 per share;
- shares of common stock reserved for future issuance under our 2021 Equity Incentive Plan, or 2021 Plan, which will become effective in connection with this offering, as well as any future shares, including annual increases, in the number of shares of common stock available for issuance under our 2021 Plan; and
- shares of common stock reserved for future issuance under our 2021 Employee Stock Purchase Plan, or ESPP, which will become effective in connection with this offering, as well as any future shares, including annual increases, in the number of shares of common stock reserved for issuance under our ESPP.

Unless otherwise indicated, the information in this prospectus assumes:

- the filing of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws, each of which will occur immediately prior to the closing of this offering;
- the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of shares of our common stock immediately prior to the closing of this offering;
- no exercise of the outstanding options and warrants described above;
- a -for-one reverse stock split of our common stock effected on ;
- no exercise of the underwriters' option to purchase up to an additional shares of our common stock.

SUMMARY CONSOLIDATED FINANCIAL DATA

You should read the consolidated financial data set forth below in conjunction with our consolidated financial statements and the accompanying notes and the information in "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained elsewhere in this prospectus. The summary consolidated statements of operations data for the years ended December 31, 2019 and 2018 are derived from our audited consolidated financial statements included elsewhere in this prospectus. The summary consolidated statements of operations data for the nine months ended September 30, 2020 and 2019 and the balance sheet data as of September 30, 2020 have been derived from our unaudited interim financial statements included elsewhere in this prospectus and have been prepared on the same basis as the audited financial statements. In the opinion of management, the unaudited data reflects all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of the financial information in those statements. Our historical results are not necessarily indicative of the results that should be expected in the future and the results for the nine months ended September 30, 2020 are not necessarily indicative of the results to be expected for the full year ending December 31, 2020 or any other future period.

(in thousands, except share and per share data)	Nine Months Ended September 30, 2020	Nine Months Ended September 30, 2019	Year Ended December 31, 2019	Year Ended December 31, 2018
Consolidated Statements of Operations Data:				
Operating expenses:				
Research and development	$ 8,629	$ 5,925	$ 8,350	$ 8,227
General and administrative	5,007	3,103	4,085	4,513
Alvaxa IPR&D	738	—	—	—
Total operating expenses	14,374	9,028	12,435	12,740
Loss from operations	(14,374)	(9,028)	(12,435)	(12,740)
Other expense:				
Interest expense	(1,635)	(860)	(2,256)	(327)
Fair value adjustments on embedded debt derivatives	995	(71)	(1,973)	—
Gain (loss) on debt extinguishment	45	(75)	(75)	—
Other (expense) income, net	—	(1)	(1)	28
Net loss	(14,969)	(10,035)	(16,740)	(13,039)
Cumulative dividends on convertible preferred stock	(104)	(2,853)	(3,804)	(3,804)
Net loss attributable to common stockholders	$ (15,073)	$ (12,888)	$ (20,544)	$ (16,843)
Net loss per common share, basic and diluted	$ (0.20)	$ (0.73)	$ (1.16)	$ (0.96)
Weighted-average number of shares used in computing net loss per common share, basic and diluted	73,681,618	17,628,909	17,636,028	17,628,909
Unaudited pro forma net loss per share common share, basic and diluted(1)	$		$	
Unaudited pro forma weighted-average shares used in computing net loss per common share, basic and diluted(1)				

(1) The unaudited pro forma basic and diluted weighted-average common shares outstanding used in the calculation of unaudited pro forma basic and diluted net loss per share attributable to common stockholders for the year ended December 31, 2019 and the nine months ended September 30, 2020 have been prepared to give effect to the automatic conversion of all outstanding shares of our convertible preferred stock into common stock immediately prior to the closing of this offering, as if this offering had occurred on the later of the beginning of each period or the issuance date of the convertible preferred stock.

The following table presents our summary balance sheet data as of September 30, 2020:

- on an actual basis;
- on a pro forma basis to reflect (i) our issuance and sale of 85,499,239 shares of Series AA convertible preferred stock and 165,956,208 shares of Series BB convertible preferred stock subsequent to September 30, 2020, (ii) the redemption of a convertible note in November 2020 for 31,591,824 shares of our Series AA convertible preferred stock, and (iii) the automatic conversion of all outstanding shares of our convertible preferred stock, including the shares described above in (i) and (ii), into 913,639,380 shares of our common stock immediately prior to the closing of this offering; and
- on a pro forma as adjusted basis to give further effect to our sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	As of September 30, 2020		
(in thousands)	Actual	Pro Forma	Pro Forma As Adjusted(1)
Consolidated Balance Sheet Data:			
Cash and cash equivalents	$ 3,733	$	$
Working capital (deficit)(2)	(286)		
Total assets	5,515		
Convertible preferred stock	51,788		
Total stockholders' (deficit) equity	(51,681)		

(1) Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, working capital (deficit), total assets and total stockholders' (deficit) equity by approximately $, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase (decrease) of 1.0 million shares in the number of shares offered by us at the assumed initial public offering price would increase (decrease) each of cash and cash equivalents, working capital (deficit), total assets and total stockholders' (deficit) equity by approximately $. The pro forma information discussed above is illustrative only and will be adjusted based on the actual initial public offering price and other terms of our initial public offering determined at pricing.

(2) We define working capital as current assets less current liabilities. See our consolidated financial statements included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

RISK FACTORS

Investing in our common stock involves a high degree of risk. Before you invest in our common stock, you should carefully consider the risks described below together with all of the other information contained in this prospectus, including our consolidated financial statements and the related notes included elsewhere in this prospectus. If any of the following risks actually occurs, our business, prospects, operating results and financial condition could suffer materially. In such event, the trading price of our common stock could decline, which would cause you to lose all or part of your investment. Please also see "Special Note Regarding Forward-Looking Statements."

Risks Related to Our Financial Position

We have incurred significant losses in every year since our inception. We expect to continue to incur losses over the next several years and may never achieve or maintain profitability.

We are a clinical-stage immunotherapy company and we have incurred significant net losses since our inception. Our net loss was $16.7 million for the year ended December 31, 2019 and $15.0 million for the nine months ended September 30, 2020. As of September 30, 2020, we had an accumulated deficit of $107.3 million. We have funded our operations to date primarily with proceeds from the sale of our equity securities and borrowings of convertible debt.

We have no products approved for commercial sale, have not generated any revenue from commercial sales of our product candidates, and are devoting substantially all of our financial resources and efforts to research and development of our ImmunoPhage platform and SNS-301, and to our other product candidates. Investment in therapeutic product development is highly speculative because it entails substantial upfront capital expenditures and significant risk that any potential product candidate will fail to demonstrate adequate effect or an acceptable safety profile, gain regulatory approval and become commercially viable.

We expect that it will take at least several years until any of our product candidates receive marketing approval and are commercialized, and we may never be successful in obtaining marketing approval and commercializing product candidates. We expect to continue to incur significant expenses and increasing operating losses for the foreseeable future. These net losses will adversely impact our stockholders' equity and net assets and may fluctuate significantly from quarter to quarter and year to year. We anticipate that our expenses will increase substantially as we:

- complete our Phase 1/2 clinical trial of SNS-301 and continue clinical development of SNS-301;
- prepare to file INDs and then initiate clinical development of additional product candidates, including SNS-401 and SNS-VISTA;
- continue the research and development of our other product candidates;
- invest in our ImmunoPhage platform;
- seek to discover and develop additional product candidates or acquire or in-license drugs, product candidates or technologies;
- seek regulatory approvals for any product candidates that successfully complete clinical trials;
- ultimately establish a sales, marketing and distribution infrastructure and scale up manufacturing capabilities to commercialize any product candidates for which we may obtain regulatory approval;
- manufacture our product candidates or otherwise secure the clinical and commercial supply of our product candidates;
- hire additional research and development and selling, general and administrative personnel;
- maintain, expand and protect our intellectual property portfolio; and

- incur additional costs associated with operating as a public company following the completion of this offering.

To become and remain profitable, we must succeed in developing and eventually commercializing products that generate significant revenue. Achievement will require us to be successful in a range of challenging activities, including completing preclinical studies and clinical trials of our product candidates, obtaining regulatory approval, manufacturing, marketing and selling any products for which we may obtain regulatory approval, as well as discovering and developing additional product candidates. We may never succeed in these activities and, even if we do, may never generate revenues that are significant enough to achieve profitability.

Because of the numerous risks and uncertainties associated with the development and commercialization of therapeutic product candidates, we are unable to accurately predict the timing or amount of expenses or when, or if, we will be able to achieve and maintain profitability. If we are required by regulatory authorities to perform studies in addition to those currently expected, or if there are any delays in the initiation and completion of our clinical trials or the development of any of our product candidates, our expenses could increase and profitability could be further delayed.

Even if we achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would depress the value of our common stock and could impair our ability to raise capital, expand our business, maintain our research and development efforts or continue our operations. A decline in the value of our common stock could also cause you to lose all or part of your investment.

Our operating history may make it difficult for you to evaluate the success of our business to date and to assess our future viability.

As an organization, we have not demonstrated an ability to successfully complete late-stage clinical trials, obtain regulatory approvals, manufacture our product candidates at commercial scale or arrange for a third party to do so on our behalf, conduct sales and marketing activities necessary for successful commercialization, or obtain reimbursement in the countries of sale. We may encounter unforeseen expenses, difficulties, complications, and delays in achieving our business objectives. Our operating history makes any assessment of our future success or viability subject to significant uncertainty. If we do not address these risks successfully or are unable to transition at some point from a company with a research and development focus to a company capable of supporting commercial activities, then our business will suffer. In addition, we will need to transition at some point from a company with a research and development focus to a company capable of supporting commercial activities. We may not be successful in such a transition.

Our independent registered public accounting firm has included an explanatory paragraph relating to our ability to continue as a going concern in its audit report included in this prospectus. Even if we consummate this offering, we will need additional funding to complete the development of our product candidates. A failure to obtain this necessary capital when needed could force us to delay, limit, reduce or terminate our product development or commercialization efforts.

Our independent registered public accounting firm included an explanatory paragraph in its audit report on our consolidated financial statements as of and for the years ended December 31, 2019 and 2018 stating that our recurring losses from operations and negative cash flows and our need to raise additional funding to finance our operations raise substantial doubt about our ability to continue as a going concern. We have insufficient committed sources of additional capital to fund our operations as described in this prospectus for more than a limited period of time. We will require substantial additional funding to meet our financial needs and to pursue our business objectives. If we are unable to raise capital when needed, we could be forced to delay, reduce or altogether cease our product development programs or commercialization efforts.

We believe that the net proceeds from this offering, together with our existing cash, will enable us to fund our operating expenses and capital expenditure requirements through the completion of several Phase 1 and 2 clinical trials. However, this funding will not be sufficient for us to fund any of our product candidates through regulatory approval, and we will need to raise additional capital to complete the development and commercialization of SNS-301 and our other product candidates and in connection with our continuing operations and other planned activities. Our future capital requirements will depend on many factors, including:

- the scope, progress, results and costs of discovery, laboratory testing, manufacturing, preclinical and clinical development for our current and future product candidates;
- the development requirements of other product candidates that we may pursue;
- the timing and amounts of any milestone or royalty payments we may be required to make or may be entitled to receive under license agreements;
- the costs of building out our infrastructure including hiring additional clinical, quality control and manufacturing personnel;
- the costs, timing and outcome of regulatory review of our product candidates;
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval;
- the revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims;
- the costs of operating as a public company; and
- the extent to which we acquire or in-license other product candidates and technologies.

We cannot be certain that additional funding will be available on acceptable terms, or at all. If we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we may have to significantly delay, scale back or discontinue the development or commercialization of our product candidates or other research and development initiatives. Any of our current or future license agreements may also be terminated if we are unable to meet the payment or other obligations under the agreements.

Raising additional capital may cause dilution to our holders, including purchasers of our common stock in this offering, restrict our operations or require us to relinquish rights to our technologies or product candidates.

We expect that significant additional capital may be needed in the future to continue our planned operations, including conducting clinical trials, commercialization efforts, expanded research and development activities and costs associated with operating a public company. Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through any or a combination of securities offerings, debt financings, license and collaboration agreements and research grants. If we raise capital through securities offerings, such sales may also result in material dilution to our existing stockholders, and new investors could gain rights, preferences and privileges senior to the holders of our common stock, including common stock sold in this offering.

To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a stockholder. Debt financing and preferred equity financing, if available, could result in fixed payment obligations, and we may be required to accept terms that restrict our ability to incur additional indebtedness, force us to maintain specified liquidity or other ratios or restrict our ability to pay dividends or make acquisitions.

If we raise additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may be required to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates or to grant licenses on terms that may not be favorable to us. In addition, we could also be required to seek funds through arrangements with collaborators or others at an earlier stage than otherwise would be desirable. If we raise funds through research grants, we may be subject to certain requirements, which may limit our ability to use the funds or require us to share information from our research and development. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to a third party to develop and market product candidates that we would otherwise prefer to develop and market ourselves. Raising additional capital through any of these or other means could adversely affect our business and the holdings or rights of our stockholders, and may cause the market price of our common stock to decline.

In addition, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe that we have sufficient funds for our current or future operating plans. If we raise additional funds through collaboration and licensing arrangements with third parties, we may have to relinquish some rights to our technologies or our product candidates on terms that are not favorable to us. Any additional capital raising efforts may divert our management from their day-to-day activities, which may adversely affect our ability to develop and commercialize our current and future product candidates, if approved. If we are unable to raise capital when needed or on attractive terms, we could be forced to delay, reduce or altogether cease our research and development programs or future commercialization efforts.

Risks Related to the Development of our Product Candidates

Our development efforts are in the early stages. All of our product candidates are in clinical development or in preclinical development. If we are unable to advance our product candidates through clinical development, obtain regulatory approval and ultimately commercialize our product candidates, or experience significant delays in doing so, our business will be materially harmed.

Our lead product candidate, SNS-301, is our only product candidate in clinical development. There is no assurance that this, or any other future clinical trials of our product candidates, will be successful or will generate positive clinical data and we may not receive marketing approval from the FDA or other regulatory agencies for any of our product candidates. With the exception of SNS-301, we have not submitted an IND to the FDA. Our other product candidates are in preclinical development. There can be no assurance that the FDA will permit the INDs for our other product candidates to go into effect in a timely manner or at all. Without the IND, we will not be permitted to conduct clinical trials in the United States.

Biopharmaceutical development is a long, expensive and uncertain process, and delay or failure can occur at any stage of any of our clinical trials. Failure to obtain regulatory approval for our product candidates will prevent us from commercializing and marketing our product candidates. The success in the development of our product candidates will depend on many factors, including:

- completing preclinical studies;
- submission of INDs for and receipt of allowance to proceed with our planned clinical trials or other future clinical trials;
- initiating, enrolling, and completing clinical trials;
- obtaining positive results from our preclinical studies and clinical trials that support a demonstration of efficacy, safety, and durability of effect for our product candidates;
- receiving approvals for commercialization of our product candidates from applicable regulatory authorities;

- establishing sales, marketing and distribution capabilities and successfully launching commercial sales of our products, if and when approved, whether alone or in collaboration with others;
- acceptance of our products, if and when approved, by patients, the medical community and third-party payors; manufacturing our product candidates at an acceptable cost; and
- maintaining and growing an organization of scientists, medical professionals and business people who can develop and commercialize our products and technology.

Many of these factors are beyond our control, including the time needed to adequately complete clinical testing and the regulatory submission process. It is possible that none of our product candidates will ever obtain regulatory approval, even if we expend substantial time and resources seeking such approval. If we do not achieve one or more of these factors in a timely manner or at all, or any other factors impacting the successful development of biopharmaceutical products, we could experience significant delays or an inability to successfully develop our product candidates, which would materially harm our business.

The development of product candidates with our ImmunoPhage platform represents an emerging approach to cancer treatment and faces significant challenges and hurdles. We may not be successful in applying our ImmunoPhage platform to the discovery and development of commercially viable products.

We have concentrated our primary research and development efforts on our ImmunoPhage platform which utilizes the power of bacteriophage to facilitate the creation of vaccines for enhanced immune system activation. Our future success is highly dependent on the successful development and manufacture of our product candidates. We do not currently have any approved or commercialized products. Because bacteriophage-based therapies represent a relatively new field of cellular immunotherapy and cancer treatment generally, developing and commercializing our product candidates subjects us to a number of risks and challenges, including:

- obtaining regulatory approval for our product candidates, as the FDA and other regulatory authorities have limited experience with phage-based therapies for cancer;
- patients receiving chemotherapy in conjunction with the delivery of our product candidates, which may increase the risk of adverse side effects of our product candidates;
- sourcing clinical and, if approved, commercial supplies of the materials used to manufacture our product candidates;
- developing product candidates with desired properties, while avoiding adverse reactions;
- establishing manufacturing capacity suitable for the manufacture of our product candidates in line with expanding enrollment in our clinical studies and our projected commercial requirements;
- achieving cost efficiencies in the scale-up of our manufacturing capacity;
- developing protocols for the safe administration of our product candidates;
- educating medical personnel regarding our phage-based technologies and the potential side effect profile of each of our product candidates; and
- the availability of coverage and adequate reimbursement from third-party payors for our novel and personalized therapies in connection with commercialization of any approved product candidates.

We may not be able to successfully develop our phage-based product candidates or any other product candidates in a manner that will yield products that are safe and effective, scalable or profitable.

Moreover, physicians, hospitals and third-party payors often are slow to adopt new products, technologies and treatment practices that require additional upfront costs and training. Treatment centers may not be willing or able to devote the personnel and establish other infrastructure required for the administration of our therapies.

Based on these and other factors, health systems, hospitals and payors may decide that the benefits of this new therapy do not or will not outweigh its costs.

The regulatory approval processes of the FDA and comparable foreign authorities are lengthy, time-consuming and inherently unpredictable, and if we are ultimately unable to obtain regulatory approval for our product candidates, our business will be substantially harmed.

We do not have any products that have gained regulatory approval. Our business is substantially dependent on our ability to obtain regulatory approval for, and, if approved, to successfully commercialize our SNS-301 product candidate and our preclinical programs. We cannot commercialize product candidates in the United States without first obtaining regulatory approval for the product from the FDA. Before obtaining regulatory approvals for the commercial sale of any product candidate for a particular indication, we must demonstrate with substantial evidence gathered in preclinical and clinical studies, that the product candidate is safe and effective for that indication and that the manufacturing facilities, processes and controls are adequate with respect to such product candidate. Prior to seeking approval for any of our product candidates, we will need to confer with the FDA and other regulatory authorities regarding the design of our clinical trials and the type and amount of clinical data necessary to seek and gain approval for our product candidates.

The time required to obtain approval by the FDA and other regulatory authorities is unpredictable and typically takes many years following the commencement of preclinical studies and clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. In addition, approval policies, regulations, or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions. It is possible that none of our existing product candidates or any future product candidates will ever obtain regulatory approval.

Our product candidates could fail to receive regulatory approval from the FDA or other comparable regulatory authorities for many reasons, including:

- disagreement with the design, protocol or conduct of our clinical trials, including with respect to our ImmunoPhage cocktail approach;
- failure to demonstrate that a product candidate is safe and effective for its proposed indication;
- failure of clinical trials to meet the level of statistical significance required for approval;
- failure to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- disagreement with our interpretation of data from preclinical studies or clinical trials;
- insufficiency of data collected from clinical trials of our product candidates to support the submission and filing of a Biologics License Application, or BLA, or other submission or to obtain regulatory approval;
- failure to obtain approval of the manufacturing processes or our facilities;
- changes in the approval policies or regulations that render our preclinical and clinical data insufficient for approval; or
- lack of adequate funding to complete a clinical trial in a manner that is satisfactory to the applicable regulatory authority.

Many of these risks are beyond our control, including the risks related to clinical development. If we are unable to develop, receive regulatory approval for, or successfully commercialize SNS-301 or our other product candidates, or if we experience delays as a result of any of these risks or otherwise, our business could be materially harmed.

The FDA or a comparable regulatory authority may require more information, including additional preclinical or clinical data to support approval, including data that would require us to perform additional clinical

trials or modify our manufacturing processes, which may delay or prevent approval and our commercialization plans, or we may decide to abandon the development program. If we change our manufacturing processes, we may be required to conduct additional clinical trials or other studies, which also could delay or prevent approval of our product candidates. If we were to obtain approval, regulatory authorities may approve any of our product candidates for fewer indications than we request (including failing to approve the most commercially promising indications), may limit indications, may grant approval contingent on the performance of costly post-marketing clinical trials or other post-marketing commitments, or may approve a product candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that product candidate.

Even if a product candidate were to successfully obtain approval from the FDA or other comparable regulatory authorities in other jurisdictions, any approval might contain significant limitations related to use restrictions for specified age groups, warnings, precautions or contraindications, or may be subject to burdensome post-approval study or risk management requirements. If we are unable to obtain regulatory approval for one of our product candidates in one or more jurisdictions, or any approval contains significant limitations, we may not be able to obtain sufficient funding to continue the development of that product or generate revenues attributable to that product candidate. Also, any regulatory approval of our current or future product candidates, once obtained, may be withdrawn.

Our business is highly dependent on the success of our lead product candidate, SNS-301 and any other product candidates that we advance into the clinic. All of our product candidates may require significant additional preclinical and clinical development before we may be able to seek regulatory approval for and launch a product commercially and we may not be successful in our efforts to build a pipeline of product candidates.

A key element of our strategy is utilizing our ImmunoPhage platform to develop what we believe are safer and more effective and personalized phage-based vaccines. We currently have no products that are approved for commercial sale and may never be able to develop marketable products. We are very early in our development efforts, and our product candidates, including SNS-301, are in early clinical development. Because SNS-301 is our lead product candidate, if SNS-301 encounters safety or efficacy problems, development delays, regulatory issues or other problems, our development plans and business would be significantly harmed. By leveraging insights gained from our experience with SNS-301, we have adapted our platform to generate personalized, off-the-shelf product candidates based on a cocktail of common and patient-specific antigens, dosed together as an array of customized, multi-antigen phage configurations in a modular approach. However, we may not be able to develop product candidates that are safe and effective, or which compare favorably with other commercially available alternatives. Even if we are successful in continuing to build our pipeline and develop personalized, off-the-shelf product candidates, the potential product candidates that we identify may not be suitable for clinical development, including as a result of lack of safety, lack of tolerability, or other characteristics that indicate that they are unlikely to be products that will receive marketing approval, achieve market acceptance or obtain reimbursements from third-party payors. We cannot provide you with any assurance that we will be able to successfully advance any of these additional product candidates through the development process. Our research programs may initially show promise in identifying potential product candidates, yet fail to yield product candidates for clinical development or commercialization for many reasons, including the following:

- our ImmunoPhage platform may not be successful in identifying additional product candidates;
- we may not be able or willing to assemble sufficient resources to acquire or discover additional product candidates;
- our product candidates may not succeed in preclinical or clinical testing;
- a product candidate may on further study be shown to have harmful side effects or other characteristics that indicate it is unlikely to be effective or otherwise does not meet applicable regulatory criteria;
- competitors may develop alternatives that render our product candidates obsolete or less attractive;

- product candidates we develop may nevertheless be covered by third parties' patents or other exclusive rights;
- the market for a product candidate may change during our development program so that the continued development of that product candidate is no longer reasonable;
- a product candidate may not be capable of being produced in commercial quantities at an acceptable cost, or at all; and
- a product candidate may not be accepted as safe and effective by patients, the medical community or third-party payors, if applicable.

If any of these events occur, we may be forced to abandon our development efforts for a program or programs, or we may not be able to identify, discover, develop, or commercialize additional product candidates, which would have a material adverse effect on our business and could potentially cause us to cease operations.

If we do not successfully develop and commercialize product candidates or collaborate with others to do so, we will not be able to obtain product revenue in future periods, which could significantly harm our financial position and adversely affect the trading price of our common stock.

We are developing product candidates designed to produce responses against novel targets through a cocktail therapy approach for which there is little clinical experience, and the FDA or other regulatory authorities may not consider the endpoints of our clinical trials to predict or provide clinically meaningful results.

SNS-301 has been engineered to produce a targeted immune response against ASPH. We are also developing a human mAb program targeting the novel immune checkpoint VISTA. There are currently no approved therapies that target ASPH or VISTA in the field of oncology. To evaluate these product candidates, we are also pioneering an adaptive clinical trial design that enables substitution of ImmunoPhage cocktail components throughout clinical development. As a result of the novelty of our targets as well as the novelty of our anticipated clinical trial design, the design and conduct of clinical trials of our product candidates or any future product candidate may take longer, be more costly or be less effective. There may also be inconsistent or contradictory efficacy or safety results amongst different cocktail product candidates for different patients in the same clinical trial. In some cases, we may use endpoints or methodologies that regulatory authorities may not consider to be clinically meaningful and that we may not continue to use in clinical trials or that we may determine after the initiation of the trial to no longer be an appropriate endpoint or methodology. Any such regulatory authority may require evaluation of additional or different clinical endpoints in our clinical trials or ultimately determine that these clinical endpoints do not support marketing approval. In addition, if we are required to use additional or different clinical endpoints by regulatory authorities, our product candidates may not achieve or meet such clinical endpoints in our clinical trials. Even if a regulatory authority finds our clinical trial success criteria to be sufficiently validated and clinically meaningful, we may not achieve the pre-specified endpoint to a degree of statistical significance in any pivotal or other clinical trials we may conduct for our product candidate. Further, even if we do achieve the pre-specified criteria, our trials may produce results that are unpredictable or inconsistent with the results of other efficacy endpoints in the trial. Regulatory authorities also weigh the benefits of a product against its risks and may not view the efficacy and safety results we product with our adaptive clinical trial design as supportive of approval.

We may expend our limited resources to pursue a particular product candidate or indication and fail to capitalize on product candidates or indications that may be more profitable or have a greater likelihood of success.

Because we have limited financial and management resources, we focus on research programs and product candidates that we identify for specific indications. As a result, we may forego or delay pursuit of opportunities

with other product candidates or for other indications that later prove to have greater commercial potential. We currently do not anticipate advancing our SNS-CoV2 product candidate into clinical development absent the receipt of external or grant funding to do so. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs and product candidates for specific indications may not yield any commercially viable products. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate.

If the clinical trials of any of our product candidates fail to demonstrate safety and efficacy to the satisfaction of the FDA or other comparable regulatory authorities, or do not otherwise produce favorable results, we may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.

Most of our product candidates are still in the preclinical development stage, and the risk of failure of preclinical programs is high. Before we can commence clinical trials for a product candidate, we must complete extensive preclinical testing and studies to obtain regulatory clearance to initiate human clinical trials. We cannot be certain of the timely completion or outcome of our preclinical testing and studies and cannot predict if the FDA or other regulatory authorities will accept our proposed clinical programs or if the outcome of our preclinical testing and studies will ultimately support the further development of our programs. As a result, we cannot be sure that we will be able to submit INDs or similar applications for our preclinical programs on the timelines we expect, if at all, and we cannot be sure that submission of INDs or similar applications will result in the FDA or other regulatory authorities allowing clinical trials to begin. It is impossible to predict accurately when or if any of our product candidates will prove effective or safe in humans and will receive regulatory approval. Before obtaining marketing approval from regulatory authorities for the commercial sale of any of our product candidates, we must demonstrate through lengthy, complex and expensive preclinical testing and clinical trials that our product candidates are both safe and effective for use in each target indication. Clinical testing is expensive, difficult to design and implement, can take many years to complete and is uncertain as to outcome. A failure of one or more clinical trials can occur at any stage of testing.

We may experience numerous unforeseen events prior to, during, or as a result of, clinical trials that could delay or prevent our ability to receive marketing approval or commercialize any of our product candidates, including:

- the FDA or other comparable regulatory authority may disagree as to the number, design or implementation of our clinical trials, or may not interpret the results from clinical trials as we do;
- regulators or institutional review boards may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- we may not reach agreement on acceptable terms with prospective clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different clinical trial sites;
- clinical trials of our product candidates may produce negative or inconclusive results;
- we may decide, or regulators may require us, to conduct additional preclinical studies or clinical trials or abandon our product development programs;
- the number of patients required for clinical trials of our product candidates may be larger than we anticipate, enrollment in these clinical trials may be slower than we anticipate, participants may drop out of these clinical trials at a higher rate than we anticipate or we may fail to recruit suitable patients to participate in a trial;
- our third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;

- regulators may issue a clinical hold, or regulators or institutional review boards may require that we or our investigators suspend or terminate clinical research for various reasons, including noncompliance with regulatory requirements or a finding that the participants are being exposed to unacceptable health risks;
- the cost of clinical trials of our product candidates may be greater than we anticipate;
- the FDA or other comparable regulatory authorities may fail to approve our manufacturing processes or facilities;
- the supply or quality of our product candidates or other materials necessary to conduct clinical trials of our product candidates may be insufficient or inadequate;
- our product candidates may have undesirable side effects or other unexpected characteristics, particularly given their novel, first-in-human application, causing us or our investigators, regulators or institutional review boards to suspend or terminate the clinical trials; and
- the approval policies or regulations of the FDA or other comparable regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

To the extent that the results of the trials are not satisfactory for the FDA or regulatory authorities in other countries or jurisdiction to approve our BLA or other comparable application, the commercialization of our product candidates may be significantly delayed, or we may be required to expend significant additional resources, which may not be available to us, to conduct additional trials in support of potential approval of our product candidates.

Clinical trials are difficult to design and implement, can be lengthy and expensive, involve uncertain outcomes and may not ultimately be successful.

It is impossible to predict when or if any of our current or future product candidates will prove effective and safe in humans or will receive regulatory approval. Before obtaining marketing approval from regulatory authorities for the sale of any product candidate, we must complete preclinical studies and then conduct extensive clinical trials to demonstrate the safety and efficacy of our product candidates in humans. Human clinical trials are expensive, can take many years to complete, and are difficult to design and implement, in part because they are subject to rigorous regulatory requirements. The design of a clinical trial can determine whether its results will support approval of a product and flaws in the design of a clinical trial may not become apparent until the clinical trial is well advanced. As an organization, we have limited experience designing clinical trials and may be unable to design and execute a clinical trial to support regulatory approval. There is a high failure rate for oncology product candidates proceeding through clinical trials, which may be higher for our product candidates because they are based on a new approach. Many companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late-stage clinical trials even after achieving promising results in preclinical testing and earlier-stage clinical trials. Data obtained from preclinical and clinical activities are subject to varying interpretations, which may delay, limit or prevent regulatory approval. In addition, we may experience regulatory delays or rejections as a result of many factors, including changes in regulatory policy during the period of our product candidate development. Any such delays could negatively impact our business, financial condition, results of operations and prospects.

Success in preclinical studies or clinical trials may not be predictive of results in future clinical trials.

Results from preclinical studies and early clinical trials may not be predictive of the success of later clinical trials, and interim results of clinical trials are not necessarily predictive of final results. While we have received initial data in our Phase 1/2 clinical trial of SNS-301 for the treatment of locally advanced unresectable or metastatic SCCHN, we still need to conduct additional clinical trials prior to seeking regulatory approval. We have also not yet begun clinical trials for our other product candidates. For that reason, we do not know whether these candidates will be effective for the intended indications or safe in humans. Our product candidates may fail

to show the desired safety and efficacy in clinical development despite positive results observed in preclinical studies or having successfully advanced through initial clinical trials. This failure to establish sufficient efficacy and safety could cause us to abandon clinical development of our product candidates.

Additionally, some of our past, planned and ongoing clinical trials utilize an open-label study design. An "open-label" clinical trial is one where both the patient and investigator know whether the patient is receiving the investigational product candidate or either an existing approved therapy or placebo. Most typically, open-label clinical trials test only the investigational product candidate and sometimes may do so at different dose levels. Open-label clinical trials are subject to various limitations that may exaggerate any therapeutic effect, as patients in open-label clinical trials are aware when they are receiving treatment. Open-label clinical trials may be subject to a "patient bias" where patients perceive their symptoms to have improved merely due to their awareness of receiving an experimental treatment. Moreover, patients selected for early clinical studies often include the most severe sufferers and their symptoms may have been bound to improve notwithstanding the new treatment. In addition, open-label clinical trials may be subject to an "investigator bias" where those assessing and reviewing the physiological outcomes of the clinical trials are aware of which patients have received treatment and may interpret the information of the treated group more favorably given this knowledge. Given that our Phase 1/2 clinical trial of SNS-301 includes an open-label dosing design, the results from this clinical trial may not be predictive of future clinical trial results with this or other product candidates for which we conduct an open-label clinical trial when studied in a controlled environment with a placebo or active control.

Interim topline and preliminary data from our clinical trials that we announce or publish from time to time may change as more patients are enrolled and additional data become available, and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publish interim topline or preliminary data from our clinical trials. Interim data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. We also make assumptions, estimations, calculations and conclusions as part of our analyses of data, and we may not have received or had the opportunity to fully and carefully evaluate all data. As a result, the topline or preliminary results that we report may differ from future results of the same studies, or different conclusions or considerations may qualify such results, once additional data have been received and fully evaluated. Preliminary or topline data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, interim and preliminary data should be viewed with caution until the final data are available. From time to time, we may also disclose interim data from our clinical trials. Interim data from clinical trials are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available or as patients from our clinical trials continue other treatments for their disease. For instance, we have reported interim data from our ongoing Phase 1/2 clinical trial of SNS-301 for the treatment of SCCHN based on our first 11 enrolled patients, of which ten patients were evaluable for efficacy as of December 10, 2020, and the overall results from the Phase 1/2 trial may materially change as we complete enrollment and report results for the full 30 patients that we anticipate enrolling in the trial. Adverse differences between preliminary or interim data and final data could significantly harm our reputation and business prospects. Further, disclosure of interim data by us or by our competitors could result in volatility in the price of our common stock after this offering.

Further, others, including regulatory agencies, may not accept or agree with our assumptions, estimates, calculations, conclusions or analyses or may interpret or weigh the importance of data differently, which could impact the potential of the particular program, the likelihood of marketing approval or commercialization of the particular product candidate, any approved product, and our company in general. In addition, the information we choose to publicly disclose regarding a particular study or clinical trial is derived from information that is typically extensive, and you or others may not agree with what we determine is material or otherwise appropriate information to include in our disclosure.

If the interim, topline, or preliminary data that we report differ from actual results, or if others, including regulatory authorities, disagree with the conclusions reached, our ability to obtain approval for, and commercialize, our product candidates may be harmed, which could harm our business, operating results, prospects or financial condition.

We depend on timely enrollment of patients in our clinical trials for our product candidates. If we encounter difficulties enrolling patients in our clinical trials, our clinical development activities could be delayed or otherwise adversely affected.

Identifying and qualifying patients to participate in clinical trials of our product candidates is critical to our success. We may experience difficulties in patient enrollment in our clinical trials for a variety of reasons. The timely completion of clinical trials in accordance with their protocols depends, among other things, on our ability to enroll a sufficient number of patients who remain in the study until its conclusion. The enrollment of patients depends on many factors, including:

- the patient eligibility criteria defined in the protocol;
- the number of patients with the disease or condition being studied;
- the perceived risks and benefits of the product candidate in the trial;
- clinicians' and patients' perceptions as to the potential advantages of the product candidate being studied in relation to other available therapies, including any new drugs that may be approved for the indications we are investigating or drugs that may be used off-label for these indications;
- the size and nature of the patient population required for analysis of the trial's primary endpoints;
- the proximity of patients to study sites;
- the design of the clinical trial;
- our ability to recruit clinical trial investigators with the appropriate competencies and experience;
- competing clinical trials for similar therapies or other new therapeutics;
- our ability to obtain and maintain patient consents;
- the risk that patients enrolled in clinical trials will drop out of the clinical trials before completion of their treatment; and
- factors we may not be able to control, such as current or potential pandemics, including the COVID-19 pandemic, that may limit patients, principal investigators or staff or clinical site available.

In particular, some of our clinical trials will look to enroll patients with specific limited characteristics. For instance, in our ongoing Phase 1/2 of SNS-301 in SCCHN, we restricted enrollment to SCCHN patients who were treated with PD1 blockade for at least 12 weeks and did not achieve an objective response or confirmed progression, which limits the pool of patients from which we have to recruit trial participants. In addition, because the number of qualified clinical investigators is limited, we expect to conduct some of our clinical trials at the same clinical trial sites that some of our competitors use, which could further reduce the number of patients who are available for our clinical trials in these clinical trial sites. Moreover, because our product candidates represent a departure from more commonly used methods for cancer treatment, potential patients and their doctors may be inclined to use conventional therapies, such as chemotherapy and antibody therapy, rather than enroll patients in our clinical trials.

Delays in patient enrollment may result in increased costs or may affect the timing or outcome of the planned clinical trials, which could prevent completion of these clinical trials and adversely affect our ability to advance the development of our product candidates. In addition, many of the factors that may lead to a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates.

We may seek Fast Track designation for some or all of our current or future product candidates, but we may be unable to obtain such designations or, where obtained, we may be unable to maintain such designations or obtain or maintain the benefits associated with such designations.

We may seek Fast Track designation for some or all of our other current and future product candidates, but we may be unable to obtain such designation or, where obtained, we may be unable to maintain such designation or obtain or maintain the benefits associated with such designation.

If a biologic is intended for the treatment of a serious or life-threatening condition and the product demonstrates the potential to address unmet medical needs for this condition, the product sponsor may apply for FDA Fast Track designation for a particular indication. We may seek Fast Track designation for SNS-301 and some or all of our other current and future product candidates, but there is no assurance that the FDA will grant this status to any of our proposed product candidates. Marketing applications filed by sponsors of products in Fast Track development may qualify for priority review under the policies and procedures offered by the FDA, but the Fast Track designation does not assure any such qualification or ultimate marketing approval by the FDA. The FDA has broad discretion whether or not to grant Fast Track designation, so even if we believe a particular product candidate is eligible for this designation, there can be no assurance that the FDA would decide to grant it. Even if we do receive Fast Track designation, we may not experience a faster development process, review or approval compared to conventional FDA procedures, and receiving a Fast Track designation does not provide assurance of ultimate FDA approval. In addition, the FDA may withdraw Fast Track designation if it believes that the designation is no longer supported by data from our clinical development program. In addition, the FDA may withdraw any Fast Track designation at any time.

The market opportunities for certain of our product candidates may be limited to those patients who are ineligible for or have failed prior treatments and, therefore, may be small, and our projections regarding the size of the addressable market may be incorrect.

Our immunotherapy approach is based on novel ideas and technologies that are unproven and may not result in marketable products, which makes it difficult for us to predict the time and cost of product development and potential for regulatory approval. Cancer therapies are sometimes characterized as first line, second line or third line, and the FDA often approves new therapies initially only for third line use. When cancers are detected they are treated with first line of therapy with the intention of curing the cancer. This treatment generally consists of chemotherapy, radiation, antibody drugs, tumor targeted small molecules, or a combination of these. If the patient's cancer relapses, then the patient is given a second line or third line therapy, which can consist of more chemotherapy, radiation, antibody drugs, tumor targeted small molecules, or a combination of these. Generally, the higher the line of therapy, the lower the chance of a cure. With third or higher line, the goal of the therapy is to control the growth of the tumor and extend the life of the patient, as a cure is unlikely to happen. Patients are generally referred to clinical trials in these situations.

While we are initially developing SNS-301 as a first line therapy and later lines of therapy for patients with SCCHN, there is no guarantee that it, or any of our product candidates, even if approved, would be approved for an early line of therapy. In addition, we may have to conduct additional large randomized clinical trials prior to gaining approval for the earlier line of therapy.

Our projections of both the number of people who have the cancers we are targeting, as well as the size of the patient population subset of people with these cancers in a position to receive first, second, third and fourth line therapy and who have the potential to benefit from treatment with our product candidates, are based on our beliefs and estimates. These estimates have been derived from a variety of sources, including scientific literature, surveys of clinics, patient foundations, or market research and may prove to be incorrect. Further, new studies may change the estimated incidence or prevalence of these cancers. The number of patients may turn out to be fewer than expected. Additionally, the potentially addressable patient population for our product candidates may be limited or may not be amenable to treatment with our product candidates. Even if we obtain significant market

share for our product candidates, because the potential target populations are small, we may never achieve significant revenues without obtaining regulatory approval for additional indications or as part of earlier lines of therapy.

We are developing SNS-301, and potentially future product candidates, in combination with other therapies, which exposes us to additional risks.

We are developing SNS-301, and may develop future product candidates, for use in combination with one or more currently approved cancer therapies. In particular, we are developing SNS-301 in combination pembrolizumab, an approved anti-PD-1 cancer treatment. Even if any product candidate we develop was to receive marketing approval or be commercialized for use in combination with other existing therapies, we would continue to be subject to the risks that the FDA or similar foreign regulatory authorities could revoke approval of the therapy used in combination with our product candidate or that safety, efficacy, manufacturing or supply issues could arise with these existing therapies. Combination therapies are commonly used for the treatment of cancer, and we would be subject to similar risks if we develop any of our product candidates for use in combination with other drugs or for indications other than cancer. This could result in our own products being removed from the market or being less successful commercially.

If the FDA or similar foreign regulatory authorities do not approve these other drugs or revoke their approval of, or if safety, efficacy, manufacturing, or supply issues arise with, the drugs we choose to evaluate in combination with SNS-301 or any product candidate we develop, we may be unable to obtain approval of or market SNS-301 or any product candidate we develop.

Adverse side effects or other safety risks associated with our product candidates could delay or preclude approval, cause us to suspend or discontinue clinical trials, cause us to abandon product candidates, could limit the commercial profile of an approved label, or could result in significant negative consequences following any potential marketing approval.

Our clinical trials include cancer patients who are very sick and whose health is deteriorating, and we expect that additional clinical trials of our other product candidates will include similar patients with deteriorating health. It is possible that some of these patients may experience similar side effects and that additional patients may die during our clinical trials for various reasons. The causes of death could include receiving our product candidates because the patient's disease is too advanced or because the patient experiences medical problems that may not be related to our product candidate. Even if the patient deaths are not related to our product candidate, the deaths could affect perceptions regarding the safety of our product candidate.

Patient deaths and severe side effects caused by our product candidates, or by products or product candidates of other companies that are thought to have similarities with our therapeutic candidates, could result in the delay, suspension, clinical hold or termination of our clinical trials, the FDA or other regulatory authorities for a number of reasons. If we elect or are required to delay, suspend or terminate any clinical trial of any product candidates that we develop, the commercial prospects of such product candidates will be harmed and our ability to generate product revenues from any of these product candidates would be delayed or eliminated. Serious adverse events observed in clinical trials could hinder or prevent market acceptance of the product candidate at issue. Any of these occurrences may harm our business, prospects, financial condition and results of operations significantly.

Additionally, if one or more of our product candidates receives marketing approval, and we or others later identify undesirable side effects caused by such products, including during any long-term follow-up observation period recommended or required for patients who receive treatment using our products, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw or limit their approval of such products;

- regulatory authorities may require the addition of labeling statements, such as a "boxed" warning or a contraindication;
- we may be required to create a Risk Evaluation and Mitigation Strategy, or REMS, plan, which could include a medication guide outlining the risks of such side effects for distribution to patients, a communication plan for healthcare providers, and/or other elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools;
- we may decide to remove such products from the marketplace;
- we could be sued and held liable for harm caused to patients; and
- our reputation may suffer.

Any of the foregoing could prevent us from achieving or maintaining market acceptance of the particular product candidate, if approved, and could significantly harm our business, results of operations, and prospects.

We may not be successful in achieving cost of goods at commercial scale that provide for an attractive margin.

We have limited commercial manufacturing experience and may underestimate the cost and time required to establish manufacturing capacity at commercial scale, or overestimate cost reductions from economies of scale that can be realized with manufacturing processes. While we are planning to internally develop this capability, including plans for the potential construction of our own manufacturing facility, we have also held discussions with multiple contract manufacturing organizations regarding commercial-stage manufacturing. We may ultimately be unable to manage the cost of goods for our product candidates to levels that will allow for a margin in line with our expectations and return on investment if those product candidates are commercialized.

We may not be successful in manufacturing our product candidates on our own for use in clinical trials and, if approved, for commercial sale.

As we advance into later-stage clinical trials and additional indications, we intend to expand our current manufacturing capabilities to support larger scale clinical trials and the potential commercialization of our product candidates. However, we have not yet constructed or acquired manufacturing facilities or capabilities that would allow us to meet commercial-scale quantities.

The implementation of this plan is subject to many risks. For example, the expansion of a manufacturing facility is a complex endeavor requiring knowledgeable individuals. Expanding our internal manufacturing infrastructure will rely upon finding personnel with an appropriate background and training to staff and operate the facility. Should we be unable to find these individuals, we may need to rely on external contractors or train additional personnel to fill the needed roles. There are a small number of individuals with relevant experience and the competition for these individuals is high.

We may never be successful in expanding our own manufacturing capability to support large scale clinical trials and commercialization of product candidates, if approved. We may establish additional manufacturing sites as we expand our commercial footprint to multiple geographies, which may lead to regulatory delays or prove costly. Even if we are successful, our manufacturing operations could be affected by cost-overruns, unexpected delays, equipment failures, labor shortages, natural disasters, power failures and numerous other factors, or we may not be successful in establishing sufficient capacity to produce our product candidates in sufficient quantities to meet the requirements for the potential launch or to meet potential future demand, all of which could prevent us from realizing the intended benefits of our manufacturing strategy and have a material adverse effect on our business.

The manufacture of our product candidates is complex and we may encounter difficulties in production, particularly with respect to process development or scaling-out of our manufacturing capabilities. If we encounter such difficulties, our ability to provide supply of our product candidates for clinical trials or our products for patients, if approved, could be delayed or stopped.

We have developed a process for manufacturing and stock storing bacteriophage viruses and we believe that our current processes are readily scalable and suitable for commercialization. Each manufacturing process must be validated through the performance of process validation runs to guarantee that the facility, personnel, equipment, and process work as designed. We have not yet manufactured or processed our product candidates on a commercial scale and may not be able to do so for any of our product candidates.

We may encounter difficulties in production, particularly in scaling up or out, validating the production process, and assuring high reliability of the manufacturing process. These problems include delays or break-downs in logistics and shipping, difficulties with production costs and yields, quality control, and product testing, operator error, lack of availability of qualified personnel, as well as failure to comply with strictly enforced federal, state and foreign regulations.

Furthermore, if microbial, viral or other contaminations are discovered in our supply of product candidates or in the manufacturing facilities, such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination. We cannot assure you that any of these or other issues relating to the manufacture of our product candidates will not occur in the future. Any delay or interruption in the supply of clinical trial supplies could delay the completion of clinical trials, increase the costs associated with maintaining clinical trial programs and, depending upon the period of delay, require us to begin new clinical trials at additional expense or terminate clinical trials completely.

Manufacturing facilities also require commissioning and validation activities to demonstrate that they operate as designed, and are subject to government inspections by the FDA and other comparable regulatory authorities. If we are unable to reliably produce products to specifications acceptable to the regulatory authorities, we may not obtain or maintain the approvals we need to manufacture our products. Further, manufacturing facilities may fail to pass government inspections prior to or after the commercial launch of our product candidates, which would cause significant delays and additional costs required to remediate any deficiencies identified by the regulatory authorities. Any of these challenges could delay completion of clinical trials, require bridging clinical trials or the repetition of one or more clinical trials, increase clinical trial costs, delay approval of our product candidate, impair commercialization efforts, increase our cost of goods, and have an adverse effect on our business, financial condition, results of operations and growth prospects.

Prior treatments can alter the cancer and negatively impact chances for achieving clinical activity with our ImmunoPhage product candidates.

Patients with head and neck and other cancers typically receive highly toxic lympho-depleting chemotherapy as their initial treatments that can impact the patient's responses to new therapies. Patients could also have received prior therapies that target the same target antigen on the cancer cells as our intended ImmunoPhage and thereby lead to a selection of cancer cells with low or no expression of the target. As a result, our product candidates may not recognize the cancer cell and may fail to achieve clinical activity. If any of our product candidates do not achieve a sufficient level of clinical activity, we may discontinue the development of that product candidate, which could have an adverse effect on the value of our common stock.

Even if we complete the necessary preclinical studies and clinical trials, the marketing approval process is expensive, time-consuming and uncertain and may prevent us or any future collaboration partners from obtaining approvals for the commercialization of SNS-301 as well as for any other product candidate we develop.

Any product candidate we may develop and the activities associated with their development and commercialization, including their design, testing, manufacture, safety, efficacy, recordkeeping, labeling,

storage, approval, advertising, promotion, sale, and distribution, are subject to comprehensive regulation by the FDA and other regulatory authorities in the United States and by comparable authorities in other countries. Failure to obtain marketing approval for a product candidate will prevent us from commercializing the product candidate in a given jurisdiction. We have not received approval to market any product candidates from regulatory authorities in any jurisdiction and it is possible that none of the product candidates we may seek to develop in the future will ever obtain regulatory approval. We have no experience in filing and supporting the applications necessary to gain marketing approvals and expect to rely on third-party contract research organizations, or CROs, or regulatory consultants to assist us in this process. Securing regulatory approval requires the submission of extensive preclinical and clinical data and supporting information to the various regulatory authorities for each therapeutic indication to establish the biologic product candidate's safety, purity, efficacy and potency. Securing regulatory approval also requires the submission of information about the product manufacturing process to, and inspection of manufacturing facilities by, the relevant regulatory authority. Any product candidates we develop may not be effective, may be only moderately effective, or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude our obtaining marketing approval or prevent or limit commercial use.

The process of obtaining marketing approvals, both in the United States and abroad, is expensive, may take many years if additional clinical trials are required, if approval is obtained at all, and can vary substantially based upon a variety of factors, including the type, complexity, and novelty of the product candidates involved. Changes in marketing approval policies during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for each submitted product application, may cause delays in the approval or rejection of an application. The FDA and comparable authorities in other countries have substantial discretion in the approval process and may refuse to accept any application or may decide that our data are insufficient for approval and require additional preclinical, clinical or other studies. In addition, varying interpretations of the data obtained from preclinical and clinical testing could delay, limit, or prevent marketing approval of a product candidate. Any marketing approval we ultimately obtain may be limited or subject to restrictions or post-approval commitments that render the approved product not commercially viable.

If we experience delays in obtaining approval or if we fail to obtain approval of any product candidates we may develop, the commercial prospects for those product candidates may be harmed, and our ability to generate revenues will be materially impaired.

Risks Related to our Dependence on Third Parties

We collaborate with third parties in connection with the development of our product candidates, and may depend upon future collaboration partners to commit to the research, development, manufacturing and marketing of our product candidates.

We collaborate with third parties for the development of our product candidates, including, for instance, our clinical trial collaboration with AstraZeneca for future Phase 2 clinical trials of SNS-301 in combination with durvalumab in the neoadjuvant setting and our collaboration with the University of Washington pursuant to which we are conducting preclinical studies for our SNS-401 program. We may enter into additional collaborations for our other current or future product candidates or technologies. We cannot control the timing or quantity of resources that our existing or future collaborators will dedicate to research, preclinical and clinical development, manufacturing or marketing of our products. Our collaborators may not perform their obligations according to our expectations or standards of quality. Our collaborators could terminate our existing agreements for a number of reasons.

In order to optimize the launch and market penetration of certain of our future product candidates, we may enter into distribution and marketing agreements with pharmaceutical industry leaders. For these product candidates, we would not market our products alone once they have obtained marketing authorization. The risks inherent in entry into these contracts are as follows:

- the negotiation and execution of these agreements is a long process that may not result in an agreement being signed or that can delay the development or commercialization of the product candidate concerned;
- these agreements are subject to cancellation or non-renewal by our collaborators, or may not be fully complied with by our collaborators;
- in the case of a license granted by us, we lose control of the development of the product candidate licensed; in such cases, we would only have limited control over the means and resources allocated by our partner for the commercialization of our product; and
- collaborators may not properly obtain, maintain, enforce, or defend our intellectual property or proprietary rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our proprietary information or expose us to potential litigation.

Should any of these risks materialize, or should we fail to find suitable collaborators, this could have a material adverse effect on our business, prospects, financial condition and results of operations.

We have entered, and may in the future enter into, partnership agreements with third parties for the development and commercialization of our product candidates. Our prospects with respect to those product candidates will depend in significant part on the success of those collaborations.

The advancement of our product candidates and development programs and the potential commercialization of our current and future product candidates will require substantial additional cash to fund expenses. For some of our programs, we may decide to collaborate with additional pharmaceutical and biotechnology companies with respect to development and potential commercialization. As such, we have entered into and may seek to enter into additional collaborations or partnerships with third parties for the development and potential commercialization of our product candidates.

We face significant competition in seeking appropriate collaborators. Should we seek to collaborate with a third party with respect to a prospective development program, we may not be able to locate a suitable partner or to enter into an agreement on commercially reasonable terms or at all. Even if we succeed in securing partners for the development and commercialization of our product candidates, we have limited control over the time and resources that our partners may dedicate to the development and commercialization of our product candidates. These partnerships pose a number of risks, including the following:

- partners may not have sufficient resources or decide not to devote the necessary resources due to internal constraints such as budget limitations, lack of human resources or a change in strategic focus;
- partners may believe our intellectual property is not valid or is unenforceable or the product candidate infringes on the intellectual property rights of others;
- partners may dispute their responsibility to conduct development and commercialization activities pursuant to the applicable collaboration, including the payment of related costs or the division of any revenues;
- partners may decide to pursue a competitive product developed outside of the collaboration arrangement;
- partners may not be able to obtain, or believe they cannot obtain, the necessary regulatory approvals; or
- partners may delay the development or commercialization of our product candidates in favor of developing or commercializing another party’s product candidate.

Thus, partnership agreements may not lead to development, regulatory approval or successful commercialization of product candidates in the most efficient manner or at all. Some partnership agreements are terminable without cause on short notice. Once a partnership agreement is signed, it may not lead to regulatory approval and commercialization of a product candidate. We also face competition in seeking out partners. If we are unable to secure new collaborations that achieve the collaborator's objectives and meet our expectations, we may be unable to advance our product candidates and may not generate meaningful revenues.

We rely, and expect to continue to rely, on third parties to conduct the preclinical and clinical trials for our product candidates, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such trials or failing to comply with applicable regulatory requirements.

We depend and will continue to depend upon independent investigators and collaborators, such as universities, medical institutions, and strategic partners to conduct our preclinical studies and clinical trials. Agreements with such third parties might terminate for a variety of reasons, including a failure to perform by the third parties. If we need to enter into alternative arrangements, our product development activities would be delayed.

Our reliance on these third parties for research and development activities will reduce our control over these activities but will not relieve us of our responsibilities. For example, we will remain responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA requires us to comply with regulatory standards, commonly referred to as good laboratory practices, or GLP, and good clinical practices, or GCP, for conducting, recording and reporting the results of preclinical and clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected. We are also required to register certain ongoing clinical trials and post the results of certain completed clinical trials on a government-sponsored database within specified timeframes. Failure to do so by us or third parties can result in FDA refusal to approve applications based on the clinical data, enforcement actions, adverse publicity and civil and criminal sanctions.

Furthermore, these third parties may also have relationships with other entities, some of which may be our competitors. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or conduct our clinical trials in accordance with regulatory requirements or our stated protocols, we will not be able to obtain, or may be delayed in obtaining, marketing approvals for our product candidates and will not be able to, or may be delayed in our efforts to, successfully commercialize our product candidates.

In addition, principal investigators for our clinical trials may serve as scientific advisors or consultants to us from time to time and may receive cash or equity compensation in connection with such services. If these relationships and any related compensation result in perceived or actual conflicts of interest, or the FDA concludes that the financial relationship may have affected the interpretation of the trial, the integrity of the data generated at the applicable clinical trial site may be questioned and the utility of the clinical trial itself may be jeopardized, which could result in the delay or rejection by the FDA. Any such delay or rejection could prevent us from commercializing our clinical-stage product candidates or any future product candidates.

To develop immunotherapeutic candidates, we rely on the availability of reagents, specialized equipment, and other specialty materials, which may not be available to us on acceptable terms or at all. For some of these reagents, equipment, and materials, we may rely on sole source vendors or a limited number of vendors, which could impair our ability to manufacture and supply our products.

Manufacturing our product candidates will require many reagents, which are substances used in our manufacturing processes to bring about chemical or biological reactions, and other specialty materials and equipment, some of which are manufactured or supplied by small companies with limited resources and experience to support commercial biologics production. We currently depend on a limited number of vendors for access to facilities and supply of certain materials and equipment used in the manufacture of our product

candidates. For example, we purchase equipment and reagents critical for the manufacture of our product candidates from third parties on a purchase order basis. Some of our suppliers may not have the capacity to support commercial products manufactured under cGMP by biopharmaceutical firms or may otherwise be ill-equipped to support our needs. We also do not have supply contracts with many of these suppliers, and may not be able to obtain supply contracts with them on acceptable terms or at all. Accordingly, we may not be able to obtain key materials and equipment to support clinical or commercial manufacturing.

For some of these reagents, equipment, and materials, we may in the future rely on sole source vendors or a limited number of vendors. An inability to source product from any of these suppliers, which could be due to regulatory actions or requirements affecting the supplier, adverse financial or other strategic developments experienced by a supplier, labor disputes or shortages, widespread business interruption, unexpected demands, or quality issues, could adversely affect our ability to satisfy demand for our product candidates, which could adversely and materially affect our product sales and operating results or our ability to conduct clinical trials, either of which could significantly harm our business.

As we continue to develop and scale our manufacturing process, we may need to obtain rights to and supplies of certain materials and equipment to be used as part of that process. We may not be able to obtain rights to such materials on commercially reasonable terms, or at all, and if we are unable to alter our process in a commercially viable manner to avoid the use of such materials or find a suitable substitute, it would have a material adverse effect on our business.

Our employees, principal investigators, CROs and consultants may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements.

We are exposed to the risk that our employees, principal investigators, CROs and consultants may engage in fraudulent conduct or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or disclosure of unauthorized activities to us that violate the regulations of the FDA and other regulatory authorities, including those laws requiring the reporting of true, complete and accurate information to such authorities; healthcare fraud and abuse laws and regulations in the United States and abroad; or laws that require the reporting of financial information or data accurately. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Activities subject to these laws also involve the improper use of information obtained in the course of clinical trials or creating fraudulent data in our preclinical studies or clinical trials, which could result in regulatory sanctions and cause serious harm to our reputation. We intend to adopt, prior to the completion of this offering, a code of conduct applicable to all of our employees, but it is not always possible to identify and deter misconduct by employees and other third parties, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. Additionally, we are subject to the risk that a person could allege such fraud or other misconduct, even if none occurred. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of civil, criminal and administrative penalties, damages, monetary fines, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, and curtailment of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

Risks Related to Regulatory Approval of our Product Candidates and Other Legal Compliance Matters

If we are not able to obtain, or if there are delays in obtaining, required regulatory approvals for our product candidates, we will not be able to commercialize, or will be delayed in commercializing, our product candidates, and our ability to generate revenue will be materially impaired.

Our product candidates and the activities associated with their development and commercialization, including their design, testing, manufacture, safety, efficacy, recordkeeping, labeling, storage, approval, advertising, promotion, sale, distribution, import and export are subject to comprehensive regulation by the FDA and other regulatory agencies in the United States and by comparable authorities in other countries. Before we can commercialize any of our product candidates, we must obtain marketing approval. Currently, all of our product candidates are in development, and we have not received approval to market any of our product candidates from regulatory authorities in any jurisdiction. It is possible that our product candidates, including any product candidates we may seek to develop in the future, will never obtain regulatory approval. Whether the results from our current ongoing clinical trials and other trials will suffice to obtain approval will be a review issue and the FDA may not grant approval and may require that we conduct one or more controlled clinical trials to obtain approval. Additionally, even if FDA does grant approval for one or more of our product candidates, it may be for a more narrow indication than we seek. Regulatory authorities, including the FDA, also may impose significant limitations in the form of narrow indications, warnings or a REMS. These regulatory authorities may require labeling that includes precautions or contra-indications with respect to conditions of use, or they may grant approval subject to the performance of costly post-marketing clinical trials. In addition, regulatory authorities may not approve the labeling claims that are necessary or desirable for the successful commercialization of any product candidates we may develop.

We have only limited experience in filing and supporting the applications necessary to gain regulatory approvals and expect to rely on third-party CROs and/or regulatory consultants to assist us in this process. Securing regulatory approval requires the submission of extensive preclinical and clinical data and supporting information to the various regulatory authorities for each therapeutic indication to establish the product candidate's safety and efficacy. Securing regulatory approval also requires the submission of information about the product manufacturing process to, and inspection of manufacturing facilities by, the relevant regulatory authority. Our product candidates may not be effective, may be only moderately effective or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude our obtaining marketing approval or prevent or limit commercial use. In addition, regulatory authorities may find fault with our manufacturing process or facilities or that of third-party contract manufacturers. We may also face greater than expected difficulty in manufacturing our product candidates.

The process of obtaining regulatory approvals, both in the United States and abroad, is expensive and often takes many years. If the FDA or a comparable foreign regulatory authority requires that we perform additional preclinical studies or clinical trials, approval, if obtained at all, may be delayed. The length of such a delay varies substantially based upon a variety of factors, including the type, complexity and novelty of the product candidates involved. Changes in marketing approval policies during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for each submitted BLA, premarket approval application, or equivalent application types, may cause delays in the approval or rejection of an application. The FDA and comparable authorities in other countries have substantial discretion in the approval process and may refuse to accept any application or may decide that our data are insufficient for approval and require additional preclinical, clinical or other studies. Our product candidates could be delayed in receiving, or fail to receive, regulatory approval for many reasons, including the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our preclinical studies or clinical trials;
- we may not be able to enroll a sufficient number of patients in our clinical studies;

- we may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a product candidate is safe and effective for its proposed indication or a related companion diagnostic is suitable to identify appropriate patient populations;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- we may be unable to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- the FDA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials of our product candidates may not be sufficient to support the submission of an NDA or other submission or to obtain regulatory approval in the United States or elsewhere;
- the FDA or comparable foreign regulatory authorities may find deficiencies with or fail to approve the manufacturing processes or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; and
- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change such that our clinical data are insufficient for approval.

Even if we were to obtain approval, regulatory authorities may approve any of our product candidates for fewer or more limited indications than we request, thereby narrowing the commercial potential of the product candidate. In addition, regulatory authorities may grant approval contingent on the performance of costly post-marketing clinical trials, or may approve a product candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that product candidate. Any of the foregoing scenarios could materially harm the commercial prospects for our product candidates.

If we experience delays in obtaining approval or if we fail to obtain approval of our product candidates, the commercial prospects for our product candidates may be harmed and our ability to generate revenues will be materially impaired.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not mean that we will be successful in obtaining regulatory approval of our product candidates in other jurisdictions.

We may also submit marketing applications in other countries. Regulatory authorities in jurisdictions outside of the United States have requirements for approval of product candidates with which we must comply prior to marketing in those jurisdictions. Obtaining foreign regulatory approvals and compliance with foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our products in certain countries. If we fail to comply with the regulatory requirements in international markets and/or receive applicable marketing approvals, our target market will be reduced and our ability to realize the full market potential of our product candidates will be harmed.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not guarantee that we will be able to obtain or maintain regulatory approval in any other jurisdiction, while a failure or delay in obtaining regulatory approval in one jurisdiction may have a negative effect on the regulatory approval process in others. For example, even if the FDA grants marketing approval of a product candidate, comparable regulatory authorities in foreign jurisdictions must also approve the manufacturing, marketing and promotion of the product candidate in those countries. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from, and greater than, those in the United States, including additional nonclinical studies or clinical trials as clinical trials conducted in one jurisdiction may not be accepted by regulatory authorities in other jurisdictions. In short, the foreign regulatory approval

process involves all of the risks associated with FDA approval. In many jurisdictions outside the United States, a product candidate must be approved for reimbursement before it can be approved for sale in that jurisdiction. In some cases, the price that we may intend to charge for our products will also be subject to approval.

Even if we receive regulatory approval for any of our product candidates, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense. Additionally, our product candidates, if approved, could be subject to post-market study requirements, marketing and labeling restrictions, and even recall or market withdrawal if unanticipated safety issues are discovered following approval. In addition, we may be subject to penalties or other enforcement action if we fail to comply with regulatory requirements.

If the FDA or a comparable foreign regulatory authority approves any of our product candidates, the manufacturing processes, labeling, packaging, distribution, storage, advertising, promotion, import, export, recordkeeping, monitoring, and reporting for our product will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, establishment registration and listing, as well as continued compliance with cGMPs and GCPs for any clinical trials that we conduct post-approval. Any regulatory approvals that we receive for our product candidates may also be subject to limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing studies, including Phase 4 clinical trials, and surveillance to monitor the safety and efficacy of the product.

The FDA may require a REMS in order to approve our product candidates, which could entail requirements for a medication guide, physician communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with our third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in, among other things:

- restrictions on the marketing or manufacturing of the product, withdrawal of the product from the market, or voluntary or mandatory product recalls;
- revision to the labeling, including limitations on approved uses or the addition of additional warnings, contraindications or other safety information, including boxed warnings;
- imposition of a REMS, which may include distribution or use restrictions;
- requirements to conduct additional post-market clinical trials to assess the safety of the product;
- fines, warning letters or other regulatory enforcement action;
- refusal by the FDA to approve pending applications or supplements to approved applications filed by us;
- product seizure or detention, or refusal to permit the import or export of products; and
- injunctions or the imposition of civil or criminal penalties.

The FDA's and other regulatory authorities' policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained, which would adversely affect our business, prospects and ability to achieve or sustain profitability.

If we are unable to successfully validate, develop and obtain regulatory approval for any required companion diagnostic tests for our product candidates or experience significant delays in doing so, we may fail to obtain approval or may not realize the full commercial potential of these product candidates.

In connection with the clinical development of our product candidates for certain indications, we may develop or engage third parties to develop or obtain access to *in vitro* companion diagnostic tests to identify

patient subsets within a disease category who may derive benefit from our product candidates, as we are targeting certain genetically defined populations for our treatments. Such companion diagnostics may be used during our clinical trials and may be required in connection with the FDA approval of our product candidates. To be successful, we or our collaborators will need to address a number of scientific, technical, regulatory and logistical challenges. Companion diagnostics are subject to regulation by the FDA, EMA and other regulatory authorities as medical devices and require separate regulatory approval prior to commercialization.

We may rely on third parties for the design, development and manufacture of companion diagnostic tests for our therapeutic product candidates that may require such tests. If we enter into such collaborative agreements, we will be dependent on the sustained cooperation and effort of our future collaborators in developing and obtaining approval for these companion diagnostics. We and our future collaborators may encounter difficulties in developing and obtaining approval for the companion diagnostics, including issues relating to selectivity/specificity, analytical validation, reproducibility, or clinical validation of companion diagnostics. We and our future collaborators also may encounter difficulties in developing, obtaining regulatory approval for, manufacturing and commercializing companion diagnostics similar to those we face with respect to our therapeutic product candidates themselves, including issues with achieving regulatory clearance or approval, production of sufficient quantities at commercial scale and with appropriate quality standards, and in gaining market acceptance. If we are unable to successfully develop companion diagnostics for these therapeutic product candidates, or experience delays in doing so, the development of these therapeutic product candidates may be adversely affected, these therapeutic product candidates may not obtain marketing approval or such approval may be delayed, and we may not realize the full commercial potential of any of these therapeutics that obtain marketing approval. As a result, our business, results of operations and financial condition could be materially harmed. In addition, a diagnostic company with whom we contract may decide to discontinue developing, selling or manufacturing the companion diagnostic test that we anticipate using in connection with development and commercialization of our product candidates or our relationship with such diagnostic company may otherwise terminate. We may not be able to enter into arrangements with another diagnostic company to obtain supplies of an alternative diagnostic test for use in connection with the development and commercialization of our product candidates or do so on commercially reasonable terms, which could adversely affect and/or delay the development or commercialization of our therapeutic product candidates.

Our relationships with customers, healthcare professionals, and third-party payors will be subject to applicable anti-kickback, fraud and abuse and other healthcare laws and regulations, which could expose us to significant penalties, including criminal sanctions, administrative civil penalties, exclusion from government healthcare programs, contractual damages, reputational harm and diminished profits and future earnings.

Our current and future business operations and activities may subject us to additional healthcare statutory and regulatory requirements and enforcement by the federal government and the states and foreign governments in which we conduct our business. Healthcare providers and third-party payors play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our current and future arrangements with healthcare professionals, third-party payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we research as well as market, sell and distribute our product candidates for which we obtain marketing approval. These laws and regulations may restrict or prohibit a wide range of ownership, pricing, discounting, marketing and promotion, structuring and commission(s), certain customer incentive programs and other business arrangements generally. Restrictions under applicable federal and state healthcare laws and regulations, include the following:

- the federal Anti-Kickback Statute prohibits, among other things, persons and entities from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made under federal and state healthcare programs such as

Medicare and Medicaid. The Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers, on the one hand, and prescribers, purchasers and formulary managers, on the other. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;

- the federal civil and criminal false claims, including the federal False Claims Act, or FCA, which can be enforced through civil whistleblower or qui tam actions, and civil monetary penalties laws, which impose criminal and civil penalties against individuals or entities for knowingly presenting, or causing to be presented, to the federal government, claims for payment that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government. In addition, the government may assert that a claim including items and services resulting from a violation of the federal Anti-Kickback Statute constitutes a false of fraudulent claim for purposes of the FCA;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, imposes criminal and civil liability for executing a scheme to defraud any healthcare benefit program, or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement in connection with the delivery of or payment for healthcare benefits, items or services; similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- the federal physician payment transparency requirements, sometimes referred to as the "Sunshine Act" under the Affordable Care Act, require certain manufacturers of drugs, devices, biologics and medical supplies that are reimbursable under Medicare, Medicaid, or the Children's Health Insurance Program to report to the Centers for Medicare & Medicaid Services, or CMS, information related to transfers of value made to physicians (currently defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, as well as ownership and investment interests of such physicians and their immediate family members. Effective January 1, 2022, these reporting obligations will extend to include transfers of value made to and ownership interest held by certain non-physician providers such as physician assistants, nurse practitioners, clinical nurse specialists, anesthesiologist assistants, certified registered nurse anesthetists and certified nurse midwives during the previous year;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 and its implementing regulations, impose obligations on certain covered entity healthcare providers, health plans, and healthcare clearinghouses and their business associates that perform certain services involving the use or disclosure of individually identifiable health information as well as their covered subcontractors, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information; and
- analogous state laws and regulations, such as state anti-kickback and false claims laws may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers. Some state laws require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government in addition to requiring drug manufacturers to report information related to payments to physicians and other health care providers or marketing expenditures. Some state and local laws require the registration of pharmaceutical sales representatives. Further, many state laws governing the privacy and security of health information in certain circumstances, differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Because of the breadth of these laws and the narrowness of the statutory exceptions and regulatory safe harbors available, it is possible that some of our business activities, including compensation of physicians with stock or stock options, could, despite efforts to comply, be subject to challenge under current or future statutes, regulations or case law interpreting applicable fraud and abuse or other healthcare laws and regulations. Ensuring that our business arrangements with third parties comply with applicable healthcare laws and regulations could

involve substantial costs. It is possible that governmental authorities will conclude that our business practices do not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations, including anticipated activities to be conducted by our sales team, were to be found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from government funded healthcare programs, such as Medicare and Medicaid, contractual damages, integrity oversight and reporting obligations, reputational harm, diminished profits and future earnings, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations. If any of the physicians or other providers or entities with whom we expect to do business is found not to be in compliance with applicable laws, they may be subject to significant criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs. In addition, the approval and commercialization of any of our product candidates outside the United States will also likely subject us to foreign equivalents of the healthcare laws mentioned above, among other foreign laws.

Healthcare legislative reform measures may have a material adverse effect on our business and results of operations.

The U.S. and many foreign jurisdictions have enacted or proposed legislative and regulatory changes affecting the healthcare system that could prevent or delay marketing approval of our current or future product candidates or any future product candidates, restrict or regulate post-approval activities and affect our ability to profitably sell a product for which we obtain marketing approval. Changes in regulations, statutes or the interpretation of existing regulations could impact our business in the future by requiring, for example: (i) changes to our manufacturing arrangements, (ii) additions or modifications to product labeling, (iii) the recall or discontinuation of our products or (iv) additional record-keeping requirements. If any such changes were to be imposed, they could adversely affect the operation of our business. In the U.S., there have been and continue to be a number of legislative initiatives to contain healthcare costs. For example, in March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care Education and Reconciliation Act, or collectively the ACA, was passed, which substantially changed the way healthcare is financed by both governmental and private insurers, and significantly impacted the U.S. pharmaceutical industry. The ACA, among other things, subjected biological products to potential competition by lower-cost biosimilars, addressed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected, increases the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program and extended the rebate program to individuals enrolled in Medicaid managed care organizations, established annual fees and taxes on manufacturers of certain branded prescription drugs, and created a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 70% (increased pursuant to the Bipartisan Budget Act of 2018, effective as of 2019) point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D.

Members of the U.S. Congress and the Trump administration have expressed intent to pass legislation or adopt executive orders to fundamentally change or repeal parts of the ACA. While Congress has not passed comprehensive repeal legislation to date, the Tax Act, repealed, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate." On December 14, 2018, a federal district court in Texas ruled the individual mandate is a critical and inseverable feature of the ACA, and therefore, because it was repealed as part of the Tax Act, the remaining provisions of the ACA are invalid as well. On December 18, 2019, the Fifth Circuit U.S. Court of Appeals held that the individual mandate is unconstitutional, and remanded the case to the lower court to determine whether the remaining provisions of the ACA are invalid as well. On March 2, 2020, the U.S. Supreme Court granted the petitions for writs of

certiorari to review this case. It is unclear how such litigation and other efforts to repeal and replace the ACA will impact the ACA and our business. It is uncertain when a decision will be reached.

Since January 2017, the current presidential administration has signed several Executive Orders and other directives designed to eliminate the implementation of certain provisions of the ACA or otherwise circumvent some of the requirements for health insurance mandated by the ACA. Concurrently, Congress has considered legislation that would repeal or repeal and replace all or part of the ACA. While Congress has not passed comprehensive repeal legislation, it has enacted laws that modify certain provisions of the ACA. For example, on January 22, 2018, a continuing resolution on appropriations for fiscal year 2018 was approved that delayed the implementation of certain ACA-mandated fees, including the so called "Cadillac" tax on certain high cost employer-sponsored insurance plans, the annual fee imposed on certain health insurance providers based on market share, and the medical device excise tax on non-exempt medical devices; however on December 20, 2019, the Further Consolidated Appropriations Act (H.R. 1865) was signed into law, which repeals the Cadillac tax, the health insurance provider tax, and the medical device excise tax. It is impossible to determine whether similar taxes could be instated in the future. The Bipartisan Budget Act of 2018, also amended the ACA, effective January 1, 2019, by increasing the point-of-sale discount that is owed by pharmaceutical manufacturers who participate in Medicare Part D and closing the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole." CMS published a final rule permitting further collections and payments to and from certain ACA qualified health plans and health insurance issuers under the ACA risk adjustment program in response to the outcome of federal district court litigation regarding the method CMS uses to determine this risk adjustment.

In addition, other legislative changes have been proposed and adopted since the ACA was enacted. In August 2011, the Budget Control Act of 2011, among other things, created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions of Medicare payments to providers up to 2% per fiscal year, and, due to subsequent legislative amendments, will remain in effect through 2030 unless additional Congressional action is taken. However, the Medicare sequester reductions under the Budget Control Act of 2011 have been suspended from May 1, 2020 through March 31, 2021 due to the COVID-19 pandemic. The American Taxpayer Relief Act of 2012 among other things, reduced Medicare payments to several providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

There has been increasing legislative and enforcement interest in the U.S. with respect to specialty drug pricing practices. Specifically, there have been several recent U.S. Congressional inquiries and proposed federal and state legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drugs. At the federal level, the Trump administration's budget for fiscal year 2021 includes a $135 billion allowance to support legislative proposals seeking to reduce drug prices, increase competition, lower out-of-pocket drug costs for patients, and increase patient access to lower-cost generic and biosimilar drugs. On March 10, 2020, the Trump administration sent "principles" for drug pricing to Congress, calling for legislation that would, among other things, cap Medicare Part D beneficiary out-of-pocket pharmacy expenses, provide an option to cap Medicare Part D beneficiary monthly out-of-pocket expenses, and place limits on pharmaceutical price increases. Additionally, the Trump administration previously released a "Blueprint" to lower drug prices and reduce out of pocket costs of drugs that contained proposals to increase manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products and reduce the out of pocket costs of product candidates paid by consumers. The U.S. Department of Health and Human Services, or HHS, has already started the process of soliciting feedback on some of these measures and, at the same time, is immediately implementing others under its existing authority. For example, in May 2019, CMS issued a final

rule to allow Medicare Advantage Plans the option of using step therapy, a type of prior authorization, for Part B drugs beginning January 1, 2020. This final rule codified CMS's policy change that was effective January 1, 2019. Additionally, on July 24, 2020 and September 13, 2020, the Trump administration announced several executive orders related to prescription drug pricing that seek to implement several of the administration's proposals. As a result, the FDA also released a final rule on September 24, 2020 providing guidance for states to build and submit importation plans for drugs from Canada. Further, on November 20, 2020, HHS finalized a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers. Further, in November 2020, CMS issued an interim final rule implementing the Most Favored Nation, or MFN, Model under which Medicare Part B reimbursement rates will be calculated for certain drugs and biologicals based on the lowest price drug manufacturers receive in Organization for Economic Cooperation and Development countries with a similar gross domestic product per capita. The MFN Model regulations mandate participation by identified Part B providers and will apply in all U.S. states and territories for a seven-year period beginning January 1, 2021, and ending December 31, 2027. On December 28, 2020, the United States District Court in Northern California issued a nationwide preliminary injunction against implementation of the interim final rule. The likelihood of implementation of any of the other Trump administration reform initiatives is uncertain, particularly in light of the recent U.S. presidential election.

At the state level, individual states are increasingly aggressive in passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. In addition, regional health care authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other health care programs. These measures could reduce the ultimate demand for our products, once approved, or put pressure on our product pricing.

We expect that additional state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for our current or future product candidates or additional pricing pressures. In particular any policy changes through CMS as well as local state Medicaid programs could have a significant impact on our business in light of the higher proportion of SCD patients that utilize Medicare and Medicaid programs to pay for treatments.

Our revenue prospects could be affected by changes in healthcare spending and policy in the U.S. and abroad. We operate in a highly regulated industry and new laws, regulations or judicial decisions, or new interpretations of existing laws, regulations or decisions, related to healthcare availability, the method of delivery or payment for healthcare products and services could negatively impact our business, operations and financial condition.

There have been, and likely will continue to be, legislative and regulatory proposals at the foreign, federal and state levels directed at broadening the availability of healthcare and containing or lowering the cost of healthcare. We cannot predict the initiatives that may be adopted in the future, including repeal, replacement or significant revisions to the ACA. The continuing efforts of the government, insurance companies, managed care organizations and other payors of healthcare services to contain or reduce costs of healthcare and/or impose price controls may adversely affect:

- the demand for our current or future product candidates, if we obtain regulatory approval;
- our ability to set a price that we believe is fair for our products;
- our ability to obtain coverage and reimbursement approval for a product;
- our ability to generate revenue and achieve or maintain profitability;

- the level of taxes that we are required to pay; and
- the availability of capital.

Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors, which may adversely affect our future profitability.

Further, it is possible that additional governmental action is taken in response to the COVID-19 pandemic. For example, on August 6, 2020, the Trump administration issued another executive order that instructs the federal government to develop a list of "essential" medicines and then buy them and other medical supplies from U.S. manufacturers instead of from companies around the world, including China. The order is meant to reduce regulatory barriers to domestic pharmaceutical manufacturing and catalyze manufacturing technologies needed to keep drug prices low and the production of drug products in the United States.

We are subject to the U.K. Bribery Act 2010, or the Bribery Act, the U.S. Foreign Corrupt Practices Act of 1977, as amended, or the FCPA, and other anti-corruption laws, as well as export control laws, import and customs laws, trade and economic sanctions laws and other laws governing our operations.

Our operations are subject to anti-corruption laws, including the Bribery Act, the FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. §201, the U.S. Travel Act, and other anti-corruption laws that apply in countries where we do business. The Bribery Act, the FCPA and these other laws generally prohibit us and our employees and intermediaries from authorizing, promising, offering, or providing, directly or indirectly, improper or prohibited payments, or anything else of value, to government officials or other persons to obtain or retain business or gain some other business advantage. Under the Bribery Act, we may also be liable for failing to prevent a person associated with us from committing a bribery offense. We and our commercial partners operate in a number of jurisdictions that pose a high risk of potential Bribery Act, or FCPA, violations, and we participate in collaborations and relationships with third parties whose corrupt or illegal activities could potentially subject us to liability under the Bribery Act, FCPA or local anti-corruption laws, even if we do not explicitly authorize or have actual knowledge of such activities. In addition, we cannot predict the nature, scope or effect of future regulatory requirements to which our international operations might be subject or the manner in which existing laws might be administered or interpreted.

We are also subject to other laws and regulations governing our international operations, including regulations administered by the governments of the United Kingdom and the United States, and authorities in the European Union, including applicable export control regulations, economic sanctions and embargoes on certain countries and persons, anti-money laundering laws, import and customs requirements and currency exchange regulations, collectively referred to as the Trade Control laws.

There is no assurance that we will be completely effective in ensuring our compliance with all applicable anti-corruption laws, including the Bribery Act, the FCPA or other legal requirements, including Trade Control laws. If we are not in compliance with the Bribery Act, the FCPA and other anti-corruption laws or Trade Control laws, we may be subject to criminal and civil penalties, disgorgement and other sanctions and remedial measures, and legal expenses, which could have an adverse impact on our business, financial condition, results of operations and liquidity. Likewise, any investigation of any potential violations of the Bribery Act, the FCPA, other anti-corruption laws or Trade Control laws by United Kingdom, United States or other authorities could also have an adverse impact on our reputation, our business, results of operations and financial condition.

If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could have a material adverse effect on the success of our business.

We are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our operations involve the use of hazardous and flammable materials, including chemicals and biological materials. Our operations also produce hazardous waste products. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from our use of hazardous materials, we

could be held liable for any resulting damages, and any liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties. Furthermore, environmental laws and regulations are complex, change frequently and have tended to become more stringent. We cannot predict the impact of such changes and cannot be certain of our future compliance. In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. Failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials or other work-related injuries, this insurance may not provide adequate coverage against potential liabilities. In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. Failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions or liabilities, which could materially adversely affect our business, financial condition, results of operations and prospects.

Risks Related to the Commercialization of our Product Candidates

If we are unable to establish sales, marketing and distribution capabilities for our product candidates, or enter into sales, marketing and distribution agreements with third parties, we may not be successful in commercializing our product candidates, if approved.

We currently plan to work to build our global commercialization capabilities internally over time such that we are able to commercialize any product candidate for which we may obtain regulatory approval. However, we currently have no sales, marketing or distribution capabilities and have no experience in marketing or distributing pharmaceutical products. To achieve commercial success for any product candidate for which we may obtain marketing approval, we will need to expand our sales and marketing organization and establish logistics and distribution processes to commercialize and deliver our product candidates to patients and healthcare providers. The development of sales, marketing and distribution capabilities will require substantial resources, will be time-consuming and could delay any product launch.

If we are unable or decide not to establish internal sales, marketing and distribution capabilities, we would have to pursue collaborative arrangements regarding the sales and marketing of our products. However, we may not be successful in entering into arrangements with third parties to sell, market and distribute our product candidates or may be unable to do so on terms that are favorable to us, or if we are able to do so, that they would be effective and successful in commercializing our products. Our product revenues and our profitability, if any, would likely to be lower than if we were to sell, market and distribute any product candidates that we develop ourselves. In addition, we would have limited control over such third parties, and any of them may fail to devote the necessary resources and attention to sell and market our product candidates effectively.

If we do not establish sales, marketing and distribution capabilities successfully, either on our own or in collaboration with third parties, we will not be successful in commercializing our product candidates in the United States or overseas.

We operate in a rapidly changing industry and face significant competition, which may result in others discovering, developing or commercializing products before or more successfully than we do.

The development and commercialization of new biopharmaceutical products is highly competitive and subject to rapid and significant technological advancements. We face competition from major multi-national pharmaceutical companies, biotechnology companies and specialty pharmaceutical companies with respect to our current and future product candidates that we may develop and commercialize in the future. There are a number

of large pharmaceutical and biotechnology companies that currently market and sell products or are pursuing the development of product candidates for the treatment of cancer. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large, established companies. Potential competitors also include academic institutions, government agencies and other public and private research organizations.

In addition to the current standard of care treatments for patients with infectious diseases or cancers, numerous commercial and academic preclinical studies and clinical trials are being undertaken by a large number of parties to assess novel technologies and product candidates in the field of immunotherapy. Results from these studies and trials have fueled increasing levels of interest in the field of immunotherapy.

Large pharmaceutical companies that have commercialized or are developing immunotherapies to treat cancer include AstraZeneca, Bristol Myers Squibb, Gilead Sciences, Merck, Novartis, Pfizer, and Roche/Genentech.

On the technology level, other companies which can potentially develop competing product candidates which act to stimulate the body's immune response as a treatment for SCCHN and other solid tumors include companies developing cell-based therapeutics such as CAR-T/TCR/NK therapies as well as companies developing therapeutic vaccines including BioNTech, Moderna, Gritstone Oncology and Oncorus, among others. In addition, a number of companies are developing oncolytic virus approaches, including Boehringer Ingelheim, Johnson and Johnson, Regeneron, Vyriad, Replimune and Turnstone. Amgen has received FDA approval for its oncolytic virus-based product, T-VEC.

Ablynx, a subsidiary of Sanofi, and Oncorus are actively pursuing the development of nanobodies as therapeutics.

Our competitors with development-stage programs may obtain marketing approval from the FDA or other comparable regulatory authorities for their product candidates more rapidly than we do, and they could establish a strong market position before we are able to enter the market. In addition, our competitors may succeed in developing, acquiring or licensing technologies and products that are more effective, more effectively marketed and sold or less costly than any product candidates that we may develop, which could render our product candidates non-competitive and obsolete.

Many of our competitors, either alone or with their strategic collaborators, have substantially greater financial, technical and human resources than we do. Accordingly, our competitors may be more successful than we are in obtaining approval for treatments and achieving widespread market acceptance, which may render our treatments obsolete or non-competitive. Mergers and acquisitions in the biotechnology and pharmaceutical industries may result in even more resources being concentrated among a smaller number of our competitors. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical studies, as well as in acquiring technologies complementary to, or necessary for, our programs. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive or better reimbursed than any products that we may commercialize. Our competitors also may obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position for either the product or a specific indication before we are able to enter the market.

Even if any of our product candidates receives marketing approval, it may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success.

Even if we obtain approvals from the FDA or other comparable regulatory agencies and are able to initiate commercialization of our clinical-stage product candidates or any other product candidates we develop, the product candidate may not achieve market acceptance among physicians, patients, hospitals, including pharmacy directors, and third-party payors and, ultimately, may not be commercially successful. The degree of market acceptance of our product candidates, if approved for commercial sale, will depend on a number of factors, including:

- the clinical indications for which our product candidates are approved;
- physicians, hospitals, cancer treatment centers, and patients considering our product candidates as a safe and effective treatment;
- the potential and perceived advantages of our product candidates over alternative treatments;
- the prevalence and severity of any side effects;
- product labeling or product insert requirements of the FDA or other regulatory authorities;
- limitations or warnings contained in the labeling approved by the FDA;
- the timing of market introduction of our product candidates as well as competitive products;
- the cost of treatment in relation to alternative treatments;
- the amount of upfront costs or training required for physicians to administer our product candidates;
- the availability of coverage, adequate reimbursement from, and our ability to negotiate pricing with, third-party payors and government authorities;
- the willingness of patients to pay out-of-pocket in the absence of comprehensive coverage and reimbursement by third-party payors and government authorities;
- relative convenience and ease of administration, including as compared to alternative treatments and competitive therapies; and
- the effectiveness of our sales and marketing efforts and distribution support.

Our efforts to educate physicians, patients, third-party payors and others in the medical community on the benefits of our product candidates, if approved, may require significant resources and may never be successful. Such efforts may require more resources than are typically required due to the complexity and uniqueness of our product candidates. Because we expect sales of our product candidates, if approved, to generate substantially all of our product revenue for the foreseeable future, the failure of our product candidates to find market acceptance would harm our business and could require us to seek additional financing.

In addition, although we are not utilizing embryonic stem cells or replication competent vectors, adverse publicity due to the ethical and social controversies surrounding the therapeutic use of such technologies, and reported side effects from any clinical trials using these technologies or the failure of such trials to demonstrate that these therapies are safe and effective, may limit market acceptance our product candidates. If our product candidates are approved but fail to achieve market acceptance among physicians, patients, hospitals, cancer treatment centers or others in the medical community, we will not be able to generate significant revenue.

Even if our product candidates, if approved, achieve market acceptance, we may not be able to maintain that market acceptance over time if new products or technologies are introduced that are more favorably received than our products, are more cost effective or render our products obsolete.

Coverage and adequate reimbursement may not be available for our current or any future product candidates, which could make it difficult for us to sell profitably, if approved.

Market acceptance and sales of any product candidates, if approved, that we commercialize will depend in part on the extent to which reimbursement for these products and related treatments will be available from third-party payors, including government health administration authorities, managed care organizations and private health insurers. Third-party payors decide which therapies they will pay for and establish reimbursement levels. In the United States, the principal decisions about reimbursement for new medicines are typically made by CMS, an agency within HHS. CMS decides whether and to what extent a new medicine will be covered and reimbursed under Medicare and private payors tend to follow CMS to a substantial degree. However, decisions regarding the extent of coverage and amount of reimbursement to be provided for any product candidates that we develop will be made on a payor-by-payor basis. Further, no uniform policy for coverage and reimbursement exists in the United States, and coverage and reimbursement can differ significantly from payor to payor. As a result, one payor's determination to provide coverage for a drug does not assure that other payors will also provide coverage and adequate reimbursement for the drug. Additionally, a third-party payor's decision to provide coverage for a therapy does not imply that an adequate reimbursement rate to allow us to establish or maintain pricing sufficient to realize a sufficient return on our investment will be approved. Third-party payors are increasingly challenging the price, examining the medical necessity and reviewing the cost-effectiveness of medical products, therapies and services, in addition to questioning their safety and efficacy. We may incur significant costs to conduct expensive pharmaco-economic studies in order to demonstrate the medical necessity and cost-effectiveness of our product candidates, in addition to the costs required to obtain FDA approvals. Our product candidates may not be considered medically necessary or cost-effective.

Each payor determines whether or not it will provide coverage for a therapy, what amount it will pay the manufacturer for the therapy, and on what tier of its list of covered drugs, or formulary, it will be placed. The position on a payor's formulary, generally determines the co-payment that a patient will need to make to obtain the therapy and can strongly influence the adoption of such therapy by patients and physicians. Patients who are prescribed treatments for their conditions and providers prescribing such services generally rely on third-party payors to reimburse all or part of the associated healthcare costs. Patients are unlikely to use our products, and providers are unlikely to prescribe our products, unless coverage is provided and reimbursement is adequate to cover a significant portion of the cost of our products and their administration. Therefore, coverage and adequate reimbursement is critical to new medical product acceptance.

In addition, companion diagnostic tests require coverage and reimbursement separate and apart from the coverage and reimbursement for their companion pharmaceutical or biological products. Similar challenges to obtaining coverage and reimbursement, applicable to pharmaceutical or biological products, will apply to companion diagnostics. Additionally, if any companion diagnostic provider is unable to obtain reimbursement or is inadequately reimbursed, that may limit the availability of such companion diagnostic, which would negatively impact prescriptions for our product candidates, if approved.

A primary trend in the U.S. healthcare industry and elsewhere is cost containment. Third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. We cannot be sure that coverage and reimbursement will be available for any drug that we commercialize and, if reimbursement is available, what the level of reimbursement will be. Even if favorable coverage and reimbursement status is attained for one or more product candidates for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future. Inadequate coverage and reimbursement may impact the demand for, or the price of, any drug for which we obtain marketing approval. If coverage and adequate reimbursement are not available, or are available only to limited levels, we may not be able to successfully commercialize our current and any future product candidates that we develop. In many countries, the prices of medical products are subject to varying price control mechanisms as part of national health systems. In general, the prices of medicines under such systems are substantially lower than in the United States. Other countries allow companies to fix their own prices for medicines, but monitor and control

company profits. Additional foreign price controls or other changes in pricing regulation could restrict the amount that we are able to charge for our product candidates. Accordingly, in markets outside the United States, the reimbursement for products may be reduced compared with the United States and may be insufficient to generate commercially reasonable revenues and profits.

We cannot be sure that coverage and reimbursement in the United States or elsewhere will be available for any product that we may develop, and any reimbursement that may become available may be decreased or eliminated in the future.

Product liability lawsuits against us could cause us to incur substantial liabilities and to limit commercialization of any products that we may develop.

We face an inherent risk of product liability exposure related to the testing of our product candidates in human clinical trials and will face an even greater risk if we commercially sell any products that we may develop. If we cannot successfully defend ourselves against claims that our product candidates or products caused injuries, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- reduced resources of our management to pursue our business strategy;
- decreased demand for any product candidates or products that we may develop;
- injury to our reputation and significant negative media attention;
- withdrawal of clinical trial participants;
- initiation of investigations by regulators;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- significant costs to defend the resulting litigation;
- substantial monetary awards paid to clinical trial participants or patients;
- loss of revenue; and
- the inability to commercialize any products that we may develop.

We currently do not have product liability in place as the cost of coverage exceeds the covered amount during clinical trials. Once we are ready for a product launch, we intend to bind a policy with product liability insurance coverage in the aggregate and a per incident limit at an amount adequate to cover estimated liabilities that we may incur. We may need to increase our insurance coverage as we expand our clinical trials or if we commence commercialization of our product candidates. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise.

Inadequate funding for the FDA, the SEC and other government agencies could hinder their ability to hire and retain key leadership and other personnel, prevent new products and services from being developed or commercialized in a timely manner or otherwise prevent those agencies from performing normal business functions on which the operation of our business may rely, which could negatively impact our business.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels, ability to hire and retain key personnel and accept the payment of user fees, and statutory, regulatory, and policy changes. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of the SEC and other government agencies on which our operations may rely, including those that fund research and development activities, is subject to the political process, which is inherently fluid and unpredictable.

Disruptions at the FDA and other agencies may also slow the time necessary for product candidates to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years, the U.S. government has shut down several times, and certain regulatory agencies, such as the FDA and the SEC, have had to furlough critical employees and stop critical activities. Separately, in response to the COVID-19 pandemic, on March 10, 2020, the FDA announced its intention to temporarily postpone most inspections of foreign manufacturing facilities and products. On March 18, 2020, the FDA announced its intention to temporarily postpone routine surveillance inspections of domestic manufacturing facilities and provided guidance regarding the conduct of clinical trials, which has since been further updated. As of June 23, 2020, the FDA noted it was continuing to ensure timely reviews of applications for medical products during the COVID-19 pandemic in line with its user fee performance goals and conducting mission critical domestic and foreign inspections to ensure compliance of manufacturing facilities with FDA quality standards. On July 16, 2020, FDA noted that it is continuing to expedite oncology product development with its staff teleworking full-time. However, FDA may not be able to continue its current pace and review timelines could be extended. As of July 2020, utilizing a rating system to assist in determining when and where it is safest to conduct such inspections based on data about the virus' trajectory in a given state and locality and the rules and guidelines that are put in place by state and local governments, the FDA is either continuing to, on a case-by-case basis, conduct only mission critical inspections, or, where possible to do so safely, resuming prioritized domestic inspections, which generally include pre-approval inspections. Foreign pre-approval inspections that are not deemed mission-critical remain postponed, while those deemed mission-critical will be considered for inspection on a case-by-case basis. The FDA will use similar data to inform resumption of prioritized operations abroad as it becomes feasible and advisable to do so. The FDA may not be able to maintain this pace, and delays or setbacks are possible in the future. Should the FDA determine that an inspection is necessary for approval and an inspection cannot be completed during the review cycle due to restrictions on travel, the FDA has stated that it generally intends to issue a complete response letter. Further, if there is inadequate information to make a determination on the acceptability of a facility, the FDA may defer action on the application until an inspection can be completed. Additionally, regulatory authorities outside the United States may adopt similar restrictions or other policy measures in response to the COVID-19 pandemic. If a prolonged government shutdown occurs, or if global health concerns continue to prevent the FDA or other regulatory authorities from conducting their regular inspections, reviews, or other regulatory activities, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business. Further, upon completion of this offering and in our operations as a public company, future government shutdowns could impact our ability to access the public markets and obtain necessary capital in order to properly capitalize and continue our operations.

Risks Related to Our Intellectual Property

If we are unable to obtain and maintain patent protection for our phage-based vaccine and ASPH-targeting technologies and product candidates, or if the scope of the patent protection obtained is not sufficiently broad, our competitors could develop and commercialize technology and biologics similar or identical to ours, and our ability to successfully commercialize our technology and product candidates may be impaired.

Our success depends, in large part, on our ability to obtain and maintain patent protection in the United States, Canada, China, the European Union and other countries with respect to our product candidates. We seek to protect our proprietary position by filing patent applications related to our technology and product candidates in the major pharmaceutical markets, including the United States, Canada, China, major countries in Europe and Japan. If we do not adequately protect our intellectual property, competitors may be able to use our technologies and erode or negate any competitive advantage that we may have, which could harm our business and ability to achieve profitability.

To protect our proprietary positions, we file patent applications in the United States and other countries related to our novel technologies and product candidates that are important to our business. The patent application and prosecution process is expensive and time-consuming. We may not be able to file and prosecute

all necessary or desirable patent applications at a reasonable cost or in a timely manner. We may also fail to identify patentable aspects of our research and development before it is too late to obtain patent protection. It is possible that defects of form in the preparation or filing of our patents or patent applications may exist, or may arise in the future, such as with respect to proper priority claims, inventorship, claim scope or patent term adjustments. If any current or future licensors or licensees are not fully cooperative or disagree with us as to the prosecution, maintenance or enforcement of any patent rights, such patent rights could be compromised and we might not be able to prevent third parties from making, using and selling competing products. If there are material defects in the form or preparation of our patents or patent applications, such patents or applications may be invalid and unenforceable. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how. Any of these outcomes could impair our ability to prevent competition from third parties.

It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. The patent applications that we own may fail to result in issued patents with claims that cover our current and future product candidates in the United States or in other foreign countries. Our patent applications cannot be enforced against third parties practicing the technology claimed in such applications unless, and until, a patent issues from such applications, and then only to the extent the issued claims cover the technology.

If the patent applications we hold with respect to our development programs and product candidates fail to issue, if their breadth or strength of protection is threatened, or if they fail to provide meaningful exclusivity for our current and future product candidates, it could threaten our ability to commercialize our product candidates. Any such outcome could have a negative effect on our business.

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain. Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may diminish the value of our patents or narrow the scope of our patent protection. In addition, the protections offered by laws of different countries vary. No consistent policy regarding the breadth of claims allowed in biotechnology and pharmaceutical patents has emerged to date in the United States or in many foreign jurisdictions. In addition, the determination of patent rights with respect to pharmaceutical compounds and technologies commonly involves complex legal and factual questions, which has in recent years been the subject of much litigation. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain. Furthermore, recent changes in patent laws in the United States, may affect the scope, strength and enforceability of our patent rights or the nature of proceedings that may be brought by or against us related to our patent rights. Additionally, the U.S. Supreme Court has ruled on several patent cases in recent years either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on decisions by the U.S. Congress, the U.S. federal courts, and the U.S. Patent and Trademark Office, or USPTO, the laws and regulations governing patents could change in unpredictable ways that could weaken our ability to obtain patents or to enforce any patents that we might obtain in the future.

We may not be aware of all third-party intellectual property rights potentially relating to our current and future our product candidates. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, we cannot be certain that we were the first to make the inventions claimed in our patents or pending patent applications, or that we were the first to file for patent protection of such inventions. Similarly, should we own any patents or patent applications in the future, we may not be certain that we were the first to file for patent protection for the inventions claimed in such patents or patent applications. As a result, the issuance, scope, validity and commercial value of our patent rights cannot be predicted with any certainty. Moreover, we may be subject to a third-party pre-issuance submission of prior art to the USPTO or become involved in opposition, derivation, reexamination, *inter partes* review or interference

proceedings, in the United States or elsewhere, challenging our patent rights or the patent rights of others. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate, our patent rights, allow third parties to commercialize our technology or product candidates and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize products without infringing third-party patent rights, which could significantly harm our business and results of operations.

Our pending and future patent applications may not result in patents being issued that protect our technology or product candidates, in whole or in part, or which effectively prevent others from commercializing competitive technologies and products. Even if our patent applications issue as patents, they may not issue in a form that will provide us with any meaningful protection against competing products or processes sufficient to achieve our business objectives, prevent competitors from competing with us or otherwise provide us with any competitive advantage. Our competitors may be able to circumvent our owned or licensed patents, should they issue, by developing similar or alternative technologies or products in a non-infringing manner. Our competitors may seek approval to market their own products similar to or otherwise competitive with our products. In these circumstances, we may need to defend and/or assert our patents, including by filing lawsuits alleging patent infringement. In any of these types of proceedings, a court or other agency with jurisdiction may find our patents invalid and/or unenforceable.

The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and our owned and licensed patents may be challenged in the courts or patent offices in the United States and abroad. Such challenges may result in loss of exclusivity or freedom to operate or in patent claims being narrowed, invalidated or held unenforceable, in whole or in part, which could limit our ability to stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our technology and products. In addition, given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized.

Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain and could significantly harm our business.

Our commercial success depends, in part, on our ability to develop, manufacture, market and sell our product candidates and use our proprietary phage-based vaccine technology without infringing the intellectual property and other proprietary rights of third parties. Numerous third-party U.S. and non-U.S. issued patents exist in the area of biotechnology, including in the area of vaccine therapies and including patents held by our competitors. If any third-party patents cover our product candidates or technologies, we may not be free to manufacture or commercialize our product candidates as planned.

There is a substantial amount of intellectual property litigation in the biotechnology and pharmaceutical industries, and we may become party to, or threatened with, litigation or other adversarial proceedings regarding intellectual property rights with respect to our technology or product candidates, including interference proceedings before the USPTO. Intellectual property disputes arise in a number of areas including with respect to patents, use of other proprietary rights and the contractual terms of license arrangements. Third parties may assert claims against us based on existing or future intellectual property rights and claims may also come from competitors against whom our own patent portfolio may have no deterrent effect. The outcome of intellectual property litigation is subject to uncertainties that cannot be adequately quantified in advance. Other parties may allege that our product candidates or the use of our technologies infringes patent claims or other intellectual property rights held by them or that we are employing their proprietary technology without authorization. As we continue to develop and, if approved, commercialize our current and future product candidates, competitors may claim that our technology infringes their intellectual property rights as part of business strategies designed to impede our successful commercialization. There are and may in the future be additional third-party patents or patent applications with claims to, for example, materials, compositions, formulations, methods of manufacture or methods for treatment related to the use or manufacture of any one or more of our product candidates.

Moreover, we may fail to identify relevant third party patents or patent applications, or we may incorrectly conclude that the claims of an issued patent are invalid or are not infringed by our activities. Because patent applications can take many years to issue, third parties may have currently pending patent applications which may later result in issued patents that any of our product candidates may infringe, or which such third parties claim are infringed by our technologies.

If we are found to infringe a third party's intellectual property rights, we could be forced, including by court order, to cease developing, manufacturing or commercializing the infringing product candidate or product. Alternatively, we may be required or may choose to obtain a license from such third party in order to use the infringing technology and continue developing, manufacturing or marketing the infringing product candidate. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. In addition, we could be found liable for monetary damages, including treble damages and attorneys' fees if we are found to have willfully infringed a patent. A finding of infringement could prevent us from commercializing our product candidates or force us to cease some of our business operations. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar negative effect on our business. Even if successful, the defense of any claim of infringement or misappropriation is time-consuming, expensive and diverts the attention of our management from our ongoing business operations.

We may need to license intellectual property from third parties, and such licenses may not be available or may not be available on commercially reasonable terms.

A third party may hold intellectual property rights, including patent rights, that are important or necessary to the development or manufacture of our product candidates. It may be necessary for us to use the patented or proprietary technology of third parties to commercialize our product candidates, in which case we would be required to obtain a license from these third parties. Such a license may not be available on commercially reasonable terms, or at all, and we could be forced to accept unfavorable contractual terms. If we are unable to obtain such licenses on commercially reasonable terms, our business could be harmed.

The licensing and acquisition of third-party intellectual property rights is a competitive practice, and companies that may be more established, or have greater resources than we do, may also be pursuing strategies to license or acquire third-party intellectual property rights that we may consider necessary or attractive in order to commercialize our product candidates. More established companies may have a competitive advantage over us due to their larger size and cash resources or greater clinical development and commercialization capabilities. We may not be able to successfully complete such negotiations and ultimately acquire the rights to the intellectual property surrounding the additional product candidates that we may seek to acquire.

We may become involved in lawsuits to protect or enforce our intellectual property, which could be expensive, time-consuming and unsuccessful.

Competitors may infringe our patents, if issued, trademarks, copyrights or other intellectual property. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming and divert the time and attention of our management and scientific personnel. Any claims we assert against perceived infringers could provoke these parties to assert counterclaims against us alleging that we infringe their patents, trademarks, copyrights or other intellectual property. In addition, in a patent infringement proceeding, there is a risk that a court will decide that a patent of ours is invalid or unenforceable, in whole or in part, and that we do not have the right to stop the other party from using the invention at issue. There is also a risk that, even if the validity of such patents is upheld, the court will construe the patent's claims narrowly or decide that we do not have the right to stop the other party from using the invention at issue on the grounds that our patents do not cover the invention. An adverse outcome in a litigation or proceeding involving our patents could limit our ability to assert our patents against those parties or other

competitors, and may curtail or preclude our ability to exclude third parties from making and selling similar or competitive products. Similarly, if we assert trademark infringement claims, a court may determine that the marks we have asserted are invalid or unenforceable, or that the party against whom we have asserted trademark infringement has superior rights to the marks in question. In this case, we could ultimately be forced to cease use of such trademarks.

In any infringement litigation, any award of monetary damages we receive may not be commercially valuable. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Moreover, there can be no assurance that we will have sufficient financial or other resources to file and pursue such infringement claims, which typically last for years before they are concluded. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. Even if we ultimately prevail in such claims, the monetary cost of such litigation and the diversion of the attention of our management and scientific personnel could outweigh any benefit we receive as a result of the proceedings. Accordingly, despite our efforts, we may not be able to prevent third parties from infringing, misappropriating or successfully challenging our intellectual property rights. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a negative impact on our ability to compete in the marketplace.

We may be subject to claims by third parties asserting that we or our employees have misappropriated their intellectual property, or claiming ownership of what we regard as our own intellectual property.

Many of our employees were previously employed at universities or other biotechnology or pharmaceutical companies. Although we try to ensure that our employees do not use the proprietary information or know-how of third parties in their work for us, we may be subject to claims that these employees or we have inadvertently or otherwise used intellectual property, including trade secrets or other proprietary information, of any such employee's former employer. We may also in the future be subject to claims that we have caused an employee to breach the terms of his or her non-competition or non-solicitation agreement. Litigation may be necessary to defend against these potential claims.

In addition, while it is our policy to require our employees and contractors who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, such employees and contractors may breach the agreement and claim the developed intellectual property as their own.

If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. A court could prohibit us from using technologies or features that are essential to our products if such technologies or features are found to incorporate or be derived from the trade secrets or other proprietary information of the former employers. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs and could be a distraction to management. In addition, any litigation or threat thereof may adversely affect our ability to hire employees or contract with independent service providers. Moreover, a loss of key personnel or their work product could hamper or prevent our ability to commercialize our products.

We may be subject to claims challenging the inventorship or ownership of our owned patent rights and other intellectual property.

We generally enter into confidentiality and intellectual property assignment agreements with our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors. However, these agreements may not be honored and may not effectively assign intellectual property rights to us. For example,

disputes may arise from conflicting obligations of consultants or others who are involved in developing our technology and product candidates. Litigation may be necessary to defend against these and other claims challenging inventorship or ownership. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, valuable intellectual property. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

Any trademarks we may obtain may be infringed or successfully challenged, resulting in harm to our business.

We expect to rely on trademarks as one means to distinguish any of our product candidates that are approved for marketing from the products of our competitors. We have not yet selected trademarks for our product candidates and have not yet begun the process of applying to register trademarks for our product candidates. Once we select trademarks and apply to register them, our trademark applications may not be approved. Third parties may oppose our trademark applications, or otherwise challenge our use of the trademarks. In the event that our trademarks are successfully challenged, we could be forced to rebrand our products, which could result in loss of brand recognition and could require us to devote resources to advertising and marketing new brands. Our competitors may infringe our trademarks and we may not have adequate resources to enforce our trademarks.

In addition, any proprietary name we propose to use with our clinical-stage product candidates or any other product candidate in the United States must be approved by the FDA, regardless of whether we have registered it, or applied to register it, as a trademark. The FDA typically conducts a review of proposed product names, including an evaluation of the potential for confusion with other product names. If the FDA objects to any of our proposed proprietary product names, we may be required to expend significant additional resources in an effort to identify a suitable proprietary product name that would qualify under applicable trademark laws, not infringe the existing rights of third parties and be acceptable to the FDA.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.

In addition to seeking patent and trademark protection for our product candidates, we also rely on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain our competitive position. We seek to protect our trade secrets, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, consultants, advisors and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets. Monitoring unauthorized uses and disclosures of our intellectual property is difficult, and we do not know whether the steps we have taken to protect our intellectual property will be effective. In addition, we may not be able to obtain adequate remedies for any such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. Furthermore, some courts inside and outside the United States are less willing or unwilling to protect trade secrets.

Moreover, our competitors may independently develop knowledge, methods and know-how equivalent to our trade secrets. Competitors could purchase our products and replicate some or all of the competitive advantages we derive from our development efforts for technologies on which we do not have patent protection. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them, or those to whom they communicate it, from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor, our competitive position would be harmed.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States could be less extensive than those in the United States. In some cases, we may not be able to obtain patent protection for certain technology outside the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States, even in jurisdictions where we do pursue patent protection. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, even in jurisdictions where we do pursue patent protection or from selling or importing products made using our inventions in and into the United States or other jurisdictions.

Competitors may use our technologies in jurisdictions where we have not pursued and obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States. These products may compete with our product candidates and preclinical programs and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property protection, particularly those relating to biotechnology products, which could make it difficult for us to stop the infringement of our patents, if pursued and obtained, or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance and annuity fees on any issued patent are due to be paid to the USPTO and patent agencies outside the United States in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Non-compliance events that could result in abandonment or lapse of a patent or patent application include failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. If we fail to maintain the patents and patent applications covering our products or product candidates, our competitors might be able to enter the market, which would harm our business. In addition, to the extent that we have responsibility for taking any action related to the prosecution or maintenance of patents or patent application in-licensed from a third party, any failure on our part to maintain the in-licensed rights could jeopardize our rights under the relevant license and may expose us to liability.

Risks Related to our Business Operations

We will need to grow the size of our organization, and we may experience difficulties in managing this growth.

As of September 30, 2020, we had 25 employees, 24 of whom are employed full-time. As our development and commercialization plans and strategies develop, and as we transition into operating as a public company, we expect to need additional managerial, operational, financial and other personnel, including personnel to support our product development and planned future commercialization efforts. Future growth will impose significant added responsibilities on members of management, including:

- identifying, recruiting, integrating, maintaining and motivating additional employees;
- managing our internal development efforts effectively, including the preclinical, clinical and FDA review processes for our product candidates; and
- improving our operational, financial and management controls, reporting systems and procedures.

There are a small number of individuals with experience in immunotherapy and the competition for these individuals is high. Our future financial performance and our ability to commercialize our product candidates will depend, in part, on our ability to effectively manage any future growth, and our management may also have to divert a disproportionate amount of its attention away from day-to-day activities in order to devote a substantial amount of time to managing these growth activities.

If we are not able to effectively expand our organization by hiring new employees, we may not be able to successfully implement the tasks necessary to further develop and commercialize our product candidates and, accordingly, may not achieve our research, development and commercialization goals.

In addition to expanding our organization, we anticipate increasing the size of our facilities and building out our development and manufacturing capabilities, which would require significant capital expenditures. If these capital expenditures are higher than expected, it may adversely affect our financial condition and capital resources. In addition, if the increase in the size of our facilities is delayed, it may limit our ability to rapidly expand the size of our organization in order to meet our corporate goals.

Our future success depends on our ability to retain key members of senior management and to attract, retain and motivate qualified personnel.

Our ability to compete in the highly competitive biopharmaceutical industry depends upon our ability to attract and retain highly qualified management, research and development, clinical, financial and business development personnel. We are highly dependent on our management, scientific and medical personnel, including John Celebi, our Chief Executive Officer, Dr. Marie-Louise Fjaellskog, our Chief Medical Officer, Dr. Robert Pierce, our Chief Scientific Officer, and Anupama Hoey, our Chief Business Officer. Our senior management may terminate their employment with us at any time and will continue to be able to do so after the closing of this offering. We do not maintain “key person” insurance for any of our employees.

Recruiting and retaining qualified scientific and clinical personnel and, if we progress the development of any of our product candidates, commercialization, manufacturing and sales and marketing personnel, will be critical to our success. The loss of the services of members of our senior management or other key employees could impede the achievement of our research, development and commercialization objectives and seriously harm our ability to successfully implement our business strategy. Furthermore, replacing members of our senior management and key employees may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to successfully develop, gain regulatory approval of and commercialize our product candidates. Our success also depends on our ability to continue to attract, retain and motivate highly skilled junior, mid-level and senior managers, as well as junior,

mid-level and senior scientific and medical personnel. Competition to hire from this limited candidate pool is intense, and we may be unable to hire, train, retain or motivate these key personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. If we are unable to continue to attract and retain high-quality personnel, our ability to pursue our growth strategy will be limited.

If we engage in future acquisitions or strategic collaborations, this may increase our capital requirements, dilute our stockholders, cause us to incur debt or assume contingent liabilities and subject us to other risks.

From time to time, we may evaluate various acquisitions and strategic collaborations, including licensing or acquiring complementary products, intellectual property rights, technologies or businesses, as we may deem appropriate to carry out our business plan. For instance, in May 2020, we acquired Alvaxa Biosciences LLC to enhance the depth of our nanobody assets and know-how. Any potential acquisition or strategic collaboration may entail numerous risks, including:

- increased operating expenses and cash requirements;
- the assumption of additional indebtedness or contingent liabilities;
- assimilation of operations, intellectual property and products of an acquired company, including difficulties associated with integrating new personnel;
- the diversion of our management's attention from our existing programs and initiatives in pursuing such a strategic partnership, merger or acquisition;
- retention of key employees, the loss of key personnel and uncertainties in our ability to maintain key business relationships;
- risks and uncertainties associated with the other party to such a transaction, including the prospects of that party and their existing products or product candidates and regulatory approvals; and
- our inability to generate revenue from acquired technology sufficient to meet our objectives in undertaking the acquisition or even to offset the associated acquisition and maintenance costs.

Additionally, if we undertake future acquisitions, we may issue dilutive securities, assume or incur debt obligations, incur large one-time expenses and acquire intangible assets that could result in significant future amortization expenses. Moreover, we may not be able to locate suitable acquisition opportunities and this inability could impair our ability to grow or obtain access to technology or products that may be important to the development of our business.

Risks Related to this Offering, our Securities and our Status as a Public Company

An active trading market for our common stock may not develop and you may not be able to resell your common stock at or above the initial offering price, if at all.

This offering constitutes the initial public offering of our common stock, and no public market has previously existed for our common stock. We have applied to list our common stock on The Nasdaq Global Market, or the Nasdaq. Any delay in receiving approval for the listing from Nasdaq and in the commencement of trading of our common stock on Nasdaq would impair the liquidity of the market for the common stock and make it more difficult for holders to sell the common stock. There can be no assurance that an active trading market for the common stock will develop or be sustained after this offering is completed. The lack of an active trading market may also reduce the fair market value of the common stock. The initial offering price was determined by

negotiations among the lead underwriters and us. Among the factors considered in determining the initial public offering price were our future prospects and the prospects of our industry in general, our revenue, net income and certain other financial and operating information in recent periods, and the market prices of securities and certain financial and operating information of companies engaged in activities similar to ours. However, there can be no assurance that, following the completion of this offering, the common stock will trade at a price equal to or greater than the initial public offering price.

The trading price of our common stock may be volatile, and you could lose all or part of your investment.

The trading price of our common stock following this offering is likely to be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control, including limited trading volume. The stock market in general and the market for biopharmaceutical companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, investors may not be able to sell their common stock at or above the price paid for the common stock. In addition to the factors discussed in this "Risk Factors" section and elsewhere in this prospectus, these factors include:

- the commencement, enrollment or results of our planned and future clinical trials;
- positive or negative results from, or delays in, testing and clinical trials by us, collaborators or competitors;
- the loss of any of our key scientific or management personnel;
- regulatory or legal developments in the United States and other countries;
- the success of competitive products or technologies;
- adverse actions taken by regulatory agencies with respect to our clinical trials or manufacturers;
- changes or developments in laws or regulations applicable to our product candidates and preclinical program;
- changes in the structure and scope of health care payment systems;
- changes to our relationships with collaborators, manufacturers or suppliers;
- concerns regarding the safety of our product candidates or ImmunoPhage platform in general;
- announcements concerning our competitors or the pharmaceutical industry in general;
- actual or anticipated fluctuations in our operating results;
- changes in financial estimates or recommendations by securities analysts;
- potential acquisitions, financing, collaborations or other corporate transactions;
- the results of our efforts to discover, develop, acquire or in-license additional product candidates;
- the trading volume of our common stock on Nasdaq;
- sales of our common stock by us, members of our senior management and directors or our stockholders or the anticipation that such sales may occur in the future;
- general economic, political, and market conditions and overall fluctuations in the financial markets in the United States;
- stock market price and volume fluctuations of comparable companies and, in particular, those that operate in the biopharmaceutical industry;
- investors' general perception of us and our business; and
- other events and factors, many of which are beyond our control.

These and other market and industry factors may cause the market price and demand for our common stock to fluctuate substantially, regardless of our actual operating performance, which may limit or prevent investors from selling their common stock at or above the price paid for the common stock and may otherwise negatively affect the liquidity of our common stock. In addition, the stock market in general, and biopharmaceutical companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies.

Some companies that have experienced volatility in the trading price of their shares have been the subject of securities class action litigation. From time to time, we have been, and may continue to be, subject to legal proceedings and claims in the ordinary course of business. For instance, during 2017, we became actively involved, along with other defendants, in a breach of contract claim in the Ontario (Canada) Superior Court of Justice seeking declaratory and other relief, including monetary damages. While we believe there is no merit to the allegations of that claim, any lawsuit to which we are a party, with or without merit, may result in an unfavorable judgment. We also may decide to settle lawsuits on unfavorable terms.

Any such negative outcome could result in payments of substantial damages or fines, damage to our reputation or adverse changes to our business practices. Defending against litigation is costly and time-consuming, and could divert our management's attention and our resources. Furthermore, during the course of litigation, there could be negative public announcements of the results of hearings, motions or other interim proceedings or developments, which could have a negative effect on the market price of our common stock.

If you purchase common stock in this offering, you will suffer immediate dilution of your investment.

The initial public offering price of our common stock is substantially higher than the pro forma as adjusted net tangible book value per common stock. Therefore, if you purchase common stock in this offering, you will pay a price per share that substantially exceeds our pro forma as adjusted net tangible book value per share after this offering. Based on the initial public offering price of $ per share, you will experience immediate dilution of $ per share, representing the difference between our pro forma as adjusted net tangible book value per share after this offering and the initial public offering price per share. After this offering, we will also have outstanding options and warrants to purchase common stock with exercise prices lower than the initial public offering price. To the extent these outstanding options or warrants are exercised, there will be further dilution to investors in this offering. For further information regarding the dilution resulting from this offering, see the section titled "Dilution" in this prospectus.

A significant portion of our total outstanding shares are restricted from immediate resale, but may be sold into the market in the near future. This could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of our common stock in the public market could occur at any time. If our stockholders sell, or the market perceives that our stockholders intend to sell, substantial amounts of our shares of common stock in the public market following this offering, the market price of our common stock could decline significantly.

Upon completion of this offering, we will have outstanding shares of common stock, based on the number of shares outstanding as of September 30, 2020. Of these shares, the shares of common stock sold in this offering and shares of common stock currently outstanding will be freely tradable, and the remaining shares of common stock will be available for sale in the public market beginning 180 days after the date of this prospectus, or with respect to shares purchased in our Series BB financing, 120 days after the date of this prospectus, following the expiration of lock-up agreements entered into by our stockholders in connection with the offering. The representatives of the underwriters may agree to release these stockholders from their lock-up agreements at any time and without notice, which would allow for earlier sales of shares in the public market. Sales of a substantial number of such shares upon expiration of the lock-up agreements, the perception that such sales may occur, or early release of restrictions in the lock-up agreements, could cause the

market price of our common stock to fall or make it more difficult for you to sell your common stock at a time and price that you deem appropriate.

In addition, promptly following the completion of this offering, we intend to file one or more registration statements registering the issuance of approximately shares of common stock subject to options or other equity awards issued or reserved for future issuance under our equity incentive plans. Shares registered under these registration statements will be available for sale in the public market subject to vesting arrangements and exercise of options, the lock-up agreements described above and, in the case of our affiliates, the restrictions of Rule 144 under the Securities Act.

Additionally, after this offering, the holders of an aggregate of approximately of our shares of common stock, or their transferees, will have rights, subject to some conditions, to require us to file one or more registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. If we were to register the resale of these shares, they could be freely sold in the public market. If these additional shares are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline.

If we fail to implement and maintain an effective system of internal controls to remediate our material weaknesses over financial reporting, we may be unable to accurately report our results of operations, meet our reporting obligations or prevent fraud, and investor confidence in our company and the market price of our common stock may be materially and adversely affected.

Prior to the completion of this offering, we only had limited accounting personnel and other resources with which to address internal control over financial reporting. In connection with the audits of our consolidated financial statements as of and for the years ended December 31, 2018 and 2019, we and our independent registered public accounting firm identified three material weaknesses in our internal control over financial reporting. As defined in the standards established by the U.S. Public Company Accounting Oversight Board, or PCAOB, a "material weakness" is a deficiency, or combination of deficiencies in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis.

The material weaknesses that have been identified relate to lack of segregation of duties, lack of a risk assessment process and lack of contemporaneous documentation, both contractual and accounting related. We are in the process of implementing a number of measures to address the material weaknesses and deficiencies that have been identified. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Internal Control Over Financial Reporting." However, we cannot assure you that these measures may fully address the material weaknesses and deficiencies in our internal control over financial reporting or that we may conclude that they have been fully remediated.

Upon completion of this offering, we will become subject to the Sarbanes-Oxley Act. Section 404 will require that we include a report from management on the effectiveness of our internal control over financial reporting in our annual report on Form 10-K beginning with our annual report in our second annual report on Form 10-K after becoming a public company. In addition, after we become a public company, our reporting obligations may place a significant strain on our management, operational and financial resources and systems for the foreseeable future. We may be unable to timely complete our evaluation testing and any required remediation.

During the course of documenting and testing our internal control procedures, in order to satisfy the requirements of Section 404, we may identify other weaknesses and deficiencies in our internal control over financial reporting. If we fail to maintain the adequacy of our internal control over financial reporting, as these standards are modified, supplemented or amended from time to time, we may not be able to conclude on an ongoing basis that we have effective internal control over financial reporting in accordance with Section 404.

Generally speaking, if we fail to achieve and maintain an effective internal control environment, it could result in material misstatements in our financial statements and could also impair our ability to comply with applicable financial reporting requirements and related regulatory filings on a timely basis. As a result, our businesses, financial condition, results of operations and prospects, as well as the trading price of our common stock, may be materially and adversely affected. Additionally, ineffective internal control over financial reporting could expose us to increased risk of fraud or misuse of corporate assets and subject us to potential delisting from the stock exchange on which we list, regulatory investigations and civil or criminal sanctions. We may also be required to restate our financial statements from prior periods.

We will have broad discretion in the use of proceeds from this offering and may invest or spend the proceeds in ways with which you do not agree and in ways that may not increase the value of your investment.

Our management will have broad discretion in the application of our cash and cash equivalents, including the net proceeds from this offering, and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our common stock. The failure by our management to apply these funds effectively could result in financial losses that could have a negative impact on our business, cause the price of our common stock to decline and delay the development of our product candidates and preclinical program. Pending their use, we may invest our cash and cash equivalents, including the net proceeds from this offering, in a manner that does not produce income or that loses value. See the section titled “Use of Proceeds” for additional information.

Because we do not anticipate paying any cash dividends on our common stock in the foreseeable future, capital appreciation, if any, will be your sole source of gains and you may never receive a return on your investment.

We do not intend to pay any cash dividends on our common stock in the forseeable future and we currently intend to retain our future earnings, if any, to fund the development and growth of our business. Therefore, you should not rely on an investment in our common stock to provide dividend income. Our board of directors has complete discretion as to whether to distribute dividends. Even if our board of directors decides to declare and pay dividends, the timing, amount and form of future dividends, if any, will depend on, among other things, our future results of operations and cash flow, our capital requirements and surplus, the amount of distributions, if any, received by us from our subsidiaries, our financial condition, contractual restrictions and other factors deemed relevant by our board of directors. As a result, capital appreciation, if any, on our common stock will be your sole source of gains for the foreseeable future. Investors seeking cash dividends should not purchase our common stock in this offering.

Our ability to use our net operating losses to offset future taxable income may be subject to certain limitations.

Our net operating loss, or NOL, carryforwards could expire unused and be unavailable to offset future income tax liabilities because of their limited duration or because of restrictions under U.S. tax law. NOLs generated in taxable years beginning before January 1, 2018 are permitted to be carried forward for only 20 taxable years under applicable U.S. federal income tax law. Under the Tax Cuts and Jobs Act, or the Tax Act, as modified by the Coronavirus Aid, Relief, and Economic Security Act, or the CARES Act, NOLs arising in taxable years beginning after December 31, 2017, and before January 1, 2021 may be carried back to each of the five tax years preceding the tax year of such loss, and NOLs arising in tax years beginning after December 31, 2020 may not be carried back. Moreover, under the Tax Act as modified by the CARES Act, NOLs generated in taxable years beginning after December 31, 2017 may be carried forward indefinitely, but the deductibility of such NOLs generally will be limited in taxable years beginning after December 31, 2020 to 80% of current year taxable income. The extent to which state income tax law will conform to the Tax Act and CARES Act is uncertain. As of December 31, 2019, we had NOL carryforwards for federal and state income tax purposes of

approximately $65.7 million, a portion of which expire beginning in 2020 if not utilized. NOL carryforwards generated in 2019 and 2018 for federal tax reporting purposes of $10.7 million and $10.4 million, respectfully, have an indefinite life.

In general, under Section 382 of the Internal Revenue Code of 1986, as amended, or the Code, a corporation that undergoes an "ownership change" (as defined under Section 382 of the Code and applicable Treasury Regulations) is subject to limitations on its ability to utilize its pre-change NOLs to offset future taxable income. We have not determined whether our NOLs are limited under Section 382 of the Code. We may have experienced an ownership change in the past, and may experience ownership changes in the future as a result of this offering or subsequent shifts in our stock ownership, some of which are outside our control. Furthermore, our ability to utilize NOLs of companies that we have acquired or may acquire in the future may be subject to limitations. There is also a risk that due to regulatory changes, such as suspensions on the use of NOLs or other unforeseen reasons, our existing NOLs could expire or otherwise be unavailable to reduce future income tax liabilities, including for state tax purposes. For these reasons, we may not be able to utilize a material portion of the NOLs reflected on our balance sheet, even if we attain profitability, which could potentially result in increased future tax liability to us and could adversely affect our operating results and financial condition.

We will incur significantly increased costs as a result of operating as a company whose common stock is publicly traded, and our management will be required to devote substantial time to new compliance initiatives.

As a public company, we will incur significant legal, accounting and other expenses that we did not incur previously. These expenses will likely be even more significant after we no longer qualify as an emerging growth company. The Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of Nasdaq and other applicable securities rules and regulations impose various requirements on public companies in the United States, including the establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Our senior management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. For example, we expect that these rules and regulations may make it more difficult and more expensive for us to obtain director and officer liability insurance, which in turn could make it more difficult for us to attract and retain qualified senior management personnel or members for our board of directors.

However, these rules and regulations are often subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices.

Pursuant to Section 404, we will be required to furnish a report by our senior management on our internal control over financial reporting. However, while we remain an emerging growth company, we will not be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To prepare for eventual compliance with Section 404, we will be engaged in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, potentially engage outside consultants and adopt a detailed work plan to assess and document the adequacy of internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented and implement a continuous reporting and improvement process for internal control over financial reporting. Despite our efforts, there is a risk that we will not be able to conclude, within the prescribed timeframe or at all, that our internal control over financial reporting is effective as required by Section 404.

We are an "emerging growth company" and as a result of the reduced disclosure and governance requirements applicable to emerging growth companies, our common stock may be less attractive to investors.

We are an "emerging growth company" as defined in the JOBS Act. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including not being required to comply with the auditor attestation requirements of Section 404, exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. As an emerging growth company, we are able to report only two years of financial results and selected financial data compared to three and five years, respectively, for comparable data reported by other public companies. We may take advantage of these exemptions until we are no longer an emerging growth company. We could be an emerging growth company for up to five years, although circumstances could cause us to lose that status earlier, including if the aggregate market value of our shares of common stock, held by non-affiliates exceeds $700 million as of the end of our second fiscal quarter before that time, in which case we would no longer be an emerging growth company as of the following December 31st (the last day of our fiscal year). We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stockless attractive as a result, there may be a less active trading market for our common stock and the price of our common stock may be more volatile.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected not to "opt out" of such extended transition period, which means that when a standard is issued or revised and it has different application dates for public or private companies, we will adopt the new or revised standard at the time private companies adopt the new or revised standard and will do so until such time that we either (i) irrevocably elect to "opt out" of such extended transition period or (ii) no longer qualify as an emerging growth company. Therefore, the reported results of operations contained in our consolidated financial statements may not be directly comparable to those of other public companies.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware and, to the extent enforceable, the federal district courts of the United States of America, will be the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, or employees.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware and, to the extent enforceable, the federal district courts of the United States of America, will be the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law:

- any derivative claim or cause of action brought on our behalf;
- any claim or cause of action for breach of a fiduciary duty owed by any of our current or former directors, officers or other employees to us or our stockholders;
- any claim or cause of action against us or any of our current or former directors, officers or other employees, arising out of or pursuant to any provision of the DGCL, our certificate of incorporation or our bylaws;
- any claim or cause of action seeking to interpret, apply, enforce or determine the validity of our certificate of incorporation or our bylaws;
- any action or proceeding as to which the DGCL confers jurisdiction to the Court of Chancery of the State of Delaware; and
- any claim or cause of action against us or any of our current or former directors, officers or other employees that is governed by the internal-affairs doctrine, in all cases to the fullest extent permitted by law and subject to the court having personal jurisdiction over the indispensable parties named as defendants.

This provision would not apply to suits brought to enforce a duty or liability created by the Securities Act or the Securities Exchange Act of 1934, or the Exchange Act, or any claim for which the U.S. federal courts have exclusive jurisdiction. Our amended and restated certificate of incorporation will provide that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act.

These exclusive-forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, or other employees, which may discourage lawsuits against us and our directors, officers, and other employees. If any other court of competent jurisdiction were to find either exclusive-forum provision in our amended and restated certificate of incorporation to be inapplicable or unenforceable, we may incur additional costs associated with resolving the dispute in other jurisdictions, which could seriously harm our business. For example, the Court of Chancery of the State of Delaware determined that a provision stating that U.S. federal district courts are the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act is not enforceable. However, this decision was recently reviewed and ultimately overturned by the Delaware Supreme Court in March 2020.

General Risk Factors

Our business, operations and clinical development plans and timelines could be adversely affected by the effects of health epidemics, including the recent COVID-19 pandemic, on the manufacturing, clinical trial and other business activities performed by us or by third parties with whom we conduct business, including our contract manufacturers, CROs, shippers and others.

Our business could be adversely affected by health epidemics wherever we have clinical trial sites or other business operations. In addition, health epidemics could cause significant disruption in the operations of third-party manufacturers, CROs and other third parties upon whom we rely. For example, in December 2019, a novel strain of coronavirus, SARS-CoV-2, causing a disease referred to as COVID-19, was reported to have surfaced in Wuhan, China. Since then, COVID-19 has spread to multiple countries worldwide, including the United States. In March 2020, the World Health Organization declared the COVID-19 outbreak a pandemic, and the U.S. government ordered the closure of all non-essential businesses, imposed social distancing measures, "shelter-in-place" orders and restrictions on travel between the United States, Europe and certain other countries. The global pandemic and government measures taken in response have also had a significant impact on businesses and commerce worldwide, as worker shortages have occurred; supply chains have been disrupted; facilities and production have been suspended across a variety of industries; and demand for certain goods and services, such as medical services and supplies, has spiked, while demand for other goods and services, such as travel, has fallen. On March 18, 2020, the FDA issued updated industry guidance for conducting clinical trials during the COVID-19 pandemic, which requires clinical trial sponsors to consider the need to delay or cease patient recruitment, change protocol regarding patient monitoring and assessment that minimizes in-person visits, alternative administration of certain investigational products due to compromised clinical sites and to put in place new processes or modify existing processes in consultation with the FDA that would ensure the safety of clinical trial participants. In connection with COVID-19, we implemented optional work-from-home policies for most employees. The effects of government orders and our work-from-home policies may negatively impact productivity, disrupt our business and delay our clinical programs and timelines, the magnitude of which will depend, in part, on the length and severity of the restrictions and other limitations on our ability to conduct our business in the ordinary course.

If our relationships with our suppliers or other vendors are terminated or scaled back as a result of the COVID-19 pandemic or other health epidemics, we may not be able to enter into arrangements with alternative suppliers or vendors or do so on commercially reasonable terms or in a timely manner. Switching or adding additional suppliers or vendors involves substantial cost and requires management time and focus. In addition, there is a natural transition period when a new supplier or vendor commences work. As a result, delays may occur, which could adversely impact our ability to meet our desired clinical development and any future

commercialization timelines. Although we carefully manage our relationships with our suppliers and vendors, there can be no assurance that we will not encounter challenges or delays in the future or that these delays or challenges will not harm our business.

In addition, our preclinical studies and clinical trials may be affected by the COVID-19 pandemic. Clinical site initiation, patient enrollment and activities that require visits to clinical sites, including data monitoring, may be delayed due to prioritization of hospital resources toward the COVID-19 pandemic or concerns among patients about participating in clinical trials during a pandemic. Some patients may have difficulty following certain aspects of clinical trial protocols if quarantines impede patient movement or interrupt healthcare services. These challenges may also increase the costs of completing our clinical trials. Similarly, if we are unable to successfully recruit and retain patients and principal investigators and site staff who, as healthcare providers, may have heightened exposure to COVID-19 or experience additional restrictions by their institutions, city or state, our clinical trial operations could be adversely impacted.

The spread of COVID-19, which has caused a broad impact globally, may materially affect us economically. While the potential economic impact brought by, and the duration of, COVID-19 may be difficult to assess or predict, a widespread pandemic has resulted in significant disruption of global financial markets, resulting in an economic downturn that could continue to significantly impact our business and operations and may reduce our ability to access capital, which could in the future negatively affect our liquidity. In addition, a recession or market correction resulting from the spread of COVID-19 could materially affect our business and the value of our common stock. In addition, a recurrence or "second wave" of COVID-19 cases could cause other widespread or more severe impacts depending on where infection rates are highest.

Further, we may experience additional disruptions that could severely impact our business and clinical trials, including:

- diversion of healthcare resources away from the conduct of clinical trials, including the diversion of hospitals serving as our clinical trial sites and hospital staff supporting the conduct of our clinical trials;
- interruption or delays in the operations of the FDA or other regulatory authorities, which may impact review and approval timelines;
- limitations on employee resources that would otherwise be focused on the conduct of our preclinical studies and clinical trials, including because of sickness of employees or their families or the desire of employees to avoid contact with large groups of people;
- risk that participants enrolled in our clinical trials will acquire COVID-19 while the clinical trial is ongoing, which could impact the results of the clinical trial, including by increasing the number of observed adverse events; and
- refusal of the FDA to accept data from clinical trials in these affected geographies.

These and similar, and perhaps more severe, disruptions in our operations could have a material adverse effect on our business, results of operations, cash flows, financial condition and/or prospects.

The global pandemic of COVID-19 continues to evolve rapidly. The ultimate impact of the COVID-19 pandemic or a similar health epidemic is highly uncertain and subject to change. We do not yet know the full extent of potential delays or impacts on our business, our clinical trials, healthcare systems or the global economy as a whole. However, these effects could have a material impact on our operations, and we continue to monitor the COVID-19 situation closely. To the extent the COVID-19 pandemic adversely affects our business, results of operations, cash flows, financial condition and/or prospects, it may also have the effect of heightening many of the other risks described in this "Risk Factors" section.

Our internal computer systems, or those of our collaborators or other contractors or consultants, may fail or suffer security breaches, which could result in a significant disruption of our product development programs and our ability to operate our business effectively.

Our internal computer systems and those of our current and any future collaborators and other contractors or consultants may be vulnerable to a variety of disruptive elements, including computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. While we have not experienced any significant system failure, accident or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a disruption of our development programs and our business operations, whether due to a loss of our trade secrets or other proprietary information, significant delays or setbacks in our research, or other similar disruptions. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability, our competitive position could be harmed, our reputation could be damaged, and the further development and commercialization of our product candidates could be delayed.

We are or may become subject to a variety of privacy and data security laws, and our failure to comply with them could harm our business.

We maintain sensitive information, including confidential business and personal information in connection with our preclinical studies and our employees, and are subject to laws and regulations governing the privacy and security of such information. In the United States, there are numerous federal and state privacy and data security laws and regulations governing the collection, use, disclosure and protection of personal information, including federal and state health information privacy laws, federal and state security breach notification laws, and federal and state consumer protection laws. Each of these constantly evolving laws can be subject to varying interpretations. In May 2018, a new privacy regime, the General Data Protection Regulation, the GDPR, took effect in the European Economic Area, the EEA, into which we may expand our business. The GDPR governs the collection, use, disclosure, transfer or other processing of personal data of European persons. Among other things, the GDPR imposes requirements regarding the security of personal data and notification of data processing obligations to the competent national data processing authorities, changes the lawful bases on which personal data can be processed, expands the definition of personal data and requires changes to informed consent practices, as well as more detailed notices for clinical trial subjects and investigators. In addition, the GDPR increases the scrutiny of transfers of personal data from clinical trial sites located in the EEA to the United States and other jurisdictions that the European Commission does not recognize as having "adequate" data protection laws, and imposes substantial fines for breaches and violations (up to the greater of €20 million or 4% of our consolidated annual worldwide gross revenue). The GDPR also confers a private right of action on data subjects and consumer associations to lodge complaints with supervisory authorities, seek judicial remedies and obtain compensation for damages resulting from violations of the GDPR.

Compliance with these and any other applicable privacy and data security laws and regulations is a rigorous and time-intensive process, and we may be required to put in place additional mechanisms ensuring compliance with the new data protection rules. If we fail to comply with any such laws or regulations, we may face significant fines and penalties that could adversely affect our business, financial condition and results of operations. Furthermore, the laws are not consistent, and compliance in the event of a widespread data breach is costly.

In addition, states are constantly adopting new laws or amending existing laws, requiring attention to frequently changing regulatory requirements. For example, California enacted the California Consumer Privacy Act, or the CCPA, on June 28, 2018, which took effect on January 1, 2020 and has been dubbed the first "GDPR-like" law in the United States. The CCPA gives California residents expanded rights to access and delete their personal information, opt out of certain personal information sharing and receive detailed information about how

their personal information is used by requiring covered companies to provide new disclosures to California consumers (as that term is broadly defined and can include any of our current or future employees who may be California residents) and provide such residents new ways to opt-out of certain sales of personal information. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches that is expected to increase data breach litigation. As we expand our operations and trials (both preclinical or clinical), the CCPA may increase our compliance costs and potential liability. Some observers have noted that the CCPA could mark the beginning of a trend toward more stringent privacy legislation in the United States. Other states are beginning to pass similar laws.

Business disruptions could seriously harm our future revenue and financial condition and increase our costs and expenses.

Our operations, and those of our vendors and suppliers, could be subject to power shortages, telecommunications failures, water shortages, civil unrest, labor disputes, violence, earthquakes, floods, hurricanes, typhoons, fires, extreme weather conditions, infectious disease, medical epidemics and other natural or man-made disasters or business interruptions, for which we are predominantly self-insured. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses. We currently rely on third-party suppliers to produce and process our product candidates on a patient-by-patient basis. Our ability to obtain clinical supplies of our product candidates could be disrupted if the operations of these suppliers are affected by a man-made or natural disaster or other business interruption.

If equity research analysts do not publish research or reports, or publish unfavorable research or reports, about us, our business or our market, the price and trading volume of our common stock could decline.

The trading market for our common stock will be influenced by the research and reports that equity research analysts publish about us and our business. We do not currently have and may never obtain research coverage by equity research analysts. Equity research analysts may elect not to provide research coverage of our common stock after the completion of this offering, and such lack of research coverage may adversely affect the market price of our common stock. In the event we do have equity research analyst coverage, we will not have any control over the analysts or the content and opinions included in their reports. The price of our common stock could decline if one or more equity research analysts downgrade our common stock or issue other unfavorable commentary or research about us. If one or more equity research analysts ceases coverage of us or fails to publish reports on us regularly, demand for our common stock could decrease, which in turn could cause the trading price or trading volume of our common stock to decline.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements about us and our industry that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this prospectus, including statements regarding our future results of operations or financial condition, business strategy and plans and objectives of management for future operations, are forward-looking statements. In some cases, you can identify forward-looking statements because they contain words such as "anticipate," "believe," "contemplate," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "should," "target," "will" or "would" or the negative of these words or other similar terms or expressions, although not all forward-looking statements contain these words. These forward-looking statements include statements concerning the following:

- the ability of our preclinical studies and clinical trials to demonstrate acceptable safety and efficacy of our product candidates;
- business disruptions affecting the initiation, patient enrollment, development and operation of our clinical trials, including a public health emergency, such as the global outbreak of the COVID-19 coronavirus;
- the timing, progress and results of preclinical studies and clinical trials for our current and future product candidates, including statements regarding the timing of initiation and completion of studies or trials and related preparatory work, the period during which the results of the trials will become available, and our research and development programs;
- the timing, scope and likelihood of regulatory filings and approvals, including final regulatory approval of our product candidates;
- our ability to develop and advance our current product candidates and programs into, and successfully complete, clinical trials;
- our manufacturing, commercialization, and marketing capabilities and strategy;
- our plans relating to commercializing our product candidates, if approved;
- the need to hire additional personnel and our ability to attract and retain such personnel;
- the size of the market opportunity for our product candidates, including our estimates of the number of patients who suffer from the diseases we are targeting;
- our expectations regarding the approval and use of our product candidates as first, second or subsequent lines of therapy or in combination with other drugs;
- our competitive position and the success of competing therapies that are or may become available;
- our estimates of the number of patients that we will enroll in our clinical trials;
- the characteristics and therapeutic effects of our product candidates;
- our ability to obtain and maintain regulatory approval of our product candidates;
- our plans relating to the further development of our product candidates, including additional indications we may pursue;
- our intellectual property position, including the scope of protection we are able to establish and maintain for intellectual property rights covering product candidates we may develop, including the validity of intellectual property rights held by third parties, and our ability not to infringe, misappropriate or otherwise violate any third-party intellectual property rights;
- our continued reliance on third parties to conduct additional clinical trials of our product candidates;
- our ability to obtain, and negotiate favorable terms of, any collaboration, licensing or other arrangements that may be necessary or desirable to develop, manufacture or commercialize our product candidates;

- the pricing and reimbursement of our product candidates we may develop, if approved;
- the rate and degree of market acceptance and clinical utility of our product candidates we may develop;
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- our financial performance and our ability to effectively manage our anticipated growth;
- the period over which we estimate our existing cash and cash equivalents will be sufficient to fund our future operating expenses and capital expenditure requirements;
- the impact of laws and regulations;
- our expectations regarding the period during which we will qualify as an emerging growth company under the JOBS Act; and
- our anticipated use of our existing resources and the proceeds from this offering.

You should not rely on forward-looking statements as predictions of future events. We have based the forward-looking statements contained in this prospectus primarily on our current expectations and projections about future events and trends that we believe may affect our business, financial condition and operating results. The outcome of the events described in these forward-looking statements is subject to risks, uncertainties and other factors described in the section titled “Risk Factors” and elsewhere in this prospectus. Moreover, we operate in a very competitive and rapidly changing environment. New risks and uncertainties emerge from time to time, and it is not possible for us to predict all risks and uncertainties that could have an impact on the forward-looking statements contained in this prospectus. The results, events and circumstances reflected in the forward-looking statements may not be achieved or occur, and actual results, events or circumstances could differ materially from those described in the forward-looking statements. You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, that we have filed with the SEC with the understanding that our actual future results, levels of activity, performance and achievements may be materially different from what we expect.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based on information available to us as of the date of this prospectus. While we believe that information provides a reasonable basis for these statements, that information may be limited or incomplete. Our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all relevant information. These statements are inherently uncertain, and investors are cautioned not to unduly rely on these statements.

The forward-looking statements made in this prospectus relate only to events as of the date on which the statements are made. We undertake no obligation to update any forward-looking statements made in this prospectus to reflect events or circumstances after the date of this prospectus or to reflect new information or the occurrence of unanticipated events, except as required by law. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments. We qualify all of our forward looking statements by these cautionary statements.

MARKET AND INDUSTRY DATA

We obtained the industry, statistical and market data in this prospectus from our own internal estimates and research as well as from industry and general publications and research, surveys and studies conducted by third parties. All of the market data used in this prospectus involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such data. While we believe that each of these studies and publications is reliable, the industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of important factors, including those described in the section titled “Risk Factors.” These and other factors could cause results to differ materially from those expressed in the estimates made by third parties and by us.

USE OF PROCEEDS

We estimate that we will receive net proceeds from this initial public offering of approximately $ million (or approximately $ million if the underwriters exercise their option to purchase additional shares in full) based on an assumed initial public offering price of $ per share of common stock, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses.

A $1.00 increase (decrease) in the assumed initial public offering price of $ per share of common stock would increase (decrease) the net proceeds to us from this offering by approximately $ million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions. Similarly, each increase (decrease) of 1.0 million shares in the number of shares of common stock offered by us would increase (decrease) the net proceeds to us from this offering by approximately $ million, assuming the assumed initial public offering price of $ per share of common stock remains the same, and after deducting estimated underwriting discounts and commissions.

The principal purposes of this offering are to increase our capitalization and financial flexibility, and create a public market for our common stock.

As of September 30, 2020, we had a cash balance of $3.7 million. Subsequent to September 30, 2020, we received $41.4 million of aggregate gross proceeds from the sale of shares of our Series AA convertible preferred stock and Series BB convertible preferred stock. We intend to use the net proceeds from this offering, together with our existing cash and cash equivalents, as follows:

- approximately $ million to $ million to fund the clinical development of SNS-301;
- approximately $ million to $ million to fund the preclinical and clinical development of SNS-401;
- approximately $ million to $ million to fund the preclinical and clinical development of SNS-VISTA; and
- the remaining amounts to fund the development of our ImmunoPhage platform and other pipeline programs, as well as for working capital and other general corporate purposes.

Based on our current operating plan, we believe that the net proceeds from this offering, together with our existing cash and cash equivalents, will enable us to fund our planned operating expenses and capital expenditures through . We believe that the net proceeds from this offering, together with our existing cash and cash equivalents, will be insufficient to fund any of our product candidates through regulatory approval, and we anticipate needing to raise additional capital to complete the development of and commercialize our product candidates. It is difficult to predict the cost and timing required to complete development and obtain regulatory approval of, and commercialize, our product candidates due to, among other factors, the relatively short history of our experience with initiating, conducting and completing clinical trials, obtaining regulatory approval and commercializing our product candidates, the rate of subject enrollment in our clinical trials, filing requirements with various regulatory agencies, clinical trial results and the actual costs of manufacturing and supplying our product candidates.

Our expected use of the net proceeds from this offering represents our intentions based upon our current plans and business conditions. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering or the amounts that we will actually spend on the uses set forth above. We believe that opportunities may exist from time to time to expand our current business through licenses with or acquisitions of, or investments in, complementary businesses, products or technologies, and we may use a portion of the net proceeds for these purposes.

Our management will have broad discretion over the use of the net proceeds from this offering. The amounts and timing of our expenditures will depend upon numerous factors, including the results of our research

and development efforts, the timing, cost and success of preclinical studies and any ongoing clinical trials or clinical trials we may commence in the future, the timing of regulatory submissions, our ability to obtain additional financing, the amount of cash obtained through our existing collaborations and future collaborations, if any, and any unforeseen cash needs.

Pending any use described above, we intend to invest the net proceeds of this offering in short- and intermediate-term interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

DIVIDEND POLICY

We have never declared or paid cash dividends on our capital stock. We currently intend to retain all available funds and future earnings, if any, to fund the development and expansion of our business, and we do not anticipate paying any cash dividends in the foreseeable future. Any future determination regarding the declaration and payment of dividends, if any, will be at the discretion of our board of directors and will depend on then-existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem relevant. Our future ability to pay cash dividends on our capital stock may also be limited by the terms of any future debt or preferred securities or future credit facility.

CAPITALIZATION

The following table sets forth our cash and cash equivalents, and our capitalization as of September 30, 2020 as follows:

- on an actual basis;
- on a pro forma basis to reflect (i) our issuance and sale of 85,499,239 shares of Series AA convertible preferred stock and 165,956,208 shares of Series BB convertible preferred stock subsequent to September 30, 2020, (ii) the redemption of a convertible note in November 2020 for 31,591,824 shares of our Series AA convertible preferred stock, (iii) the automatic conversion of all outstanding shares of our convertible preferred stock, including the shares described above in (i), into 913,639,380 shares of our common stock immediately prior to the closing of this offering, and (iv) the filing of our amended and restated certificate of incorporation immediately prior to the closing of this offering; and
- on a pro forma as adjusted basis to give further effect to our issuance and sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The pro forma and pro forma as adjusted information below is illustrative only, and our capitalization following the completion of this offering will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing. You should read this information in conjunction with our consolidated financial statements and the related notes included in this prospectus and the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section and other financial information contained in this prospectus.

	As of September 30, 2020		
	Actual	Pro Forma	Pro Forma As Adjusted(1)
		(in thousands)	
Cash and cash equivalents	$ 3,733	$	$
Preferred stock, $0.0001 par value per share: 870,211,737 shares authorized, 630,592,111 issued and outstanding, actual; and shares authorized and no shares issued or outstanding, pro forma and pro forma as adjusted	51,788		
Stockholders' equity:			
Common stock, $0.0001 par value per share; 1,230,000,000 shares authorized, 85,786,348 shares issued and outstanding, actual; shares authorized, pro forma and pro forma as adjusted; shares issued and outstanding, pro forma; shares issued and outstanding, pro forma as adjusted	9		
Additional paid-in capital	55,591		
Accumulated deficit	(107,281)		
Total stockholders' (deficit) equity	(51,681)		
Total capitalization	$ 107	$	$

(1) Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, additional paid in capital, total stockholders' (deficit) equity and total capitalization by approximately $, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase (decrease) of 1.0 million shares in the number of shares offered by us at the assumed initial public offering price per share would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, additional paid in capital, total stockholders' (deficit) equity and total capitalization by approximately $.

The table above is based on 85,786,348 shares of our common stock outstanding as of September 30, 2020 and excludes:

- 79,722,731 shares of common stock issuable upon the exercise of stock options outstanding as of September 30, 2020, under our 2018 Plan, at a weighted-average exercise price of $0.14 per share;
- 22,545,202 shares of common stock issuable upon the exercise of warrants outstanding as of September 30, 2020, at a weighted-average exercise price of $0.20 per share;
- shares of common stock reserved for future issuance under our 2021 Plan, which will become effective in connection with this offering, as well as any future shares, including annual increases, in the number of shares of common stock available for issuance under our 2021 Plan; and
- shares of common stock reserved for future issuance under our ESPP, which will become effective in connection with this offering, as well as any future shares, including annual increases, in the number of shares of common stock reserved for issuance under our ESPP.

DILUTION

If you invest in our common stock in this offering, your ownership interest will be immediately diluted to the extent of the difference between the initial public offering price per share and the pro forma as adjusted net tangible book value per share of our common stock after this offering.

As of September 30, 2020, we had a historical net tangible book value (deficit) of $0.1 million, or $0.00 per share of common stock. Our historical net tangible book value (deficit) per share represents total tangible assets less total liabilities, divided by the number of shares of common stock outstanding as of September 30, 2020.

Our pro forma net tangible book value as of September 30, 2020 was $ million, or $ per share of our common stock. Pro forma net tangible book value represents the amount of our total tangible assets less our total liabilities, after giving effect to (i) our issuance and sale of 85,499,239 shares of Series AA convertible preferred stock and 165,956,208 shares of Series BB convertible preferred stock subsequent to September 30, 2020, (ii) the redemption of a convertible note in November 2020 for 31,591,824 shares of our Series AA convertible preferred stock, and (iii) the automatic conversion of all outstanding shares of our convertible preferred stock, including the shares described above in (i) and (ii), into 913,639,380 shares of our common stock immediately prior to the closing of this offering. Pro forma net tangible book value per share represents pro forma net tangible book value divided by the total number of shares outstanding as of September 30, 2020, after giving effect to the pro forma adjustments described above.

After giving further effect to the sale of shares of common stock that we are offering at an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of September 30, 2020 would have been approximately $ million, or approximately $ per share. This amount represents an immediate increase in pro forma net tangible book value of $ per share to our existing stockholders and an immediate dilution in pro forma net tangible book value of approximately $ per share to new investors purchasing shares of common stock in this offering.

Dilution per share to new investors is determined by subtracting pro forma as adjusted net tangible book value per share after this offering from the initial public offering price per share paid by new investors. The following table illustrates this dilution (without giving effect to any exercise by the underwriters of their option to purchase additional shares):

Assumed initial public offering price per share		$
Historical net tangible book value (deficit) per share as of September 30, 2020	$0.00	
Pro forma increase in historical net tangible book value per share attributable to the pro forma transactions described in the preceding paragraphs		
Pro forma net tangible book value per share as of September 30, 2020		
Increase in pro forma net tangible book value per share attributable to this offering		
Pro forma as adjusted net tangible book value per share after this offering		
Dilution per share to new investors in this offering		$

Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted net tangible book value per share after this offering by approximately $, and dilution in pro forma net tangible book value per share to new investors by approximately $, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and the estimated offering expenses payable by us. Each increase (decrease) of 1.0 million shares in the number of shares offered by us would increase (decrease) our pro

forma as adjusted net tangible book value per share after this offering by approximately $ per share and decrease (increase) the dilution to investors participating in this offering by approximately $ per share, assuming that the assumed initial public offering price remains the same, and after deducting the estimated underwriting discounts and commissions and the estimated offering expenses payable by us.

If the underwriters exercise their option to purchase additional shares of our common stock in full in this offering, the pro forma as adjusted net tangible book value after the offering would be $ per share, the increase in pro forma net tangible book value per share to existing stockholders would be $ per share and the dilution per share to new investors would be $ per share, in each case assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus.

The following table summarizes on the pro forma as adjusted basis described above, as of September 30, 2020, the differences between the number of shares purchased from us, the total consideration paid to us in cash and the average price per share paid by existing stockholders for shares issued prior to this offering and the price to be paid by new investors in this offering. The calculation below is based on the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of the prospectus, before deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders		%	$	%	$
New investors					
Total		100%	$	100%	$

If the underwriters exercise their option to purchase additional shares of our common stock in full:

- the percentage of shares of common stock held by existing stockholders will decrease to approximately % of the total number of shares of our common stock outstanding after this offering; and
- the number of shares held by new investors will increase to , or approximately % of the total number of shares of our common stock outstanding after this offering.

The foregoing tables and calculations exclude:

- 79,722,731 shares of common stock issuable upon the exercise of stock options outstanding as of September 30, 2020, under our 2018 Plan, at a weighted-average exercise price of $0.14 per share;
- 22,545,202 shares of common stock issuable upon the exercise of warrants outstanding as of September 30, 2020, at a weighted-average exercise price of $0.20 per share;
- shares of common stock reserved for future issuance under our 2021 Plan, which will become effective in connection with this offering, as well as any future shares, including annual increases, in the number of shares of common stock available for issuance under our 2021 Plan; and
- shares of common stock reserved for future issuance under our 2021 Employee Stock Purchase Plan, or ESPP, which will become effective in connection with this offering, as well as any future shares, including annual increases, in the number of shares of common stock reserved for issuance under our ESPP.

To the extent any outstanding options or warrants are exercised, there will be further dilution to new investors. In addition, we may choose to raise additional capital because of market conditions or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans. If we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

SELECTED CONSOLIDATED FINANCIAL DATA

You should read the consolidated financial data set forth below in conjunction with our consolidated financial statements and the accompanying notes and the information in "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained elsewhere in this prospectus. The following selected consolidated statement of operations data for the years ended December 31, 2019 and 2018 and the consolidated balance sheet data as of December 31, 2019 and 2018 have been derived from our audited consolidated financial statements included elsewhere in this prospectus. The selected consolidated statements of operations data for the nine months ended September 30, 2020 and 2019 and the balance sheet data as of September 30, 2020 have been derived from our unaudited interim financial statements included elsewhere in this prospectus and have been prepared on the same basis as the audited financial statements. In the opinion of management, the unaudited data reflects all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of the financial information in those statements. Our historical results are not necessarily indicative of the results that should be expected in the future and the results for the nine months ended September 30, 2020 are not necessarily indicative of the results to be expected for the full year ending December 31, 2020 or any other future period.

	Nine Months Ended September 30,		Year Ended December 31,	
(in thousands, except share and per share data)	2020	2019	2019	2018
Consolidated Statements of Operations Data:				
Operating expenses:				
Research and development	$ 8,629	$ 5,925	$ 8,350	$ 8,227
General and administrative	5,007	3,103	4,085	4,513
Alvaxa IPR&D	738	—	—	—
Total operating expenses	14,374	9,028	12,435	12,740
Loss from operations	(14,374)	(9,028)	(12,435)	(12,740)
Other expense:				
Interest expense	(1,635)	(860)	(2,256)	(327)
Fair value adjustments on embedded debt derivatives	995	(71)	(1,973)	—
Gain (loss) on debt extinguishment	45	(75)	(75)	—
Other (expense) income, net	—	(1)	(1)	28
Net loss	(14,969)	(10,035)	(16,740)	(13,039)
Cumulative dividends on convertible preferred stock	(104)	(2,853)	(3,804)	(3,804)
Net loss attributable to common stockholders	$ (15,073)	$ (12,888)	$ (20,544)	$ (16,843)
Net loss per common share, basic and diluted	$ (0.20)	$ (0.73)	$ (1.16)	$ (0.96)
Weighted-average number of shares used in computing net loss per common share, basic and diluted	73,681,618	17,628,909	17,636,028	17,628,909
Unaudited pro forma net loss per share common share, basic and diluted(1)	$		$	
Unaudited pro forma weighted-average shares used in computing net loss per common share, basic and diluted(1)				

(1) The unaudited pro forma basic and diluted weighted-average common shares outstanding used in the calculation of unaudited pro forma basic and diluted net loss per share attributable to common stockholders for the year ended December 31, 2019 and the nine months ended September 30, 2020 have been prepared to give effect to the automatic conversion of all outstanding shares of our convertible preferred stock into common stock immediately prior to the closing of this offering as if this offering had occurred on the later of the beginning of each period or the issuance date of the convertible preferred stock.

(in thousands)	As of September 30, 2020	As of December 31, 2019	2018
Consolidated Balance Sheet Data:			
Cash and cash equivalents	$ 3,733	$ 251	$ 653
Working capital (deficit)(1)	(286)	(21,212)	(1,383)
Total assets	5,515	1,217	1,850
Convertible preferred stock	51,788	47,545	47,545
Total stockholders' deficit	(51,681)	(68,662)	(53,480)

(1) We define working capital as current assets less current liabilities. See our financial statements included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with our consolidated financial statements and the related notes and other financial information included elsewhere in this prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties. You should review the "Risk Factors" section of this prospectus for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are a clinical-stage immunotherapy company engaged in the discovery and development of next-generation therapies with an initial focus on treatments for cancer. Our ImmunoPhage platform is a powerful, self-adjuvanted and highly differentiated immunotherapy approach that is designed to utilize bacteriophage to induce a robust, focused and coordinated innate and adaptive immune response. We are engineering our ImmunoPhage product candidates to directly target APCs and modulate the TME through the targeted use of nanobodies to further enhance therapeutic activity. We believe our ImmunoPhage platform has the potential to deliver on the promise of personalized, off-the-shelf product candidates tailored to a patient's specific tumor. The versatility of our ImmunoPhage platform allows us to design product candidates in a modular fashion, based on a cocktail of common and patient-specific antigens built from our proprietary library of ImmunoPhages, which we refer to as Phortress. We are currently conducting an ongoing 30-patient Phase 1/2 clinical trial of our lead product candidate, SNS-301, in combination with the PD-1 inhibitor pembrolizumab, as a potential treatment for SCCHN. As of December 10, we have enrolled 11 patients in the trial, of which ten patients were evaluable for efficacy. We have observed disease control in seven of the patients evaluable for efficacy, including one patient with a PR, and two patients who have achieved longstanding SD for greater than 36 weeks following treatment. Treatment with SNS-301 has generally been well tolerated. We anticipate reporting topline data from this trial by the end of 2021. If the results of this trial are positive, subject to feedback from the FDA, we intend to initiate a randomized, registration-enabling trial for SNS-301. We are leveraging the insights from our experience with SNS-301 to expand our development pipeline to include SNS-401 for the treatment of MCC and a human mAb program targeting the novel immune checkpoint VISTA.

Since our inception, we have devoted the majority of our efforts and financial resources to research and development activities related to our ImmunoPhage platform and our lead product candidate SNS-301, including raising capital, protecting our intellectual property portfolio and conducting preclinical studies and clinical trials. We do not have any product candidates approved for sale, have not generated any revenue from product sales, and do not expect to generate any revenue from product sales for at least the next several years. We have largely funded our operations with proceeds from the sale of convertible preferred stock, common stock and convertible debt. As of November 3, 2020, we had raised an aggregate of $88.9 million of gross proceeds from private placements of our equity and convertible debt securities.

We have incurred significant operating losses over the last several years. Our net loss was $16.7 million and $13.0 million for the years ended December 31, 2019 and 2018, respectively, and $15.0 million for the nine months ended September 30, 2020. As of December 31, 2019, we had an accumulated deficit of $92.3 million, which increased to $107.3 million as of September 30, 2020. We expect to continue to incur significant expenses and operating losses for the foreseeable future. We anticipate that our expenses will increase significantly in connection with our ongoing activities, as we:

- complete our Phase 1/2 clinical trial of SNS-301 and continue clinical development of SNS-301;
- prepare to file INDs and then initiate clinical development of additional product candidates, including SNS-401 and SNS-VISTA;

- continue the research and development of our other product candidates;
- invest in our ImmunoPhage platform;
- seek to discover and develop additional product candidates or acquire or in-license drugs, product candidates or technologies;
- seek regulatory approvals for any product candidates that successfully complete clinical trials;
- ultimately establish a sales, marketing and distribution infrastructure and scale up manufacturing capabilities to commercialize any product candidates for which we may obtain regulatory approval;
- manufacture our product candidates or otherwise secure the clinical and commercial supply of our product candidates;
- hire additional research and development and selling, general and administrative personnel;
- maintain, expand and protect our intellectual property portfolio; and
- incur additional costs associated with operating as a public company following the completion of this offering.

Cash used to fund operating expenses is impacted by the timing of when we pay these expenses, as reflected in the change in our accounts payable and accrued expenses. We expect to continue to incur net losses and negative cash flows for the foreseeable future, and we expect our research and development expenses, general and administrative expenses, and capital expenditures will continue to increase. In particular, we expect our expenses to increase as we continue our development of, and seek regulatory approvals for, our product candidates, as well as hire additional personnel, pay fees to outside consultants, lawyers and accountants, and incur other increased costs associated with being a public company. In addition, if we seek and obtain regulatory approval to commercialize any product candidate, we will also incur increased expenses in connection with commercialization and marketing of any such product.

Recapitalization and Recent Security Issuances

In January 2020, we entered into an agreement with a third party, who is the holder of the 2019 Bridge Note with a principal balance of $1.0 million, and the holders of a majority of our Series A through F convertible preferred stock, or the Majority Legacy Preferred Stockholders, that provided a new source of capital and restructured our existing capital structure, or the Recapitalization. The third party invested $4 million in exchange for 48,700,311 shares of Series AA convertible preferred stock, or our Series AA Preferred Stock, and a warrant to purchase 30,437,694 shares of our common stock at an exercise price of $0.00001 per share. The warrant was subsequently exercised in January 2020. Additionally, the agreement with the Majority Legacy Preferred Stockholders caused all other holders of our Series A through F convertible preferred stock, or the Minority Legacy Preferred Stockholders, and the Majority Legacy Preferred Stockholders to receive an aggregate of 30,140,432 shares of our common stock, or the Newly Issued Common Stock, in exchange for their holdings of our Series A through F convertible preferred stock, including cumulative and unpaid dividends, as part of the Recapitalization.

The Majority Legacy Preferred Stockholders agreed to invest additional capital in exchange for Series AA Preferred Stock. The Minority Legacy Preferred Stockholders were provided the opportunity to invest additional capital in exchange for Series AA Preferred Stock. All Majority and Minority Legacy Preferred Stockholders who invested additional capital during January 2020 were allowed to convert their Newly Issued Common Stock into Series AA Preferred Stock at a conversion rate based upon their incremental and historical investment. The Majority and Minority Legacy Preferred Stockholders invested $6.6 million in exchange for 79,954,952 shares of Series AA Preferred Stock. The Majority and Minority Legacy Preferred Stockholders also exchanged 7,140,280 shares of Newly Issued Common Stock for 210,310,025 shares of Series AA Preferred Stock under the Recapitalization agreement.

Our issuance of Series AA Preferred Stock triggered the redemption of certain convertible promissory notes, as well as accrued and unpaid interest and repayment premium, as applicable for certain notes, into shares of Series AA Preferred Stock. These debt instruments were redeemed for 188,173,050 shares of the Series AA Preferred Stock, which resulted in a gain on debt extinguishment of $45 thousand. Our remaining convertible promissory note was redeemed in November 2020.

On May 7, 2020, we issued warrants to a third party to purchase 18,687,605 shares of our common stock with an exercise price of $0.082135 per common share. As of September 30, 2020, these warrants have not been exercised and have a five-year maturity date.

From October to November 2020, we issued and sold 85,499,239 shares of Series AA convertible preferred stock at $0.082135 per share in exchange for $7.0 million in gross proceeds.

From December 2020 through January 2021, we issued and sold 165,956,208 shares of our Series BB convertible preferred stock at a purchase price of $0.207383 per share for aggregate gross proceeds of $34.4 million.

Impact of COVID-19

In March 2020, COVID-19 was declared a global pandemic by the World Health Organization and to date, the COVID-19 pandemic continues to present a substantial public health and economic challenge around the world. The length of time and full extent to which the COVID-19 pandemic will directly or indirectly impact our business, results of operations and financial condition will depend on future developments that are highly uncertain, subject to change and are difficult to predict. While we continue to conduct our research and development activities, the COVID-19 pandemic may cause disruptions that impact the timing of our ongoing and planned clinical trials of SNS-301 and affect our ability to complete preclinical studies, future clinical trials or to procure items that are essential for our research and development activities.

In addition, a recurrence or "second wave" of COVID-19 cases could cause other widespread or more severe impacts depending on where infection rates are highest. We plan to continue to closely monitor the ongoing impact of the COVID-19 pandemic on our employees and our business operations, as we deal with the disruptions and uncertainties relating to the COVID-19 pandemic. In an effort to provide a safe work environment for our employees, we have, among other things, implemented various social distancing measures in our office and labs including replacing in-person meetings with virtual interactions, and are working remotely when possible. We expect to continue to take actions as may be required or recommended by government authorities or as we determine are in the best interests of our employees and other business partners in light of the pandemic. To date, there has not been a significant impact on the development of SNS-301 or the rest of our pipeline; however we cannot at this time predict the specific extent, duration, or full impact that the COVID-19 pandemic could potentially have on our ongoing business plan, financial condition and operations.

Components of Our Results of Operations

Operating Expenses

Research and Development Expense

Our research and development expense consists of expenses incurred in connection with the discovery and development of our product candidates. These expenses include:

- expenses incurred under agreements with CROs, as well as investigative sites and consultants that conduct our clinical trials and preclinical studies;
- the cost of manufacturing our product candidates including the potential cost of CMOs that manufacture product for use in our preclinical studies and clinical trials and perform analytical testing, scale-up and other services in connection with our development activities;
- the cost of outsourced professional scientific development services;
- employee-related expenses, including salaries, benefits and stock-based compensation for employees engaged in the research and development function;
- expenses relating to regulatory activities, including filing fees paid to regulatory agencies;

- fees for maintaining licenses and other amounts due under our third party licensing agreements;
- laboratory materials and supplies used to support our research activities; and
- allocated expenses for utilities and other facility-related costs.

We expense all research and development costs in the periods in which they are incurred. Costs for certain research and development activities are recognized based on an evaluation of the progress to completion of specific tasks using information and data provided to us by our vendors and third-party service providers.

We do not track our research and development expenses by program. Our direct external research and development expenses consist primarily of external costs, such as fees paid to CROs, CMOs, research/testing laboratories and outside consultants in connection with our preclinical development, process development, manufacturing and clinical development activities. We do not allocate these costs to specific product candidates because many of them are deployed across several of our development programs and, as such, are not separately classified. We use internal resources primarily to conduct research and manage our preclinical development, outsourced clinical trials, process development, manufacturing and clinical development activities. These employees work across multiple development programs and, therefore, we do not track their costs by program and, as such, are not separately classified. Research and development activities are central to our business model. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect our research and development expenses to increase significantly over the next several years as we increase personnel costs, including stock-based compensation, conduct our registration-enabling clinical trial of SNS-301 in patients with SCCHN, conduct other clinical trials and prepare regulatory filings for our product candidates.

The successful development of our product candidates is highly uncertain. At this time, we cannot reasonably estimate or know the nature, timing and costs of the efforts that will be necessary to complete the remainder of the development of, or when, if ever, material net cash inflows may commence from any of our other product candidates. This uncertainty is due to the numerous risks and uncertainties associated with the duration and cost of clinical trials, which vary significantly over the life of a project as a result of many factors, including:

- the scope, progress, outcome and costs of our preclinical studies and clinical trials of SNS-301, our other product candidates and any other product candidates we may acquire or develop;
- manufacturing of our product candidates or making arrangements with potential third-party manufacturers for both clinical and commercial supplies of these product candidates;
- successful patient enrollment in, and the initiation, duration and completion of clinical trials;
- the cost of gaining regulatory approvals for our product candidates, subject to the successful outcome of ongoing and future clinical trials; and
- the extent of any required post-marketing approval commitments to applicable regulatory authorities.

Our expenditures are subject to additional uncertainties, including the terms and timing of regulatory approvals, and the expense of filing, prosecuting, defending and enforcing any patent claims or other intellectual property rights. We may never succeed in achieving regulatory approval for any of our product candidates. We may obtain unexpected results from our clinical trials. We may elect to discontinue, delay or modify clinical trials of some product candidates or focus on others. A change in the outcome of any of these variables with respect to the development of a product candidate could mean a significant change in the costs and timing associated with the development of that product candidate. For example, if the FDA or other regulatory authorities were to require us to conduct clinical trials beyond those that we currently anticipate, or if we experience significant delays in enrollment in any of our clinical trials, we could be required to expend significant additional financial resources and time on the completion of clinical development. Product commercialization will take several years and significant additional development costs.

General and Administrative Expense

General and administrative expenses consist principally of salaries and related costs for personnel in executive, administrative, finance and legal functions, including stock-based compensation, travel expenses and recruiting expenses. Other general and administrative expenses include facility related costs, patent filing and prosecution costs and professional fees for legal, auditing and tax services, and insurance costs.

We anticipate that our general and administrative expenses will increase as a result of increased payroll, expanded infrastructure and higher consulting, legal and tax-related services associated with maintaining compliance with Nasdaq listing and SEC requirements, accounting and investor relations costs, and director and officer insurance premiums associated with being a public company.

Alvaxa IPR&D

On May 18, 2020, we acquired Alvaxa Biosciences, or Alvaxa, in a cash and stock purchase pursuant to a Stock Purchase Agreement. Under the terms of the Stock Purchase Agreement, we acquired Alvaxa's existing camelid nanobodies and other biomaterials, or the Biomaterials, expertise in nanobody discovery, as well as a license agreement with a research organization. The former majority shareholder of Alvaxa is our current Chief Scientific Officer. Under the Stock Purchase Agreement, we paid $197 thousand to settle liabilities assumed from Alvaxa and issued 14,610,093 shares of our common stock to the shareholders of Alvaxa. We have evaluated the acquisition under ASC 805, *Business Combinations* and determined this to be an asset acquisition.

The 14,610,093 shares of common stock was valued at $0.037 per share, or $541 thousand in total, based on a valuation determined with the assistance of a third party. We determined that substantially all the value acquired in the transaction related to the Biomaterials and represents in-process research and development, or IPR&D. The liabilities of $197 thousand assumed were related to previously incurred employee costs as well as contractually required vendor payments. The consideration transferred in this transaction was recorded as an expense in the IPR&D line item within our Statement of Operations during the nine months ended September 30, 2020.

Other Expense

Our other expense consists of changes in the fair value of our derivative liability related to an embedded derivative on certain 2019 promissory notes, gain/loss on debt extinguishments and interest expense on our outstanding convertible debt.

Income Taxes

Since our inception, we have not recorded any income tax benefits for the net losses we have incurred or for the research and development tax credits earned in each year, as we believe, based upon the weight of available evidence, that it is more likely than not that all of our net operating loss carryforwards and tax credit carryforwards will not be realized.

Results of Operations

Comparison of the Nine Months Ended September 30, 2020 and 2019

The following sets forth our results of operations for the nine months ended September 30, 2020 and 2019:

(in thousands)	Nine Months Ended September 30, 2020	2019	Change
Operating expenses:			
Research and development	$ 8,629	$ 5,925	$ 2,704
General and administrative	5,007	3,103	1,904
Alvaxa IPR&D	738	—	738
Total operating expenses	14,374	9,028	5,346
Loss from operations	(14,374)	(9,028)	(5,346)
Total other expense	(595)	(1,007)	412
Net loss	$ (14,969)	$ (10,035)	$(4,934)

Research and Development Expenses

Research and development expenses were $8.6 million for the nine months ended September 30, 2020, compared to $5.9 million for the nine months ended September 30, 2019. The increase of $2.7 million is driven mainly by the progress of our clinical trial for SNS-301, furthering the preclinical development of SNS-401 and SNS-VISTA and increased early research costs.

General and Administrative Expenses

General and administrative expenses were $5.0 million for the nine months ended September 30, 2020, compared to $3.1 million for the nine months ended September 30, 2019. The increase of $1.9 million was primarily attributable to increased human resources related spend associated with growing the new leadership team, and consulting fees for executive contractors and financing support.

Alvaxa IPR&D

In May 2020, we entered into a Stock Purchase Agreement to purchase 100% of the shares of Alvaxa. Under the Stock Purchase Agreement, we paid $197 thousand and issued 14,610,093 shares of our common stock to the shareholders of Alvaxa valued at $541 thousand.

Other Expense

Other expense was $0.6 million for the nine months ended September 30, 2020, compared to $1.0 million for the nine months ended September 30, 2019. The decrease of $0.4 million was driven by $1.2 million fair value adjustments of embedded debt derivative liability associated with certain 2019 promissory notes, and gain on gain extinguishment related to the conversion of outstanding promissory notes in January 2020, offset by an increase of $0.8 million in interest expense on convertible promissory notes.

Comparison of Years Ended December 31, 2019 and 2018

The following sets forth our results of operations for the years ended December 31, 2019 and 2018:

(in thousands)	Year Ended December 31, 2019	2018	Change
Operating expenses:			
Research and development	$ 8,350	$ 8,227	$ 123
General and administrative	4,085	4,513	(428)
Total operating expenses	12,435	12,740	(305)
Loss from operations	(12,435)	(12,740)	305
Total other expense	(4,305)	(299)	(4,006)
Net loss	$ (16,740)	$ (13,039)	$(3,701)

Research and Development Expenses

Research and development expenses were $8.4 million for the year ended December 31, 2019, compared to $8.2 million for the year ended December 31, 2018. Costs remained relatively flat between the two years, with investments being made in early research and development activities and the clinical and preclinical development of SNS-301, SNS-401 and SNS-VISTA.

General and Administrative Expenses

General and administrative expenses were $4.1 million for the year ended December 31, 2019, compared to $4.5 million for the year ended December 31, 2018. The decrease of $0.4 million was primarily attributable to decreased spend associated with external corporate legal costs, partially offset by an increase headcount-related costs in the same period.

Other Expense

Other expense was $4.3 million for the year ended December 31, 2019, compared to $0.3 million for the year ended December 31, 2018. The increase of $4.0 million was driven by a $2.0 fair value adjustments of embedded debt derivative liability associated with certain 2019 promissory notes, and an increase of $2.0 million in interest expense on outstanding convertible promissory notes.

Liquidity and Capital Resources

Sources of Liquidity

We have not generated any product revenue and have incurred net losses and negative cash flows from our operations. We have financed our operations through sales of our common stock, convertible preferred stock and convertible debt, receiving aggregate gross proceeds of $88.9 million as of November 3, 2020. Our net loss was $16.7 million and $13.0 million for the years ended December 31, 2019 and 2018, respectively and $15.0 million for the nine months ended September 30, 2020. As of December 31, 2019, we had an accumulated deficit of $92.3 million, increasing to $107.3 million as of September 30, 2020. Our primary use of cash is to fund operating expenses, which consist primarily of research and development expenditures, and to a lesser extent, general and administrative expenditures.

As of December 31, 2019, we had cash and cash equivalents of $0.3 million. From January 2020 to November 2020, we issued and sold 317.6 million shares of Series AA convertible preferred stock to a group of investors, in exchange for $26.1 million of new gross proceeds. As of September 30, 2020, we had cash and cash equivalents of $3.7 million. From December 2020 to January 2021, we issued and sold 165,956,208 shares of Series BB convertible preferred stock to a group of investors, in exchange for $34.4 million of new gross proceeds.

Cash Flows

The following table summarizes our sources and uses of cash for each of the periods below:

(in thousands)	Nine Months Ended September 30, 2020	Nine Months Ended September 30, 2019	Year Ended December 31, 2019	Year Ended December 31, 2018
Net cash used in operating activities	$ (15,025)	$(6,920)	$ (8,571)	$ (10,313)
Net cash used in investing activities	(1,087)	(9)	(53)	(31)
Net cash provided by financing activities	19,594	6,576	8,222	750
Net increase (decrease) in cash and cash equivalents	$ 3,482	$ (353)	$ (402)	$ (9,594)

Operating Activities

During the nine months ended September 30, 2020, our operating activities used $15.0 million of cash, driven primarily by our net loss. During the nine months ended September 30, 2019, operating activities used $6.9 million of cash, primarily resulting from our net loss. The increase in net cash used in operating activities for the nine months ended September 30, 2020 as compared to the nine months ended September 30, 2019 is attributed to an increase in both our research and development and general and operating expenses as well a $2.5 million decrease in our outstanding payables.

During the year ended December 31, 2019, our operating activities used $8.6 million of cash, primarily resulting from the continued clinical and preclinical advancement of our product candidates. During the year ended December 31, 2018, operating activities used $10.3 million of cash, primarily resulting from our advancement of our lead product candidate, SNS-301, and development of our ImmunoPhage platform. The decrease in net cash used in operating activities for the year ended December 31, 2019 as compared to the year ended December 31, 2018 was primarily impacted by extending vendor payment terms on services provided in order to conserve cash usage.

Investing Activities

During the nine months ended September 30, 2020, net cash used in investing activities was $1.1 million from the purchase of Alvaxa and purchases of property and equipment. During the nine months ended September 30, 2019 and the years ended December 31, 2019 and 2018, net cash used in investing activities was related to purchases of property and equipment.

Financing Activities

During the nine months ended September 30, 2020, net cash provided by financing activities was $19.6 million, primarily from the issuance of our Series AA convertible preferred stock, as well as $0.6 million received in unsecured loan funding from the Payroll Protection Program. During the nine months ended September 30, 2019, net cash provided by financing activities was $6.6 million from the issuance of convertible promissory notes.

During the year ended December 31, 2019, net cash provided by financing activities was $8.2 million from the issuance of convertible promissory notes, as well as cash proceeds from the exercise of common stock warrants. During the year ended December 31, 2018, net cash provided by financing activities was $0.8 million from the issuance of a convertible promissory note.

Funding Requirements

We expect our expenses to increase in connection with our ongoing activities, particularly as we continue the research and development of, continue or initiate clinical trials of, and potentially seek marketing approval for, our product candidates. In addition, upon the closing of this offering, we expect to incur additional costs

associated with operating as a public company, including significant legal, accounting, investor relations and other expenses that we did not incur as a private company. The timing and amount of our operating expenditures will depend largely on:

- the initiation, progress, timing, costs and results of current and future preclinical studies and clinical trials for SNS-301, SNS-401 and SNS-VISTA and our other product candidates;
- the cost and timing of the manufacture of additional clinical trial material as well as any costs related to the scale-up of manufacturing activities;
- the costs to seek regulatory approvals for any product candidates that successfully complete clinical trials;
- the extent to which we or any third-party service providers on whom we rely experience delays or interruptions to preclinical studies and clinical trials, or to our supply chain due to the COVID-19 pandemic;
- the need to hire additional clinical, quality assurance, quality control and other scientific personnel;
- the number and characteristics of product candidates that we develop or may in-license;
- the outcome, timing and cost of meeting and maintaining compliance with regulatory requirements;
- the cost of filing, prosecuting, defending and enforcing our patent claims and other intellectual property rights;
- the terms of any collaboration agreements we may choose to enter into, including the achievement of milestones or occurrence of other developments that trigger payments under any license or collaboration agreements we might have at such time;
- the cost associated with the expansion of our operational, financial and management systems and increased personnel, including personnel to support our operations as a public company; and
- the cost of establishing sales, marketing and distribution capabilities for any product candidates for which we may receive regulatory approval in regions where we choose to commercialize our products, if approved, on our own.

Without giving effect to the anticipated net proceeds from this offering, based on our current operating plan, we believe we do not have sufficient cash and cash equivalents on hand to support current operations for at least one year from the date of issuance of the consolidated financial statements for the year ended December 31, 2019, which was November 12, 2020, appearing at the end of this prospectus. To finance our operations beyond that point we will need to raise additional capital, which cannot be assured. Our independent registered public accounting firm included an explanatory paragraph in its audit report on our consolidated financial statements as of and for the years ended December 31, 2019 and 2018 emphasizing our disclosure in note 1 of our consolidated financial statements regarding recurring losses from operations and negative cash flows and our need to raise additional funding to finance our operations raising substantial doubt about our ability to continue as a going concern.

We expect our existing cash and cash equivalents, together with the net proceeds from this offering, will enable us to fund our operating expenses and capital expenditure requirements for at least . We have based this estimate on assumptions that may prove to be wrong, and we may use our available capital resources sooner than we currently expect. Our future capital requirements will depend on many factors, including:

- the scope, progress, results and costs of product discovery, preclinical studies and clinical trials;
- the scope, prioritization and number of our research and development programs;
- the costs, timing and outcome of regulatory review of our product candidates;
- our ability to establish and maintain collaborations on favorable terms, if at all;

- the extent to which we are obligated to reimburse, or entitled to reimbursement of, clinical trial costs under collaboration agreements, if any;
- the costs of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending intellectual property-related claims;
- the extent to which we acquire or in-license other product candidates and technologies;
- the costs of securing manufacturing arrangements for commercial production;
- the costs of establishing or contracting for sales and marketing capabilities if we obtain regulatory approvals to market our product candidates; and
- the impact of the COVID-19 pandemic and the corresponding responses of businesses and governments.

Until such time, if ever, as we can generate substantial product revenue, we expect to finance our operations through a combination of equity offerings, debt financings, collaborations, strategic alliances and marketing, distribution or licensing arrangements. We do not currently have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest may be materially diluted, and the terms of such securities could include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing and preferred equity financing, if available, may involve agreements that include restrictive covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. In addition, debt financing would result in fixed payment obligations.

If we raise additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may have to relinquish valuable rights to our future revenue streams, research programs or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings or other arrangements when needed, we may be required to delay, limit, reduce or terminate our research, product development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Contractual Obligations

The following table summarizes our contractual obligations at December 31, 2019 (in thousands):

	Total	Less than 1 Year	1 to 3 Years	3 to 5 Years
Capital leases	$ 147	$ 41	$ 82	$ 24
Convertible notes	2,489	2,489	—	—
Total	$2,636	$ 2,530	$ 82	$ 24

The amounts in the table above are associated with contracts that are enforceable and legally binding and that specify all significant terms, including fixed or minimum services to be used, fixed, minimum or variable price provisions, and the approximate timing of the actions under the contracts. The table does not include obligations under agreements that we can cancel without a significant penalty.

In July 2020, we entered into an agreement with our sub-landlord to terminate our corporate headquarters lease agreement. Under the terms of the agreement, we will vacate the property on or before December 31, 2020 and the sub-landlord will retain our $0.4 million security deposit previously remitted in 2018. In October 2020, we entered into a new operating lease for our current corporate headquarters, with a term commencing on November 1, 2020 and continuing through February 2027. Our minimum commitment under the new lease is approximately $0.4 million dollars annually.

We enter into contracts in the normal course of business with third-party service providers for clinical trials, preclinical research studies and testing, manufacturing and other services and products for operating purposes. We have not included our payment obligations under these contracts in the table as these contracts generally provide for termination upon notice, and therefore, we believe that our non-cancelable obligations under these agreements are not material and we cannot reasonably estimate the timing of if and when they will occur. We could also enter into additional research, manufacturing, supplier and other agreements in the future, which may require up-front payments and even long-term commitments of cash.

Internal Control Over Financial Reporting

During the audit of our financial statements for the year ended December 31, 2019, three material weaknesses were identified in our internal control over financial reporting. Under standards established by the PCAOB, a "material weakness" is a deficiency, or combination of deficiencies in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis. The material weaknesses that have been identified relate to lack of segregation of duties, lack of a risk assessment process and lack of contemporaneous documentation, both contractual and accounting related.

We are in the process of implementing a number of measures to address the material weaknesses and deficiencies that have been identified including: (i) hiring additional accounting and financial reporting personnel with generally accepted accounting principles in the United States, or US GAAP, and SEC reporting experience, (ii) developing, communicating and implementing an accounting policy manual for our accounting and financial reporting personnel for recurring transactions and period-end closing processes, and (iii) establishing effective monitoring and oversight controls for non-recurring and complex transactions to ensure the accuracy and completeness of our company's consolidated financial statements and related disclosures.

These additional resources and procedures are designed to enable us to broaden the scope and quality of our internal review of underlying information related to financial reporting and to formalize and enhance our internal control procedures. With the oversight of senior management and our audit committee, we have begun taking steps and plan to take additional measures to remediate the underlying causes of the material weaknesses.

We intend to complete the implementation of our remediation plan during fiscal year 2021. Although we believe that our remediation plan will improve our internal control over financial reporting, additional time may be required to fully implement it and to make conclusions regarding the effectiveness of our internal controls over financial reporting. Our management will closely monitor and modify, as appropriate, the remediation plan to eliminate the identified material weakness.

If our remediation of the material weaknesses is not effective, or if we experience additional material weaknesses or otherwise fail to maintain an effective system of internal controls in the future, we may not be able to accurately or timely report our financial condition or results of operations. Accordingly, there could continue to be a reasonable possibility that a material misstatement of our financial statements would not be prevented or detected on a timely basis. We cannot assure you that the measures we have taken to date, or any measures we may take in the future, will be sufficient to remediate the material weaknesses we have identified or avoid potential future material weaknesses.

We, and our independent registered public accounting firm, were not required to report on our evaluation of the Company's internal control over financial reporting as of December 31, 2019 and 2018 in accordance with the provisions of the Sarbanes-Oxley Act. Accordingly, we cannot assure you that we have identified all, or that we will not in the future have additional, material weaknesses. Material weaknesses may still exist when we report on the effectiveness of our internal control over financial reporting as required by reporting requirements under Section 404 of the Sarbanes-Oxley Act after the completion of this offering.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined in the rules and regulations of the U.S. Securities and Exchange Commission.

Critical Accounting Policies and Significant Judgements and Estimates

This Management's Discussion and Analysis of Financial Condition and Results of Operations is based on our financial statements, which are prepared in accordance with US GAAP. The preparation of our financial statements requires us to make estimates, assumptions and judgments that affect the reported amounts of assets, liabilities, costs and expenses. We base our estimates and assumptions on historical experience and other factors that we believe to be reasonable under the circumstances. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates.

We define our critical accounting policies as those accounting principles that require us to make subjective estimates and judgments about matters that are uncertain and are likely to have a material impact on our financial condition and results of operations, as well as the specific manner in which we apply those principles. While our significant accounting policies are more fully described in note 2 to our annual financial statements beginning on page F-1 of this prospectus, we believe the following are the critical accounting policies used in the preparation of our financial statements that require significant estimates and judgments.

Accrued Research and Development Expenses

We incur substantial expenses associated with clinical trials. Accounting for clinical trials relating to activities performed by CROs and other external vendors requires management to exercise significant estimates in regard to the timing and accounting for these expenses. We estimate costs of research and development activities conducted by service providers, which include, the conduct of sponsored research, preclinical studies and contract manufacturing activities. The diverse nature of services being provided under CRO and other arrangements, the different compensation arrangements that exist for each type of service and the lack of timely information related to certain clinical activities complicates the estimation of accruals for services rendered by CROs and other vendors in connection with clinical trials. We record the estimated costs of research and development activities based upon the estimated amount of services provided but not yet invoiced and include these costs in the accrued and other current liabilities or prepaid expenses on the balance sheets and within research and development expense on the consolidated statements of operations. We determine the estimated costs through discussions with the internal personnel and external service providers as to the progress, or stage of completion of the services and the agreed-upon fees to be paid for such services. This process involves a thorough review of open contracts and evaluation by internal personnel to identify services received that have been performed for us and estimating the associated cost incurred for these services for which we have not yet been invoiced or otherwise notified of the actual cost. In estimating the duration of a clinical study, we evaluate the start-up, treatment and wrap-up periods, compensation arrangements and services rendered attributable to each clinical trial and fluctuations are regularly tested against payment plans and trial completion assumptions.

Our expenses related to clinical trials are based on estimates of patient enrollment and related expenses at clinical investigator sites as well as estimates for the services received and efforts expended pursuant to contracts with multiple research institutions and CROs that may be used to conduct and manage clinical trials on our behalf. We determine the estimated costs through discussions with internal personnel and external service providers as to the progress, or stage of completion of the services and the agreed-upon fees to be paid for such services. We generally accrue expenses related to clinical trials based on contracted amounts applied to the level of patient enrollment and activity. If timelines or contracts are modified based upon changes in the clinical trial protocol or scope of work to be performed, we modify our estimates of accrued expenses accordingly on a prospective basis.

Stock-Based Compensation

We measure all stock-based awards granted based on their estimated fair value on the date of the grant and recognize the corresponding compensation expense for those awarded to employees and directors over the requisite service period, which is generally the vesting period of the respective award, and for those awarded to nonemployees over the period during which services are rendered by nonemployees until completed. We have typically issued stock options and warrants with service-based vesting conditions and we record the expense for these awards using the straight-line method.

We estimate the fair value of each stock option grant using the Black-Scholes option-pricing model, which uses as inputs the fair value of our common stock and assumptions we make for the volatility of our common stock, the expected term of our stock options and warrants, the risk-free interest rate for a period that approximates the expected term of our stock options and warrants and our expected dividend yield.

The following table reflects the weighted average assumptions used to estimate the fair value of stock options and warrants granted during the nine months ended September 30, 2020 and 2019 and year ended December 31, 2019 and 2018:

	Nine Months Ended September 30,		Year Ended December 31,	
	2020	2019	2019	2018
Volatility	90.0%	90.0%	90.0%	72.5%–75.0%
Expected life (years)	0.5–4.0	0.5–10.0	0.5–10.0	6.0–10.0
Risk-free interest rate	0.11%–0.18%	1.4%–2.5%	1.4%–2.5%	2.2%–2.8%
Dividend rate	— %	— %	— %	— %

Due to the lack of a public market for the trading of our common stock and a lack of company-specific historical and implied volatility data, we base the estimate of expected stock price volatility on the historical volatility of a representative group of publicly traded companies for which historical information is available. The historical volatility is generally calculated based on a period of time commensurate with the expected term assumption. We use the simplified method to calculate the expected term for options granted to employees and directors. We utilize this method as we do not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term. For options granted to non-employees, we utilize the contractual term. The risk-free interest rate is based on a U.S. treasury instrument whose term is consistent with the expected term of the stock options. The expected dividend yield is assumed to be zero, as we have never paid dividends and do not have current plans to pay any dividends on our common stock.

Fair Value of Common Stock

As there has been no public market for our common stock to date, the estimated fair value of our common stock has been determined by our board of directors as of the date of each option grant, with input from management, considering our most recently available third-party valuations of common stock, and our board of directors' assessment of additional objective and subjective factors that it believed were relevant and which may have changed from the date of the most recent valuation through the date of the grant.

We obtained an independent third-party valuation of our common stock as of July 31, 2020, which valuation was considered by our board of directors in determining the fair value of our common stock as of the grant dates for equity awards during 2020. This valuation was performed in accordance with the guidance outlined in the American Institute of Certified Public Accountants' Accounting and Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*. For the valuation as of July 31, 2020, the value of our common stock was estimated, using a market approach, to be $0.067 per share.

After our equity value was determined, our common stock values were estimated using both an option pricing method, or OPM, and a hybrid approach. The OPM treats common stock and convertible preferred stock

as call options on the total equity value of a company, with exercise prices based on the value thresholds at which the allocation among the various holders of a company's securities changes. Under this method, the common stock only has value if the funds available for distribution to stockholders exceeds the value of the convertible preferred stock liquidation preferences at the time of the liquidity event, such as a strategic sale or a merger. A discount for lack of marketability of the common stock is then applied to arrive at an indication of value for the common stock.

The hybrid method utilized both a probability-weighted expected return method, or PWERM, where the equity value in one or more scenarios is assigned, and the OPM. The PWERM is a scenario-based methodology that estimates the fair value of our common stock based upon an analysis of our future values, assuming various outcomes. The common stock value is based on the probability-weighted present value of expected future investment returns considering each of the possible outcomes available as well as the rights of each class of stock. The future value of the common stock under each outcome is discounted back to the valuation date at an appropriate risk-adjusted discount rate, and then probability weighted to arrive at an indication of value for the common stock

Given the absence of a public trading market of our capital stock, our board of directors exercised reasonable judgment and considered a number of objective and subjective factors to determine its estimate of the fair value of our common stock, including changes in the following factors between the date of the July 31, 2020 valuation and the grant date:

- the prices, rights, preferences and privileges of our convertible preferred stock relative to our common stock;
- our business, financial condition and results of operations, including related industry trends affecting our operations;
- the likelihood of achieving a liquidity event, such as an initial public offering or sale of our company, given prevailing market conditions;
- the lack of marketability of our common stock;
- the market performance of comparable publicly traded companies; and
- U.S. and global economic and capital market conditions and outlook.

The assumptions underlying our board of directors' valuations represented our board's best estimates, which involved inherent uncertainties and the application of our board's judgment. As a result, if factors or expected outcomes had changed or our board of directors had used significantly different assumptions or estimates, our equity-based compensation expense could have been materially different. Following the completion of this offering, our board of directors will determine the fair value of our common stock based on the quoted market prices of our common stock on the Nasdaq Global Market.

The following table summarizes by grant date the number of shares of common stock subject to options granted since January 1, 2020, as well as the associated per share exercise price and the estimated fair value per share of the common stock underlying the options as of the grant date:

Grant Date	Number of Shares of Common Stock Subject to Options Granted	Exercise Price per Share	Estimated Fair Value Per Share of Common Stock on Grant Date
August 5, 2020	75,997,000	$ 0.067	$ 0.067
December 29, 2020	15,180,000	$ 0.125	$ 0.125
January 14, 2021	3,500,000	$ 0.192	$ 0.192

Based on an assumed initial public offering price of $ per share of common stock, the midpoint of the price range set forth on the cover page of this prospectus, the intrinsic value of vested and unvested options outstanding as of September 30, 2020 was $ million.

Recent Accounting Pronouncements

See note 2 in our annual financial statements and note 2 in our interim financial statements beginning on page F-1 of this prospectus for a description of recent accounting pronouncements applicable to our financial statements. Other than as disclosed in our financial statements, we do not expect that any recently issued accounting standards will have a material impact on our financial statements or will otherwise apply to our operations.

Qualitative and Quantitative Disclosures about Market Risk

We are a smaller reporting company as defined by Item 10 of Regulation S-K and are not required to provide the information otherwise required under this item.

Emerging Growth Company and Smaller Reporting Company Status

We qualify as an EGC, as defined in the JOBS Act. As an EGC, we may take advantage of specified reduced disclosure and other requirements that are otherwise applicable generally to public companies, including reduced disclosure about our executive compensation arrangements, exemption from the requirements to hold non-binding advisory votes on executive compensation and golden parachute payments and exemption from the auditor attestation requirement in the assessment of our internal control over financial reporting.

We may take advantage of these exemptions until the last day of the fiscal year following the fifth anniversary of this offering or such earlier time that we are no longer an emerging growth company. We would cease to be an EGC earlier if we have more than $1.07 billion in annual revenue, we have more than $700.0 million in market value of our stock held by non-affiliates (and we have been a public company for at least 12 months and have filed one annual report on Form 10-K) or we issue more than $1.0 billion of non-convertible debt securities over a three-year period. For so long as we remain an EGC, we are permitted, and intend, to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not EGCs. We may choose to take advantage of some, but not all, of the available exemptions.

In addition, the JOBS Act provides that an EGC can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an EGC to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected not to “opt out” of such extended transition period, which means that when a standard is issued or revised and it has different application dates for public or private companies, we will adopt the new or revised standard at the time private companies adopt the new or revised standard and will do so until such time that we either (i) irrevocably elect to “opt out” of such extended transition period or (ii) no longer qualify as an EGC. Therefore, the reported results of operations contained in our consolidated financial statements may not be directly comparable to those of other public companies.

We are also a “smaller reporting company,” meaning that the market value of our stock held by non-affiliates plus the proposed aggregate amount of gross proceeds to us as a result of this offering is less than $700 million and our annual revenue was less than $100 million during the most recently completed fiscal year. We may continue to be a smaller reporting company after this offering if either (i) the market value of our stock held by non-affiliates is less than $250 million or (ii) our annual revenue is less than $100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than $700 million.

If we are a smaller reporting company at the time we cease to be an EGC, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and, similar to EGCs, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

BUSINESS

Overview

We are a clinical-stage immunotherapy company engaged in the discovery and development of next-generation therapies with an initial focus on treatments for cancer. Our proprietary ImmunoPhage platform is a powerful, self-adjuvanted and highly differentiated immunotherapy approach that is designed to utilize bacteriophage to induce a robust, focused and coordinated innate and adaptive immune response. We are engineering our ImmunoPhage product candidates to directly target antigen presenting cells, or APCs, and modulate the tumor microenvironment, or TME, through the targeted use of nanobodies which further enhances therapeutic activity. We believe our ImmunoPhage platform has the potential to deliver personalized, off-the-shelf product candidates tailored to a patient's specific tumor. The versatility of our ImmunoPhage platform allows us to design product candidates in a modular fashion, based on a cocktail of common and patient-specific antigens built from our proprietary library of ImmunoPhages, which we refer to as Phortress. We are currently conducting an ongoing 30-patient Phase 1/2 clinical trial of our lead product candidate, SNS-301, in combination with the PD-1 inhibitor pembrolizumab, as a potential treatment for squamous cell carcinoma of the head and neck, or SCCHN. As of December 10, 2020, we have enrolled 11 patients in the trial, of which ten patients were evaluable for efficacy. We have observed disease control in seven of the patients evaluable for efficacy, including one patient with a partial response, or PR, and two patients who have achieved longstanding stable disease, or SD, for greater than 36 weeks following treatment. Treatment with SNS-301 has generally been well tolerated. We anticipate reporting topline data from this trial by the end of 2021. If the results of this trial are positive, subject to feedback from the U.S. Food and Drug Administration, or FDA, we intend to initiate a randomized, registration-enabling trial for SNS-301. We are leveraging the insights from our experience with SNS-301 to expand our development pipeline to include SNS-401 for the treatment of Merkel cell carcinoma, or MCC, as well as a human monoclonal antibody, or mAb, program targeting the novel immune checkpoint VISTA, or V-set immunoglobulin domain suppressor of T cell activation.

Monoclonal antibodies targeting the programmed cell death protein 1, or PD-1, and its related ligand, or PD-L1, have emerged as one of the most promising classes of therapeutics for the treatment of cancer. However, in a majority of patients they generally fail to produce meaningful results. Drugs utilizing PD-1 blockade have been approved by the FDA to treat at least 20 different types of cancer and, in 2019, generated sales of approximately $19.4 billion worldwide. By 2024, the total global market for drugs utilizing PD-1 blockade is estimated to exceed $36 billion. Two of the most common reasons for non-response to PD-1 blockade treatment include a lack of tumor infiltrating lymphocytes, or TILs, or the presence of alternate immunosuppressive mechanisms such as VISTA. To address these mechanisms of non-response to PD-1 blockade, there has been considerable focus on the development of therapies that induce the body's immune system to mount a response towards tumor antigen targets. Our ImmunoPhage platform is designed to address the challenges of converting PD-1 blockade non-responsive tumors into responsive ones by triggering the generation of tumor antigen-specific T cells and circumventing immunosuppressive pathways.

Pioneering work with bacteriophage led to our discovery of their utility as a powerful, self-adjuvanted immunotherapy platform. The foundation of ImmunoPhage is the bacteriophage lambda, or lambda phage, which we selected for its native immunostimulatory capabilities, large and tractable genome, and tolerability profile. The highly immunogenic nature of bacteriophage promotes a balanced, coordinated and robust response by both the innate and the cellular and humoral components of the adaptive immune system. We believe that the unique features of bacteriophage, including the ability to generate both T cell responses and B cell mediated antibody responses, give it the potential to be used in the development of differentiated treatments for cancer. The modularity of the ImmunoPhage platform allows for personalized, dynamic substitution of particular phage components to optimize patient therapy. Our creation of a phage cocktail expressing multivalent antigens along with the integration of nanobody technology is designed to enhance the utility, precision and therapeutic activity of our product candidates. This allows for an adaptive clinical trial design, which we have discussed with the FDA. To date, we have constructed over 25 unique ImmunoPhage configurations in-house in accordance with current good manufacturing practices, or cGMP, and we are continuing to expand our Phortress library of ImmunoPhages.

SNS-301 is an ImmunoPhage product candidate that we are developing as a treatment for locally advanced unresectable or metastatic SCCHN. Head and neck cancer is the sixth most common malignancy worldwide, accounting for approximately 6% of all cancer cases, and is responsible for an estimated 1% to 2% of all cancer deaths. An estimated 650,000 cases of head and neck cancer are diagnosed annually worldwide, including approximately 50,000 cases in the United States. Human papilloma virus, or HPV, infection accounts for an estimated 70% of SCCHN cases in the United States. The current standard of care in our target patient population is PD-1 inhibition as a single agent or in combination with chemotherapy. Despite improvements in diagnoses and disease management, long-term survival rates for patients with SCCHN have not increased significantly over the past 30 years and are among the lowest for major cancers.

We selected SCCHN as our first indication based on a high unmet patient need, robust scientific rationale, a clearly defined regulatory path and accessibility of these tumors for biopsy. SNS-301 has been engineered to produce a targeted immune response against the tumor associated antigen, or TAA, aspartate b-hydroxylase, or ASPH. ASPH is found to be overexpressed in 70% to 90% of human malignancies, including SCCHN. Expression of ASPH is related to cancer cell growth, invasiveness, and disease progression through the Notch signaling pathway. As SCCHN tumors are often lacking intratumoral CD8 T cells, we believe that the addition of SNS-301 has the potential to generate and expand ASPH specific anti-tumor T cells and thereby enhance PD-1 blockade activity.

We are currently evaluating SNS-301 in combination with the PD-1 inhibitor pembrolizumab in a 30-patient Phase 1/2 clinical trial. As of December 10, 2020, we have enrolled 11 patients in the trial, of which ten patients were evaluable for efficacy. The trial includes patients with locally advanced unresectable or metastatic SCCHN who have been treated with PD-1 blockade for at least 12 weeks with the best overall response being SD or unconfirmed progressive disease, or PD. Patients who achieved a PR, complete response, or CR, or confirmed progression on PD-1 blockade, are not eligible. Based on an initial assessment of the ten evaluable patients, SNS-301 in combination with pembrolizumab has been well tolerated and has shown promising anti-tumor activity, including a PR in one patient with a PD-L1 negative tumor who achieved SD as best overall response on PD-1 inhibition alone as well as SD in six patients. Of the six SD patients, one patient previously had PD on PD-L1 inhibition and two patients have achieved longstanding SD for greater than 36 weeks following treatment. We anticipate reporting topline data from this trial by the end of 2021. If the results of this trial are positive, subject to feedback from the FDA, we intend to initiate a randomized, registration-enabling trial for SNS-301.

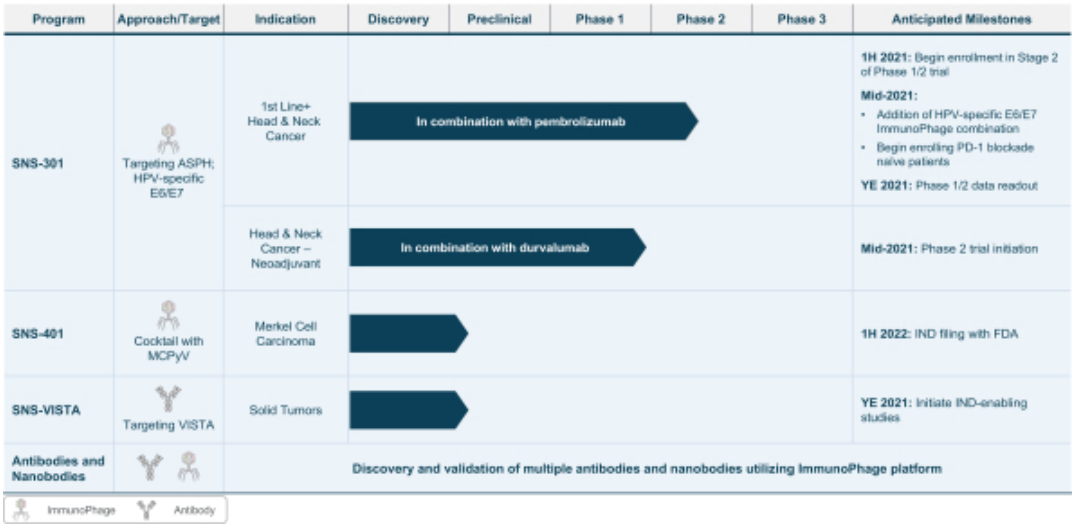
Based on the results we have observed to date, we also intend to evaluate the addition of SNS-301 to pembrolizumab in PD-1 blockade naïve SCCHN patients as part of our ongoing Phase 1/2 trial, with enrollment in this additional treatment arm expected to begin in mid-2021. We intend to use an ImmunoPhage cocktail targeting the E6/E7 antigens of HPV, in combination with SNS-301, in HPV positive patients in our ongoing trial of SNS-301, which we expect to incorporate in mid-2021. In addition, we are currently planning two Phase 2 trials to evaluate the safety and efficacy of SNS-301 in combination with durvalumab for patients with locally advanced resectable SCCHN in the neoadjuvant setting and ASPH positive patients with locally advanced unresectable or metastatic solid tumors. We intend to initiate the first trial in patients with locally advanced resectable SCCHN in the neoadjuvant setting in mid-2021.

In addition to SNS-301, we are currently developing our next ImmunoPhage candidate, SNS-401, for the treatment of MCC. SNS-401 is in preclinical studies and we plan on submitting an IND for SNS-401 in the first half of 2022. We are also developing a mAb therapy targeting VISTA. Through the use of proprietary functional and in vivo assays, we intend to select a product candidate and initiate IND-enabling studies for our lead mAb by the end of 2021.

We are led by an experienced team with deep experience in immuno-oncology, biologics, drug discovery platform technologies, clinical development, general management and business development. Collectively, our management team has a track record of managing product development programs that have received regulatory approval and been successfully commercialized, including Keytruda and Kisqali, as well as building companies that have initiated innovative investigational new drug programs.

Our Pipeline

We are utilizing our pioneering ImmunoPhage platform, which harnesses the intrinsic immunostimulatory characteristics and capabilities of bacteriophage, to develop a pipeline of product candidates with an initial focus on treatments for cancer. We have worldwide commercial rights for each of our product candidates. Our current portfolio of therapeutic initiatives is presented in the diagram below:



Our Strategy

Our goal is to transform the treatment of cancer and other diseases by leveraging our ImmunoPhage platform to discover, develop and commercialize transformative immunotherapies capable of eliciting a robust, focused and coordinated innate and adaptive immune response. Key components of our strategy include the following:

- ***Rapidly advance our lead ImmunoPhage product candidate, SNS-301, through clinical development in patients with SCCHN and other solid tumors.*** We are currently evaluating the safety and efficacy of our lead ImmunoPhage product candidate, SNS-301, in combination with pembrolizumab in an ongoing Phase 1/2 trial in patients with locally advanced unresectable or metastatic SCCHN. Based on an initial assessment of the first 11 patients in the trial, of which ten patients were evaluable for efficacy, SNS-301 in combination with pembrolizumab was well tolerated with promising anti-tumor activity, including a PR observed in a patient with a PD-L1 negative tumor. We expect to report topline data from this trial by the end of 2021. If the results of this trial are positive, subject to feedback from the FDA, we intend to initiate a randomized registration-enabling trial. Based on the results we have observed to date, we also intend to evaluate the addition of SNS-301 to pembrolizumab in PD-1 blockade naïve SCCHN patients as part of our ongoing Phase 1/2 trial, with enrollment in this additional treatment arm expected to begin in mid-2021. In addition, we are currently planning two additional Phase 2 trials to evaluate the safety and efficacy of SNS-301 in combination with durvalumab for patients with locally advanced resectable SCCHN in the neoadjuvant setting and ASPH positive patients with locally advanced unresectable or metastatic solid tumors. We intend to initiate the first trial in patients with locally advanced resectable SCCHN in the neoadjuvant setting in mid-2021.
- ***Leverage our proprietary ImmunoPhage platform and Phortress library to design differentiated product candidates with enhanced activity through a cocktail therapy approach.*** Our platform allows us to engineer ImmunoPhage product candidates, in a modular fashion. We envision engineering our immunotherapies that are precisely tailored to a patient's specific tumor and yet are composed of

pre-manufactured and off-the-shelf components. We have designed more than 25 distinct ImmunoPhage product candidates into our Phortress library and intend to develop additional candidates against known antigens and neo-antigens. We believe that the creation of a phage cocktail expressing multivalent antigens along with the integration of nanobody technology will further enhance the utility, precision and therapeutic activity of our product candidates and has the potential to replace current standards of care, including systemic administration of checkpoint inhibitors. We intend to use an HPV-specific E6/E7 ImmunoPhage cocktail in our ongoing Phase 1/2 trial of SNS-301 and are advancing several early-stage programs, including SNS-401, which is an ImmunoPhage cocktail for MCC.

- ***Strengthen our position in the immunotherapy field through the continuous innovation and expansion of our ImmunoPhage platform.*** We have identified novel immunostimulatory mechanisms and are engineering ImmunoPhage to further optimize APC targeting and co-stimulatory signaling. In addition, we are developing nanobodies targeted to immune checkpoints that can be packaged into the phage as immunomodulatory payloads to enhance immunogenicity. We plan to continue driving innovation that enables the delivery of a robust and complete immune response. In addition, we continually survey the scientific and industry landscape for opportunities to in-license or acquire new technologies as well as access the human capital necessary to enable our development of a world class scientific organization.
- ***Expansion of our ImmunoPhage manufacturing capabilities.*** We own and operate a cGMP compliant facility and believe the scalability, speed and cost effectiveness of ImmunoPhage manufacturing, as well as our control over our manufacturing processes, provide us with significant competitive advantages. We believe these advantages, along with the long-term stability of ImmunoPhage, have the potential to make personalized ImmunoPhage cocktails a commercially viable solution to the current challenges facing fully personalized patient-specific immunotherapy. As we advance into later-stage clinical trials and additional indications, we intend to expand our current manufacturing capabilities to support larger scale clinical trials and the potential commercialization of our product candidates.
- ***Seek strategic partnerships for selected product candidates.*** Our ImmunoPhage platform is designed to generate a broad pipeline of product candidates with potential for clinical application in multiple indications. We intend to accelerate opportunities for preclinical and clinical development of these candidates in a capital-efficient manner, including selectively pursuing strategic partnerships with leading biopharmaceutical companies with clinical development expertise to maximize the value of our pipeline. As we seek to commercialize any approved products, we plan to retain worldwide rights for key programs, while considering partnership opportunities for others.

Background

The Role of the Immune System in Fighting Cancer

The immune system is a host defense system comprising multiple structures and processes within an organism that protects against infection and disease. The human immune system is comprised of two integrated systems, the innate immune system and the adaptive immune system. The innate immune system involves an immediate, non-specific response to foreign pathogens, based primarily on the built-in ability to recognize pathogen-associated molecular patterns. It generally lacks immune memory, which is a defining feature of the adaptive immune response. Phagocytic leukocytes like macrophages and dendritic cells, or DCs, are part of this front-line immune response and, in this capacity, eliminate pathogens directly. DCs also act as APCs and facilitate activation of the adaptive immune response.

The adaptive immune system includes special types of leukocytes known as B and T lymphocytes (also known as B cells and T cells, respectively). B cells are involved in the humoral immune response, differentiating into antibody-secreting plasma cells upon activation and recognition of their target antigen. T cells participate primarily in the cell-mediated immune response.

T lymphocytes can be further segregated into distinct cell types with the primary types being CD8 T cells, also referred to as cytotoxic T lymphocytes, or CTLs, and CD4 "helper" T cells. CTLs eliminate cells that are infected with viruses, other pathogens or cancer-associated mutations. In contrast, CD4 T cells, which have limited cytotoxic activity, participate in the immune response by directing the activity of other cells, in particular B cells and CTLs.

APCs are a functional class of immune cells capable of taking up antigen by a variety of mechanisms, then processing and presenting the antigen to lymphocytes. DCs are often referred to as "professional APC" as they are particularly well-suited to driving immune responses, although it is fundamentally the integration of both positive and negative signals in the immune synapse between APC and lymphocytes that primarily determines the character of the subsequent adaptive immune response. Optimal immunogenicity requires that DCs present antigen to and drive CD4 T cells, which provide support for downstream activation and differentiation of both B cells and CD8 T cells.

A critical feature of adaptive immunity is its ability to distinguish between healthy, functioning host cells, or self, and either infectious agents or cells that have mutated, or non-self. Many mechanisms are responsible for enabling the ongoing inhibition of immune attacks against "self." Taken together, these mechanisms constitute immune tolerance.

Immune checkpoints, such as PD-1/PD-L1, represent a myriad of inhibitory pathways involved in the immune system that act to regulate the duration and intensity of an antigen-induced immune response. Checkpoints are critical to regulating immune tolerance. Certain tumors have the ability to co-opt these pathways to up-regulate the activity of these immune checkpoints which enables the cancerous cells to evade detection and elimination. Two of the more well characterized immune checkpoints are cytotoxic T lymphocyte associated antigen 4, or CTLA4, PD-1 and PD-L1. Other potentially relevant checkpoints and counter-regulatory pathways that inhibit T cell activity include TIGIT, IL-10, TGFb and VISTA. In multiple models, inhibition of VISTA appears to synergize with PD-1 blockade to enhance anti-tumor immune responses.

Limitations of Currently Available Immunotherapy and the Need for New Options for Cancer Patients

Immunotherapy is a treatment that harnesses the components and mechanics of the immune system to address diseases and disorders. Several types of immunotherapy are used to treat cancers. These include mAbs adoptive transfer of T cells, including naturally occurring and engineered T cells, other immune system modulators and therapeutic vaccines.

All immunotherapy modalities, including efforts to develop robust anti-cancer vaccines, have inherent efficacy limitations. While general immune activity directed at target antigens has been observed with vaccines, reduction in tumor loads has not been frequently observed. Contributing to this lack of efficacy is the low immunogenicity of TAAs, down regulation of antigen presentation and processing mechanisms involving T cell recognition of tumor, as well as the loss of adequate expression of positive costimulatory signals. These negative factors result in the limited generation of tumor antigen-specific T cells as well as the impaired fitness of anti-tumor T cells.

Immune checkpoint inhibitors have emerged as one of the most promising classes of therapeutics for the treatment of cancer. Checkpoint inhibitors work by disabling the inhibitory function of immune checkpoint proteins. Disabling immune checkpoints allows the immune system to bypass the shield of immune tolerance they provide, allowing the tumor-specific CTL to engage the tumor. Drugs utilizing PD-1 blockage have been approved by the FDA to treat at least 20 different types of cancer and, in 2019, generated sales of approximately $19.4 billion worldwide. By 2024, the total global market for drugs utilizing PD-1 blockade is estimated to exceed $36 billion.

While checkpoint inhibitors have proven a significant advance in cancer therapy, they generally fail to produce meaningful results in a majority of patients. Because PD-1 blockade, including PD-1 or PD-L1

inhibitory mAbs, require anti-tumor T cells to be effective, patients whose tumors lack TILs typically fail to respond. Given this mechanism of non-response to PD-1 blockade, considerable effort is being made to develop T cell therapies which can induce the body's immune system to mount a response towards tumor antigen targets. The overarching objective of our ImmunoPhage-based approach is to convert PD-1 non-responsive tumors into responsive ones.

Our Approach to Immunotherapy

Our ImmunoPhage Platform

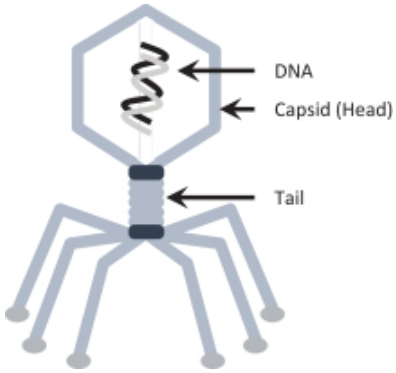
We believe that the unique features of bacteriophage give it the potential to be used in the development of differentiated treatments for cancer. The pioneering work with bacteriophage documented in scientific literature describes its potential utility as a powerful, self-adjuvanted immunotherapy platform. However, we have not directly evaluated our ImmunoPhase platform in clinical trials beyond those described below. We selected bacteriophage because of its native immunostimulatory capabilities, large and tractable genome, and tolerability profile. The highly immunogenic nature of bacteriophage promotes a balanced, coordinated and robust response by both the innate and the cellular and humoral components of the adaptive immune system. Bacteriophage has the ability to generate both T cell responses and B cell mediated antibody responses.

The bacteriophage lambda, or lambda phage, is the foundation of our ImmunoPhage platform. Lambda phage is composed of an icosahedral head, or capsid, consisting of major capsid proteins gpD and gpE that surround a single copy of a 48.5 kb double-stranded DNA genome and a flexible tail structure. The gpD protein forms specialized structures on the capsid that results in over 400 copies of the protein being displayed on the capsid surface, which can be modified with antigens to increase the antigen presentation capacity of the phage. The lambda phage DNA genome contains abundant CpG sequence motifs, which are known to function as potent APC activators, through TLR9-mediated signaling.

As bacteriophages are ubiquitous, patients either have pre-existing anti-phage antibody titers or quickly develop anti-phage antibodies upon repeat dosing. However, rather than contributing to neutralization, as is experienced with many viral and protein-based therapies, the presence of phage antibodies may augment ImmunoPhage activity through a process known as antibody-dependent enhancement, or ADE.

In addition to its natural characteristics, lambda phage can be manufactured without significant difficulty and is amenable to further optimization through our proprietary engineering capabilities, such as the addition of antigens and integration of our proprietary nanobodies, which can be used to direct the phage to specific cells and as payloads that can be incorporated into our product candidates.

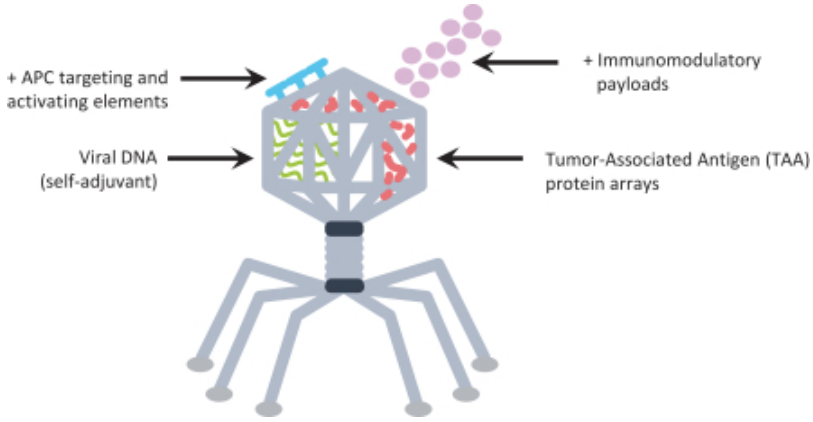
Structure of Lambda Phage



Our ImmunoPhage platform capitalizes on the following key immunostimulatory features:

- **Self-adjuvanted:** ImmunoPhage elicits an enhanced immune response and displays a high-density of the protein sequence of the targeted antigen and contains multiple CpG motifs in its DNA genome, eliminating the need to include an exogenous adjuvant common to competing viral and mRNA nanoparticle immunotherapies.
- **Intrinsic APC targeting:** ImmunoPhage demonstrates a natural tropism for APCs. We have identified and are advancing additional mechanisms, such as engineering moieties on ImmunoPhage targeted to proteins found on APCs, to further optimize APC targeting and costimulatory signaling.
- **Modular antigen design:** We intend to use off-the-shelf common antigens together with viral and patient-specific antigens as an array of customized, multi-antigen phage configurations, which we refer to as phage cocktails. We believe that the ability to dose cocktails of ImmunoPhage displaying different antigens have the potential to create a personalized, patient-specific immunotherapy.
- **Targeted use of nanobodies:** We are developing nanobodies targeted to immune checkpoints and other immune stimulatory molecules that can be packaged into the phage as immunomodulatory payloads to enhance immunogenicity.

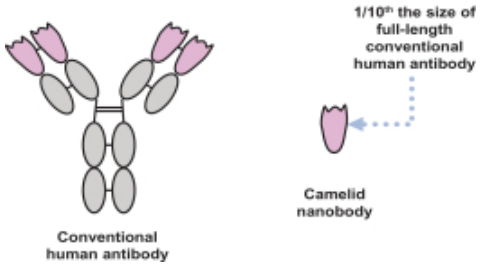
Structure of Our ImmunoPhage



Our proprietary nanobodies, derived from alpacas, are antibody-like structures that consist of a single monomeric variable domain located on the heavy chain. Nanobodies are small (approximately 1/10 the size of mAb), robust protein-binding molecules that we believe represent the optimal class of molecules for use as immunomodulatory proteins, where payload space in a delivery vector or vehicle is limited. Like conventional antibodies, nanobodies can bind selectively to a specific antigen, but they possess additional advantages to conventional antibodies, including:

- **Small size:** Provides better access to binding grooves and contours on proteins on target cells.
- **Stability:** Stable at a wide range of temperatures and able to refold properly at varying temperatures.
- **High Solubility:** Hydrophilic, single-chain structure allows nanobodies to avoid aggregation issues common to mAbs.
- **Ease of manufacturing:** Easier and less expensive to produce due to benefits from improved screening and isolation techniques and bacterial cell production.

Size of Conventional Human Antibody versus Camelid Nanobody

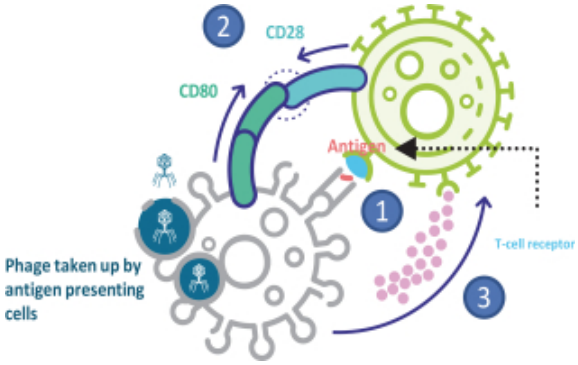


We maintain the ability to produce our customized nanobodies in-house that are compatible with our ImmunoPhage engineering processes. Our product candidates are able to be manufactured through the well-established principles of bacterial fermentation, which provides cost and scalability advantages. We can achieve GMP manufacture of an ImmunoPhage dose configuration in-house in as little as four weeks. We believe that these advantages, along with the long-term stability of ImmunoPhage, make personalized ImmunoPhage cocktails a commercially viable solution to the current challenges facing fully personalized patient-specific immunotherapy.

ImmunoPhage Mechanism of Action

Our mechanism of action focuses on what we believe to be the critical step leading to the generation of effective anti-tumor T cells, the immune priming step where APCs acquire and process tumors antigens, and interact with CD4 and CD8 T cells in the immune synapse. ImmunoPhage mimics a pathogenic virus and naturally targets APCs that capitalize on phage-intrinsic danger signals which activate these critical cells. The aggregation of antigen and danger signals enable self-adjuvant capabilities in a single entity which help to enhance the immunogenicity and augment downstream immune responses, including antigen-specific B and T cell responses. In order to drive optimal generation of antigen-specific T cells, the APC must deliver three discrete critical signals to the T cell, as shown below.

ImmunoPhage Activates Three Discrete Critical Signals Required to Drive Activation of T Cells



1. **Signal one** involves antigenic peptides, derived from APC protein processing pathways, presented in the context of the appropriate major histocompatibility complex, or MHC, molecules, Class II for CD4 T cells and Class I for CD8 T cells. An alternate MHC Class I presentation pathway results in the activation of CD8 T cells through a process called cross presentation.

2. **Signal two** involves the APC expressing positive costimulatory molecules CD80 (or CD86) interacting with CD28 on the T cells. In the presence of significant negative costimulatory signals through molecules like PD-L1 or VISTA, or the lack of sufficient positive co-stimulation, the interaction between APC and T cell can lead to dysfunction of the T cell rather than T cell activation.

3. **Signal three** collectively refers to the cytokine microenvironment of the immune synapse wherein the priming interaction between APC and T cell is occurring. This cytokine milieu determines the differentiation and fitness of the downstream T cell response. For instance, a rich IL-12 environment leads to a Th1 biased immune response and enhanced generation of CTLs.

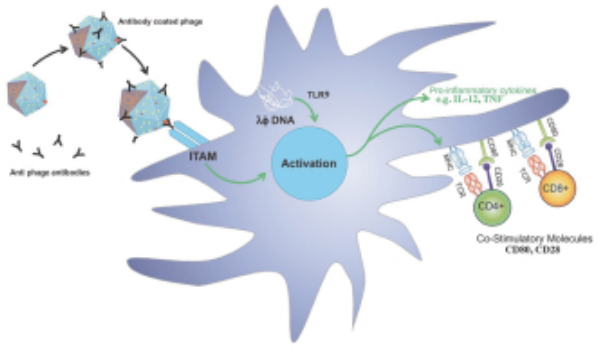
We believe that ImmunoPhage can efficiently deliver antigen to and activate DCs, driving these three critical signals in the priming phase of the immune response. We have observed that increasing doses of ImmunoPhage on human skin-derived DC cultures increase the critical components of signals two and three in a dose-dependent fashion. Importantly, in the context of anti-tumor immune responses, which require the generation of tumor antigen-specific CD8 T cells, phages can drive cross-presentation of displayed antigens, even breaking tolerance to “self” TAAs.

Since the development of pembrolizumab and other inhibitors of the PD-1 signaling pathway, it has become clear that a prerequisite for response to PD-1 blockade is the presence of a sufficient number of tumor-specific T cells, particularly, CD8 T cells in the TME. Patients with poorly immunogenic tumors lacking CD8 T cells represent a major unmet medical need. We believe that there is a significant opportunity for our ImmunoPhage platform to drive the generation of tumor antigen-specific T-cells and potentially convert PD-1 blockade non-responders into responders.

To optimize immunotherapy in cancer, a two-fold approach may be required: the first is the systemic generation of antigen-specific T cells through vaccination or adoptive transfer and the second refers to inhibition of immunosuppressive mechanisms limiting the entry of T cells into the TME. In situ vaccination has been shown to “soften” the TME and increase T cell infiltration. We believe that ImmunoPhage delivered to the tumor, either by direct intralesional injection or by the development of tumor-targeted phages, can deliver both a potent generation of tumor-specific T cells and enhancement of T cell infiltration into tumors.

In addition to our ImmunoPhage-based approach, we are developing a human mAb targeting the immunosuppressive VISTA checkpoint protein as well as nanobody programs targeting other key molecules preventing T cell entry into the TME and cytotoxic activity, including TGFb, IL-10 and PD-1. The goal of these programs is to limit the immunosuppressive mechanisms that prevent T cell entry into the TME.

ImmunoPhage leverages anti-drug antibodies that limit the use of other viral and protein-based therapies to enhance immunogenicity. ADE occurs when anti-phage antibodies which coat the capsid surface result in enhanced uptake by, and activation of, DCs through the binding and activation of Fc receptors, or FcRs. The high-density of phage-bound antibody is thought to lead to massive cross-linking of certain FcRs, leading to a strong immunogenic response to FcR-mediated endocytosis of the phage antigen/antibody complex. This mode of DC activation can lead to enhanced T cell responses, including CD8 priming by enabling cross-presentation.



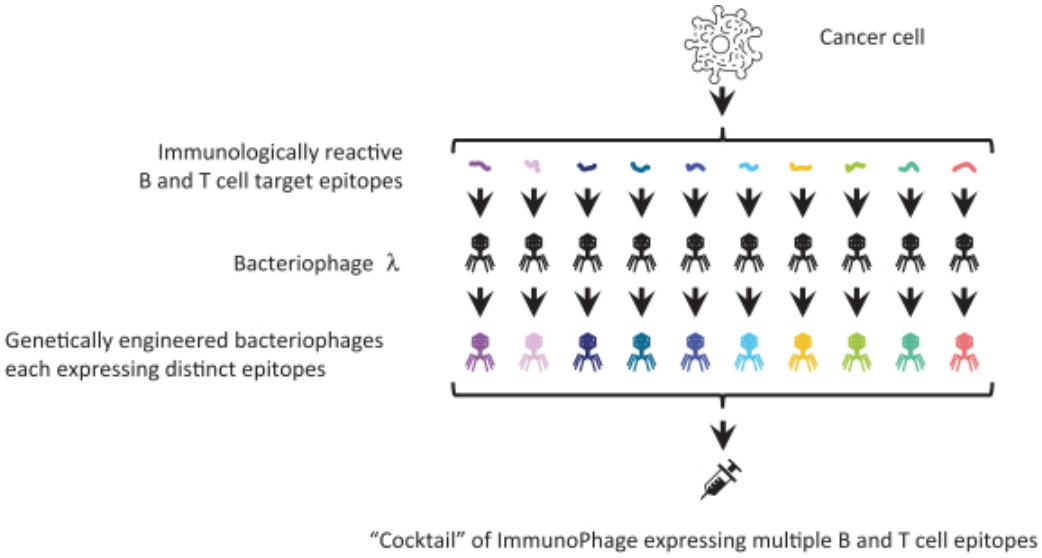
Our Adaptive Approach to ImmunoPhage Cocktail Therapy

Our ImmunoPhage platform enables a cocktail therapy approach that has the potential to provide patients with the benefits of both an off-the-shelf treatment and a personalized approach to their individual cancer. Each ImmunoPhage product candidate we produce has a unique therapeutic armament, such as various multivalent antigens, including those targeting CD4, CD8 and B cell epitopes designed to deliver broad epitope coverage, and nanobody payloads added to boost antigenicity or provide direct cancer cell killing capabilities. Based on the profile of a patient's tumor, multiple distinct ImmunoPhage product candidates, each having a distinct profile, can be combined for treatment. We believe that broad epitope coverage along with nanobody payloads, combined with the intrinsic immunostimulatory activity of our ImmunoPhage product candidates, can provide patients a therapy with meaningful clinical benefits.

The modular nature of the Phortress library allows for personalized dynamic substitution of particular ImmunoPhage components to optimize patient therapy. Moreover, the ease of manufacturing allows us to perform immune monitoring in patients to assess the immunogenicity of each phage component of a cocktail and adjust the cocktail during the course of treatment. To date, we have constructed over 25 unique ImmunoPhage configurations and anticipate expanding our Phortress library as we advance our clinical stage programs.

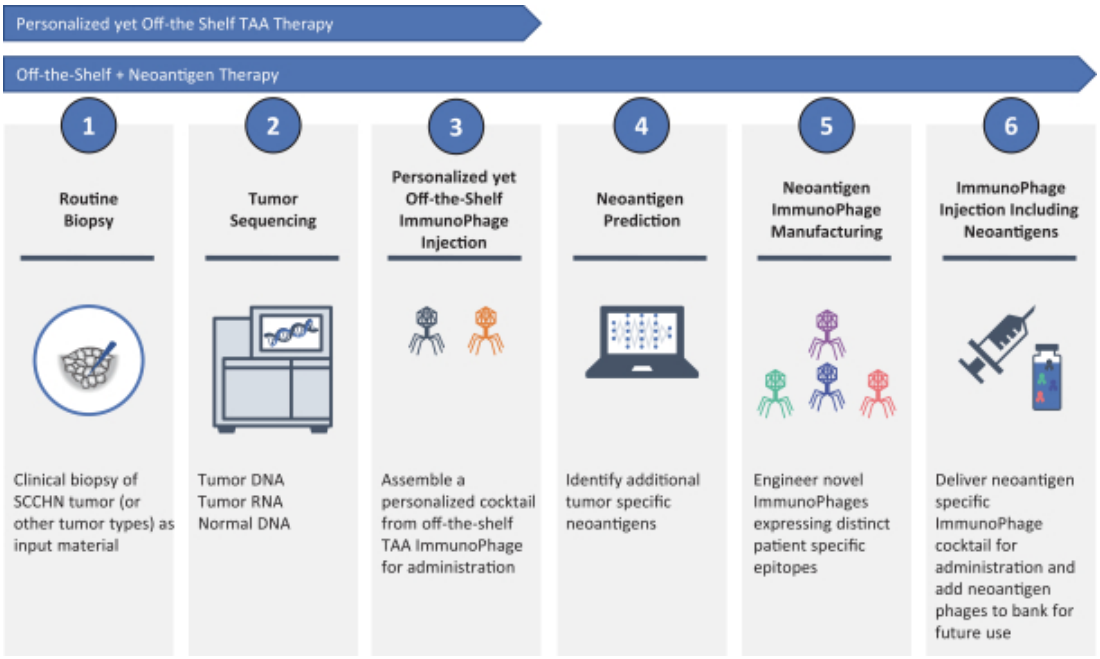
We also intend to utilize the potential of an adaptive cocktail therapy approach in our ongoing and future clinical trials, including in our SNS-301, SNS-401 and our SARS-CoV2 programs. For the SARS-CoV2 program, we have discussed the proposed clinical trial design, including the adaptive cocktail therapy approach, with the FDA. We believe this strategy will allow us to use insights derived from initial study cohorts, such as antibody titers raised against a target antigen, to dictate phage substitutions to the phage cocktail which are subsequently tested in additional cohorts. The best performing cocktail can then be advanced into dose expansion and later-stage clinical trials.

ImmunoPhage Adaptive Cocktail Therapy Approach



We believe that the speed of manufacturing and antigenic capacity of ImmunoPhage cocktails will allow us to address the limitations of neoantigen-only vaccine approaches. With the Phortress library, we have the ability to quickly initiate an off-the-shelf immunotherapy with a patient-specific ImmunoPhage cocktail from our shared antigen library within 1 to 2 weeks of diagnosis as display in steps 1 through 3 in the figure below, and then to augment the cocktail with a newly designed neoantigen phage within 4 to 6 weeks, as displayed in steps 4 through 6 below. We believe that this approach has the potential to address the urgency of treatment and provide the patient with an enhanced anti-tumor immune response.

Our Personalized Immunotherapy Process



SNS-301: Our Lead ImmunoPhage Candidate Targeting ASPH for Treatment of SCCHN

Our lead product candidate, SNS-301, is an ImmunoPhage construct engineered to generate a strong, specific immune response against the TAA ASPH. We believe the immune stimulatory effects generated by our ImmunoPhage platform, combined with the inhibition of the PD-1 immune system checkpoint, act in a complementary manner to produce an enhanced immune response in SCCHN patients. SNS-301 is being studied in an ongoing Phase 1/2 trial in combination with pembrolizumab. As of December 10, 2020, we have enrolled 11 patients in the trial, of which ten patients were evaluable for efficacy. In these pateints, we have observed that SNS-301 in combination with pembrolizumab has been well tolerated and has shown promising anti-tumor activity, including a PR in one patient with a PD-L1 negative tumor and disease control in seven of ten evaluable patients.

Head and Neck Cancer

Head and neck cancer is the sixth most common malignancy worldwide, accounting for approximately 6% of all cancer cases, and is responsible for an estimated 1% to 2% of all cancer deaths. Head and neck cancers encompass an array of cancers originating in the squamous cells that line the moist, mucosal surfaces inside the head and neck. More than 90% of head and neck cancers are classified as squamous cell carcinomas that raise from the mucosal surfaces of the oral cavity, oropharynx and larynx.

An estimated 650,000 cases of head and neck cancer are diagnosed annually worldwide, including approximately 50,000 cases in the United States, with more than 350,000 deaths annually worldwide. HPV infection accounts for an estimated 70% of SCCHN cases in the United States. The primary causes of SCCHN are smoking, heavy alcohol use and certain types of HPV.

Early-stage head and neck cancer is typically either treated with surgery or radiation alone; however, approximately 66% of patients present with advanced disease and fewer than 30% of these are cured. The

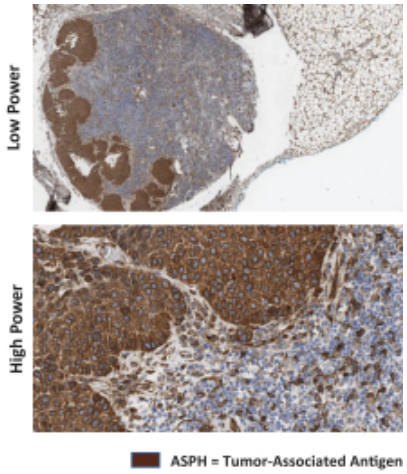
management of advanced disease consists of multiple-modality therapy with surgery, radiation, chemotherapy and immunotherapy. Despite improvements in diagnoses and local management, long-term survival rates for patients with SCCHN have not increased significantly over the past 30 years and are among the lowest when compared against other major cancers.

Targeting ASPH

ASPH is a TAA, strongly expressed in 70% to 90% of human malignancies, including carcinomas, such as SCCHN, and sarcomas and hematologic malignancies. Expression of ASPH is related to cancer cell growth, invasiveness, and disease progression through the Notch signaling pathway. SNS-301 is designed to overcome self-tolerance and induce robust and durable humoral and cellular immune responses that target tumors expressing ASPH.

In the course of conducting our ongoing Phase 1/2 trial for SNS-301, we collected ASPH-positive tumor samples from 30 patients who had been screened for inclusion in our trial, although some patients who had samples collected did not satisfy other criteria for ultimate inclusion in our trial. The samples were stained to show intratumoral ASPH expression. Depicted below is a staining of a representative patient's tumor biopsy using an immunohistochemistry assay. The first figure shows the magnification at low power, while the second figure shows the same sample at a higher power of magnification. In each figure, the ASPH is shown in the darker color.

Representative Patient ASPH-Positive Tumor Sample



SNS-301—A Potential Solution for SCCHN

We believe that SNS-301, in combination with pembrolizumab, has the potential to produce enhanced activity in patients with SCCHN compared to currently available therapies. We are developing SNS-301 for the treatment of SCCHN due to the cancer's lack of intratumoral T cells and the consequent modest objective response rate to PD-1 blockade. We selected SCCHN as our first indication based on a high unmet need, a clearly defined regulatory path and easily accessible tumor for obtaining biopsies for early translational data to evaluate immune activation.

Although drugs utilizing PD-1 blockade have been approved for several years in the treatment of advanced SCCHN after platinum containing chemotherapy, the objective response rate, or ORR, has been reported to be as

modest as 13% to 18% in relapsed or refractory SCCHN patients with progression free survival, or PFS, of two months and overall survival, or OS, of eight months. Objective responses predominantly occur in patients with PD-L1 positive tumors, with demonstrated ORR of 21% for PD-L1 positive patients, while patients with PD-L1 negative tumors are reported to have a response rate of only 6%. Pembrolizumab has been approved for use as a first-line therapy in combination with chemotherapy for all patients and as a single agent for patients with PD-L1 positive of T cells infiltrating the tumor. As SCCHN tumors are often lacking intratumoral CD8 T cells, we believe that the addition of SNS-301 has the potential to generate and expand ASPH specific anti-tumor T cells and thereby enhance PD-1 blockade activity.

SNS-301: Ongoing Phase 1/2 Trial Status and Design

We are currently conducting an open-label, multi-center Phase 1/2 clinical trial of SNS-301 in combination with pembrolizumab. The primary objectives of this trial are to assess the safety and tolerability of SNS-301 in combination with pembrolizumab and the anti-tumor activity of the combination treatment as measured by ORR, PFS per iRECIST and OS. The secondary objective is to assess the preliminary immune response, which is measured by evaluating antigen-specific antibody and T cells and other lymphocytes. Examination of paired pre- and post-treatment biopsy samples are being utilized to evaluate whether the addition of SNS-301 to PD-1 blockade results in increased inflammation, determined by the presence of TILs, PD-L1, inflammatory gene signatures.

As of December 10, 2020, we have enrolled 11 patients in the trial. Our Phase 1/2 trial includes patients with locally advanced unresectable or metastatic SCCHN who have been treated with PD-1 blockade for at least 12 weeks with the best overall response being SD or unconfirmed PD based on RECIST1.1 and iRECIST, industry accepted standard guidelines for tumor evaluation. RECIST 1.1 defines a CR, PR, SD and PD as follows:

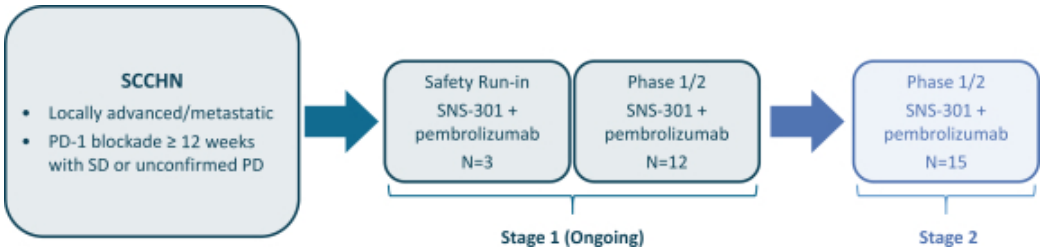
Category	Description
Complete Response (CR)	Disappearance of all Tumor Lesions
Partial Response (PR)	Reduction of ³30% of the Sum of Target Diameters
Stable Disease (SD)	Reduction of <30% or increase of <20% of the Sum of Target Diameters
Progressive Disease (PD)	Increase of ³20% of the Sum of Target Diameters

Patients who achieved a PR, CR or confirmed progression on PD-1 blockade are not eligible for participation in this clinical trial. The rationale for this restrictive inclusion criteria is based on reported data demonstrating that the median time to a PR or CR with PD-1 blockade is two months. Therefore, by excluding patients that achieved PRs or CRs while on PD-1 blockade alone for at least 12 weeks, we believe that any PRs or CRs observed in our Phase 1/2 trial are likely attributable to the addition of SNS-301. Similarly, we believe that a patient with PD on single-agent PD-1 blockade achieving stabilization after the addition of SNS-301 is an indication of clinical benefit from the treatment combination.

Phase 1/2 trial design

The treatment regimen consists of repeat doses of SNS-301 administered intradermally on Day 0, Week 3, Week 6, Week 9, then every 6 weeks for 6 additional doses, and thereafter every 12 weeks until confirmed disease progression, unacceptable toxicity, patient intolerability as determined by the investigator or up to 24 months in patients without disease progression. Pembrolizumab is administered intravenously as per standard of care at either 200 mg every 3 weeks or 400 mg every 6 weeks.

Design of the Phase 1/2 Clinical Trial of SNS-301 in SCCHN



The Phase 1/2 trial consists of a safety run-in followed by a Simon two-stage design in the absence of any dose-limiting toxicities, or DLTs, during the safety run-in, with a total initial enrollment of 15 patients, which we refer to as Stage 1. The trial design allows additional expansion up to a total of 30 patients if one CR or PR is observed in Stage 1. We did not observe any DLTs during the safety run-in and are continuing to enroll patients through Stage 1. Since one patient in our clinical trial has already achieved a confirmed PR, as described below, the pre-defined efficacy criteria of Stage 1 has been met, allowing us to continue into Stage 2 and dose up to a total of 30 patients in the trial.

Ongoing Phase 1/2 Trial Results

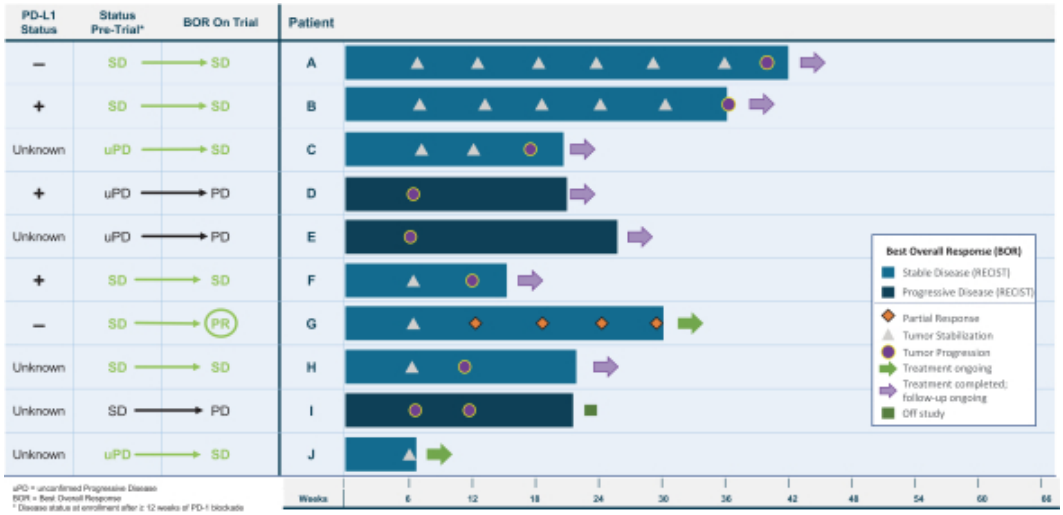
Preliminary evidence of clinical benefit of SNS-301 in combination with pembrolizumab

As of the December 10, 2020 data cutoff for the first 11 patients in Stage 1 of our ongoing Phase 1/2 trial, we observed the following results in the first ten patients evaluable for efficacy:

- PR in one patient with a PD-L1 negative tumor who previously achieved SD on PD-1 inhibition alone;
- SD in six patients, including:
  - one patient that has achieved SD for more than 4 months following PD at enrollment after 10 months of PD-L1 blockade treatment; and
  - two patients with longstanding SD for 9 and 9.5 months, respectively, of which one SD occurred in a patient with a PD-L1 negative tumor; and
- PD in three patients, including two patients who had PD at enrollment while on PD-1 blockade.

One patient withdrew consent prior to the first efficacy evaluation and was therefore not evaluable for efficacy. As shown in the figure below, disease control, as evidenced by PR or SD, was achieved in seven of the ten patients regardless of HPV status. Tumor regression was observed regardless of PD-L1 or HPV status.

Duration of Response in Ongoing Phase 1/2 Trial of SNS-301 in Combination with Pembrolizumab



Patient G referred to in the chart above achieved a PR at 12 weeks. This patient was diagnosed in May 2018 with HPV negative and PD-L1 negative SCCHN. At diagnosis, the cancer was classified as Stage II and graded T2N0M0, an enlarged tumor (<4 cm) that had not spread to lymph nodes or other organs. This patient received radiation therapy followed by two cycles of platinum-based chemotherapy, achieving a PR. At the time of enrollment into this trial, the patient had received pembrolizumab for more than 12 weeks with SD. After six weeks on SNS-301 in combination with pembrolizumab, the combined lesion measurement had decreased by 29%. After 12 weeks, the combined lesion measurement had decreased by 43% from baseline, achieving a PR that was confirmed at the 18-week scans. Furthermore, the 30 week scan showed an additional decrease to 52%, maintaining a PR.

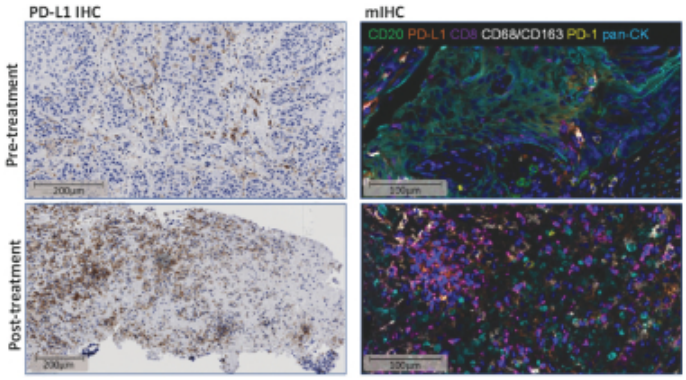
Patient C is another patient of notable clinical interest who had been treated with the PD-L1 inhibitor atezolizumab for 10 months when scans showed PD per RECIST 1.1. After receiving combination therapy with SNS-301 and pembrolizumab, two consecutive scans six weeks apart showed SD. Given that SCCHN is an aggressive disease, we believe stabilization of an ongoing progression suggests that SNS-301 likely added to the improvement of the patient's disease status. Safety concerns related to COVID-19 prevented the acquisition of paired biopsies to evaluate the TME in this patient.

In addition, of the two Patients (A and B) with longstanding SD of 9 and 9.5 months, respectively, Patient A's tumor was assessed as PD-L1 negative in the clinical setting.

Translational Data Demonstrated T Cell Integration into the Tumor Supporting Antitumor Activity of SNS-301

A comparison of pre-treatment and on-treatment biopsies showed a definitive increase in PD-L1 expression, which likely represents an influx of T cells into the TME and aligns with the achieved clinical benefit. As illustrated below, a predominance of tumor cells was observed pre-treatment, with a pronounced influx of immune cells noted upon treatment. Multiplex IHC demonstrates that the PD-L1 staining in the post-treatment biopsy is found in close proximity to PD-1 positive CD4 and CD8 TILs.

SNS-301 Catalyzes Conversion of PD-L1^{NEG} Immune Desert Tumor into Inflamed Phenotype in Patient with PR



Given that the patient initially had a PD-L1 negative tumor with no objective response to PD-1 blockade alone and that after combination treatment the patient achieved a PR with transformation of the tumor into a PD-L1 positive inflamed phenotype, we believe the additional treatment benefit is likely attributable to the addition of SNS-301. Serology data indicated the presence of anti-phage antibodies prior to treatment, suggesting increased immunogenic activity related to ADE.

SNS-301 in Combination with Pembrolizumab has been well tolerated

As of December 10, 2020, based on the 11 patients enrolled in our ongoing Phase 1/2 trial, the combination of SNS-301 and pembrolizumab has been generally well tolerated. No DLTs have been observed in the safety run-in and observed adverse events, or AEs, have primarily been either Grade 1 or 2 or unrelated to treatment. Three Grade 3 related AEs, dehydration, electrocardiogram QT prolongation and rash, have been reported. Four serious adverse events, or SAEs, have been reported. The Grade 3 dehydration was also an SAE as a result of hospitalization; however, it was attributed to an underlying cancer and concomitant medication by the sponsor, and therefore not a reportable event. One patient experienced an SAE for Grade 2 hemoptysis and two weeks later a second SAE of Grade 2 dehydration. Neither of these events were considered related to study drug, but were instead attributed to disease progression. There was one SAE of Grade 2 systemic inflammatory response syndrome that occurred during the follow-up visit but was assessed as not being a treatment-related adverse event.

SNS-301: Future Clinical Plans

We expect to report topline data from the Phase 1/2 trial by the end of 2021. If the results from our Phase 1/2 trial are positive, subject to feedback from the FDA, we intend to initiate a randomized, registration-enabling trial of SNS-301 against standard of care, single-agent pembrolizumab.

Based on the results we have observed to date, we also intend to evaluate the addition of SNS-301 to pembrolizumab in PD-1 blockade naïve SCCHN patients as part of our ongoing Phase 1/2 trial, with enrollment in this additional treatment arm expected to begin in mid-2021.

We also intend to use an ImmunoPhage cocktail targeting the E6/E7 antigens of HPV, in combination with SNS-301, in HPV positive patients in our ongoing trial of SNS-301, which we expect to incorporate in mid-2021. As a significant percentage of SCCHN patients are HPV positive, we believe the opportunity to incorporate our HPV-specific E6/E7 ImmunoPhage into a combination with SNS-301 has the potential to increase the evidence of clinical benefit seen to date.

We entered into a clinical trial collaboration with AstraZeneca in May 2019 to evaluate the safety, tolerability and preliminary efficacy of AstraZeneca's PD-1 inhibitor, durvalumab, in combination with SNS-301. We are currently planning two Phase 2 trials to evaluate SNS-301 in combination with durvalumab. Under the agreement, AstraZeneca will be supplying us with durvalumab for the trial with no upfront, milestone or royalty payments required by us. We intend to initiate the first trial in patients with locally advanced resectable SCCHN in the neoadjuvant setting in mid-2021. We are also planning a second trial in ASPH positive patients with locally advanced unresectable or metastatic solid tumors.

Prior Clinical Results

In 2018, we completed a Phase 1 trial evaluating the safety, immunogenicity and efficacy of SNS-301 in patients with biochemical relapse of localized prostate cancer after surgery or radiotherapy. SNS-301 was dosed intradermally in three cohorts of patients, using a fixed dose escalation scheme every 21 days to establish the maximum tolerated dose, or MTD. Patients who tested positive for ASPH in either tumor tissue or serum were eligible to continue in the study. The treatment regimen consisted of three repeat doses of SNS-301 at each dose level (2.0×10^{10}, 1.0×10^{11} and 3.0×10^{11} particles) administered intradermally every 21 days for nine cycles plus six months of follow up. Three patients were enrolled in the low and mid dose cohorts and six patients were enrolled in the high dose cohort.

SNS-301 was well tolerated in the trial, with few and mostly mild AEs, no observed DLTs and no patients experiencing study drug related SAEs or Grade 4 or Grade 5 AEs. Importantly, there were no indications of an off-target autoimmune response. Furthermore, the MTD of SNS-301 was not reached. Three major protocol deviations occurred during the study: two patients went from middle to high dose prematurely of which one stayed at the higher dose level and one patient varied between middle and high dose levels in subsequent cycles, and one patient (assigned to the lowest dose level) was started on the excluded anti-androgen drug bicalutamide after one year on study treatment. Of the 12 treated subjects, nine discontinued the study before completing all protocol required assessments: six because of sponsor decision, one due to investigator decision, and one with prostate-specific antigen doubling time <90 days and one from an AE (severe arthralgia not related to study drug).

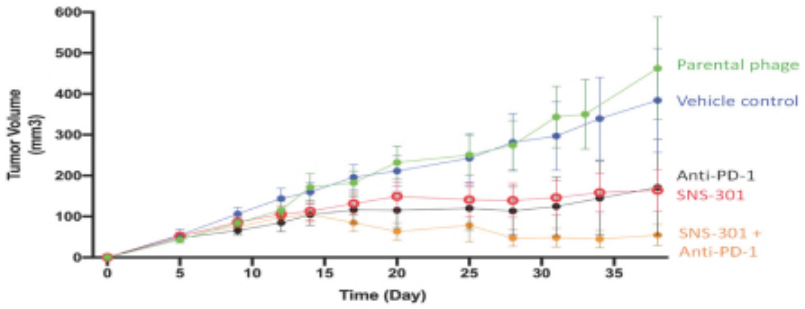
All patients had antigen-specific immune responses, with SNS-301 inducing a multi-variate immune response including T cells and B cells in the majority of patients. In addition, seven of the 12 participants in this Phase 1 safety trial, or 58%, demonstrated a reduction in the doubling time of biomarker prostate specific antigen, or PSA, levels through cycle 2. The second dosage level of 1.0×10^{11} was chosen as the recommended Phase 2 dose based on safety, immunogenicity data and the observation of an improvement in PSA doubling time for the mid-dose patients (two of three patients) compared to the high dose (three of six patients).

Preclinical Study Results

SNS-301 was evaluated in rodents for immunogenicity and efficacy. Immunogenicity was observed in mice and rats, with both humoral and cellular immune response specific to ASPH to the amount of and number of doses. Efficacy data was obtained in three rodent tumor models, BNLT3, 4T1 and MLLB-2, showing inhibition of tumor and or metastasis growth. A repeat dose toxicology study in rats has been conducted with no adverse safety findings for SNS-301.

As illustrated in the graph below, in a murine model of hepatocellular carcinoma, co-administration of SNS-301 and a PD-1 inhibitor resulted in a significant decrease in tumor growth, as did administration of SNS-301 or an anti-PD-1 antibody individually. We believe the results of this study provide encouraging evidence that checkpoint inhibition removes immunological encumbrances while at the same time SNS-301 works to drive antigen-specific immune activation.

SNS-301 and PD-1 Blockade Slowed Tumor Growth in a Liver Cancer (Hepa 1-6) Treatment Model



SNS-401: Our ImmunoPhage Candidate Targeting Merkel Cell Carcinoma

We are currently developing our next ImmunoPhage candidate, SNS-401, for the treatment of MCC. MCC is a rare but highly aggressive neuroendocrine carcinoma of the skin in which MCPyV infection and chronic exposure to ultraviolet radiation are key risk factors. Approximately 2,500 cases are diagnosed each year with the disease-specific mortality approaching 50%. Integration of MCPyV is evidenced by the presence of virus-specific epitopes in 80% of cases diagnosed in the U.S. In these cases, expression of a virus-related T cell oncogenic antigen appears intimately linked to tumor growth.

Checkpoint inhibitors have proven to be a major advancement in the treatment of advanced MCC and have revolutionized the treatment of locally advanced, inoperable and metastatic MCC. Systemic PD-1/PD-L1 inhibition therapy is associated with a high ORR, prolonged durable responses, and good tolerability in advanced-stage MCC. However, even with the advances made by checkpoint inhibitors, refractory PD-1/PD-L1 inhibitor disease remains a significant unmet medical need with an aggressive clinical course.

In March 2020, we established an exclusive exploratory collaboration with The University of Washington, one of the world's leading research centers for the study of MCC. This collaboration provides for the joint construction, to the preclinical development stage, of the first custom MCC vaccine consisting of MCPyV epitopes together with other patient specific antigens. There are no upfront, milestone or royalty payments payable to either party as part of this collaboration. The University of Washington will design MCPyV T cell constructs and determine the immunogenicity and mechanism of candidate ImmunoPhages developed by us. We will develop ImmunoPhages specifically targeting MCPyV T cell constructs and other TAAs using our cocktail approach. We believe that the MCPyV epitope space can be completely addressed with an ImmunoPhage cocktail of two bacteriophage carriers. We have an option to license on an exclusive, worldwide basis the intellectual property developed as part of this collaboration. Currently, SNS-401 is in preclinical studies and we plan on submitting an IND for SNS-401 in the first half of 2022.

SNS-VISTA: Monoclonal Antibody targeting VISTA

We are developing a mAb therapy targeting VISTA. VISTA is an immunoregulatory receptor and is highly expressed on various immune system cells including neutrophils, monocytes, macrophages, basophils and DCs. While highly expressed on CD4 T helper cells and certain T regulatory cells, it exhibits much lower expression on CD8 CTLs.

VISTA is an important checkpoint regulator. Effective PD-1 blockade is often confounded by alternative immune checkpoints, such as VISTA, and we have chosen to develop a mAb targeting VISTA in the expectation that our development of this checkpoint inhibitor will closely complement our ImmunoPhage development activities. Unlike other checkpoint regulators, which are induced after activation, VISTA expression is maintained at a steady state. This broad pattern of expression suggests that VISTA has an important role in

regulating immune system activity and preserving homeostasis. VISTA's presence in tumors is often indicative of a poor prognosis. Analysis of the TME often reveals an absence of TILs as well as a reduction in cytokines and other co-stimulatory molecules. VISTA blockade appears to dramatically modulate the TME towards a state that favors an immune system response, resulting in improved T-cell effector function and anti-tumor activity. Accordingly, VISTA has been identified as a promising therapeutic target.

In January 2020, we entered into a collaborative agreement with AdiMab to expedite antibody development through the production of human IgGs that we may evaluate as potential therapeutic product candidates. Under this agreement, we provide key proprietary reagents and information to AdiMab to enable the initiation of antibody discovery and development. In March 2020, AdiMab initiated our VISTA antibody campaign. In June 2020, we received a first shipment of 84 IgGs for further screening. Among these, several have passed through our proprietary screening criteria and we believe multiple antibodies possess the desired biophysical properties and mechanism of action for a potential clinical candidate. Through the use of proprietary functional and in vivo assays, we intend to select a product candidate and initiate IND-enabling studies for our lead mAb by the end of 2021.

SNS-CoV2: ImmunoPhage Targeting SARS-CoV-2

Coronavirus infectious disease 2019, or COVID-19, caused by the emerging coronavirus SARS-CoV-2, has rapidly swept throughout the world. As of November 9, 2020, there have been an estimated 50 million laboratory-confirmed COVID-19 patients and over 1.2 million deaths worldwide. The WHO has declared COVID-19 a public health emergency of international concern.

We have rapidly deployed our ImmunoPhage platform to address the ongoing COVID-19 crisis. Our ImmunoPhage platform has been designed to include multiple epitopes from multiple domains simultaneously. Using the known immunogenicity of the closely related SARS virus and the highly conserved structural genes (N, M, E and S), we have developed an ImmunoPhage cocktail broadly covering large epitopic domains of SARS-Cov-2. We have discussed our ImmunoPhage cocktail approach and clinical trial design with the FDA.

SARS-CoV-2 is an enveloped, single-stranded, positive-sense RNA virus belonging to the family *Coronavidae* and the genus b-coronavirus. The genome of SARS-CoV-2 encodes one large Spike, or S, protein that plays a pivotal role during the viral attachment and entry into host cells. The S protein has been frequently considered as the major antigen target for vaccines against human coronavirus such as SARS-CoV, MERS-CoV, and also SARS-CoV-2 in recent studies because it contains the major epitopes targeted by neutralizing antibodies. In addition, the M and E domains of the viral genome code for structural viral protein, the M domain coding for a membrane protein and the E domain coding for a viral envelope protein and represent attractive targets for neutralizing viral entry or targeting the virus for cellular destruction. Both M and E are believed to be highly immunogenic and, as illustrated below, collectively contain multiple B cell and T cell epitopes.

	Spike (S)	Nucleocapsid (N)	Membrane (M)	Envelope (E)
Similarity to SARS-CoV-2	~80%	94%	98%	100%
B cell epitopes	279	113	20	2
T cell epitopes	48	33	4	0

Because ImmunoPhage is capable of rapid and cost-effective manufacturing, we manufactured over 25 different unique ImmunoPhage, each targeting different epitopes of the S, M or E domains of SARS-COV-2. This was achieved in less than three months under cGMP conditions. While advancing this program would

advance our platform's use to address other indications, we do not envision funding its development ourselves. As such, we would continue its development only if public funding is available or through some other collaborative initiative.

Manufacturing

We have manufactured SNS-301 bulk drug substance for clinical trials, as well as our current Phortess library, at our own manufacturing facility. We are in the process of establishing a new manufacturing facility, where we anticipate having a 10L bioreactor capability, which will allow us to produce a quantity of drug substance equivalent to 5,000 to 10,000 doses under cGMP conditions. We believe that having control over the manufacturing process allows us to reduce cycle times, increase the robustness and consistency of the process and potentially reduce cost of goods for commercial production, which are critical to the construction of our Phortress library consisting of multiple novel ImmunoPhage. We expect that having a dedicated manufacturing facility will allow us to optimize commercial-scale processes and to develop a suitable workforce capable of supporting market launch. As we advance into later-stage clinical trials and additional indications, we intend to expand our current manufacturing capabilities to support larger scale clinical trials and the potential commercialization of our product candidates.

We may also rely on contract manufacturing organizations, or CMOs, to produce our product candidates for clinical use. We require that our CMOs produce bulk drug substances and finished drug products in accordance with cGMP, and all other applicable laws and regulations. Although we have established our own manufacturing facility, we may rely on CMOs for parts of the process, like filling and labelling of our products for commercial sale. Any agreements with potential and existing manufacturers will include confidentiality and intellectual property provisions to protect our proprietary rights related to our product candidates.

Intellectual Property

Intellectual property is of vital importance in our field and in biotechnology generally. We seek to protect and enhance proprietary technology, inventions, and improvements that are commercially important to the development of our business by seeking, maintaining, and defending patent rights, whether developed internally or licensed from third parties. We will also seek to rely on regulatory protection afforded through inclusion in expedited development and review, data exclusivity, market exclusivity and patent term extensions where available.

We have sought patent protection in the United States and internationally for our clinical product SNS-301. The claims of U.S. Patent Nos. 9,744,223 and 10,702,591 encompass the clinical product. We continue to pursue claims directed to the clinical product in related applications. Such applications may not result in issued patents and, even if patents do issue, such patents may not be in a form that will provide us with meaningful protection for our product. We also rely on trade secrets that may be important to the development of our business. Trade secrets are difficult to protect and provide us with only limited protection.

We expect to file additional patent applications in support of current and new clinical candidates as well as new platform and core technologies. Our commercial success will depend in part on obtaining and maintaining patent protection and trade secret protection of our current and future product candidates and the methods used to develop and manufacture them, as well as successfully defending these patents against third-party challenges and operating without infringing on the proprietary rights of others. Our ability to stop third parties from making, using, selling, offering to sell or importing our products depends on the extent to which we have rights under valid and enforceable patents or trade secrets that cover these activities. We cannot be sure that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications filed by us in the future, nor can we be sure that any patents that may be granted to us in the future will be commercially useful in protecting our product candidates, discovery programs and processes. For this and more comprehensive risks related to our intellectual property, please see "Risk Factors—Risks Related to Our Intellectual Property."

The term of individual patents depends upon the legal term of the patents in the countries in which they are obtained. In most countries in which we file, including the United States, the patent term is 20 years from the

earliest date of filing a non-provisional patent application. In the United States, a patent's term may be lengthened by patent term adjustment, which compensates a patentee for administrative delays by the U.S. Patent and Trademark Office, or USPTO, in examining and granting a patent, or may be shortened if a patent is terminally disclaimed over an earlier filed patent. In the United States, the patent term of a patent that covers an FDA-approved drug may also be eligible for patent term extension, which permits patent term restoration as compensation for the patent term lost during the FDA regulatory review process. The Hatch-Waxman Act permits a patent term extension of up to five years beyond the expiration of the patent. The length of the patent term extension is related to the length of time the drug is under regulatory review. Patent term extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval, only one patent applicable to an approved drug may be extended and only those claims covering the approved drug, a method for using it, or a method for manufacturing it may be extended. Similar provisions are available in Europe and other foreign jurisdictions to extend the term of a patent that covers an approved drug. In the future, if and when our products receive FDA approval, we expect to apply for patent term extensions on patents covering those products. We plan to seek patent term extensions to any issued patents we may obtain in any jurisdiction where such patent term extensions are available, however there is no guarantee that the applicable authorities, including the FDA in the United States, will agree with our assessment of whether such extensions should be granted, and if granted, the length of such extensions. For more information regarding the risks related to our intellectual property, see "Risk Factors—Risks Related to Our Intellectual Property."

In some instances, we submit patent applications directly with the USPTO as provisional patent applications. Corresponding non-provisional patent applications must be filed not later than 12 months after the provisional application filing date. While we intend to timely file non-provisional patent applications relating to our provisional patent applications, we cannot predict whether any such patent applications will result in the issuance of patents that provide us with any competitive advantage.

We file U.S. non-provisional applications and Patent Cooperation Treaty, or PCT, applications that claim the benefit of the priority date of earlier filed provisional applications, when applicable. The PCT system allows a single application to be filed within 12 months of the original priority date of the patent application, and to designate all of the PCT member states in which national patent applications can later be pursued based on the international patent application filed under the PCT. The PCT searching authority performs a patentability search and issues a non-binding patentability opinion which can be used to evaluate the chances of success for the national applications in foreign countries prior to having to incur the filing fees. Although a PCT application does not issue as a patent, it allows the applicant to seek protection in any of the member states through national-phase applications. At the end of the period of two and a half years from the first priority date of the patent application, separate patent applications can be pursued in any of the PCT member states either by direct national filing or, in some cases by filing through a regional patent organization, such as the European Patent Office. The PCT system delays expenses, allows a limited evaluation of the chances of success for national/regional patent applications and enables substantial savings where applications are abandoned within the first two and a half years of filing.

For all patent applications, we determine claiming strategy on a case-by-case basis. Advice of counsel and our business model and needs are always considered. We seek to file patents containing claims for protection of all useful applications of our proprietary technologies and any products, as well as all new applications and/or uses we discover for existing technologies and products, assuming these are strategically valuable. We continuously reassess the number and type of patent applications, as well as the pending and issued patent claims to pursue maximum coverage and value for our processes, and compositions, given existing patent office rules and regulations. Further, claims may be modified during patent prosecution to meet our intellectual property and business needs.

We recognize that the ability to obtain patent protection and the degree of such protection depends on a number of factors, including the extent of the prior art, the novelty and non-obviousness of the invention, and the ability to satisfy the enablement requirement of the patent laws. In addition, the coverage claimed in a patent application can be significantly reduced before the patent is issued, and its scope can be reinterpreted or further altered even after patent issuance. Consequently, we may not obtain or maintain adequate patent protection for

any of our future product candidates or for our technology platform. We cannot predict whether the patent applications we are currently pursuing will issue as patents in any particular jurisdiction or whether the claims of any issued patents will provide sufficient proprietary protection from competitors. Any patents that we hold may be challenged, circumvented or invalidated by third parties.

In addition to patent protection, we also rely on trademark registration, trade secrets, know how, other proprietary information and continuing technological innovation to develop and maintain our competitive position. We seek to protect and maintain the confidentiality of proprietary information to protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection. Although we take steps to protect our proprietary information and trade secrets, including through contractual means with our employees and consultants, third parties may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose our technology. Thus, we may not be able to meaningfully protect our trade secrets. It is our policy to require our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors to execute confidentiality agreements upon the commencement of employment or consulting relationships with us. These agreements provide that all confidential information concerning our business or financial affairs developed or made known to the individual during the course of the individual's relationship with us is to be kept confidential and not disclosed to third parties except in specific circumstances. Our agreements with employees also provide that all inventions conceived by the employee in the course of employment with us or from the employee's use of our confidential information are our exclusive property. However, such confidentiality agreements and invention assignment agreements can be breached and we may not have adequate remedies for any such breach. In addition, our trade secrets may otherwise become known or be independently discovered by competitors. To the extent that our consultants, contractors or collaborators use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting trade secrets, know-how and inventions. For more information regarding the risks related to our intellectual property, see "Risk Factors—Risks Related to Intellectual Property."

The patent positions of biotechnology companies like ours are generally uncertain and involve complex legal, scientific and factual questions. Our commercial success will also depend in part on not infringing upon the proprietary rights of third parties. Third-party patents could require us to alter our development or commercial strategies, or our products or processes, obtain licenses or cease certain activities. Our breach of any license agreements or our failure to obtain a license to proprietary rights required to develop or commercialize our future products may have a material adverse impact on us. If third parties prepare and file patent applications in the United States that also claim technology to which we have rights, we may have to participate in interference or derivation proceedings in the USPTO to determine priority of invention. For more information, see "Risk Factors—Risks Related to Intellectual Property."

When available to expand market exclusivity, our strategy is to obtain, or license additional intellectual property related to current or contemplated development platforms, core elements of technology and/or clinical candidates.

As of December 9, 2020, our solely owned patent estate included four issued U.S. patents, two issued foreign patents, over five pending U.S. patent applications, two pending international (PCT) patent applications, and over nine foreign patent applications (pending in Canada, China, Europe, Hong Kong and Japan).

With regard to SNS-301, we own one pending U.S. patent application and two issued U.S. patents with composition of matter claims covering SNS-301. The issued U.S. patents and U.S. patent application, if issued, are expected to expire in 2033, subject to payment of required maintenance fees, annuities and other charges. We also own one issued European EP patent (in force in France, Germany and the United Kingdom) and five pending foreign patent applications (pending in Canada, Europe, Hong Kong and Japan), where the EP European patent and the pending foreign patent applications, if issued, are expected to expire in 2034.

We own one pending U.S. patent application and one pending, published PCT application with claims directed to methods for using and making the SNS-301 product candidate. The U.S. patent application and patent applications claiming the benefit of the PCT application, if issued, are expected to expire in 2039, subject to payment of required maintenance fees, annuities and other charges.

We own one pending U.S. patent application and one pending, published PCT application relating to methods for using the SNS-301 product candidate in combination with immune checkpoint protein inhibitors. The U.S. patent application and patent applications claiming the benefit of the PCT application, if issued, are expected to expire in 2040, subject to payment of required maintenance fees, annuities and other charges.

We own one provisional U.S. patent application relating to phage-based vaccines targeting SARS-CoV-2 proteins. Subject to payment of required maintenance fees, annuities and other charges, and assuming either U.S. non-provisional or foreign patent applications are filed at the appropriate time, if issued, are projected to expire in 2041.

License Agreement with Fred Hutch

In connection with our acquisition of Alvaxa Biosciences, Inc., or Alvaxa, in May 2020, we acquired a non-exclusive license agreement, or the Fred Hutch Agreement, with Fred Hutchinson Cancer Research Center, or Fred Hutch, which was originally entered into in January 2020 and amended in March 2020. Pursuant to the Fred Hutch Agreement, we obtained a non-exclusive, non-sublicensable, worldwide license to possess, maintain, and use certain biological materials, including llama-derived antibodies, for any and all uses. Under the Fred Hutch Agreement, we are obligated to use commercially reasonable efforts to develop and commercialize at least one product containing or derived from an antibody in any form, or a developed product.

As partial consideration for the licensed rights granted under the Fred Hutch Agreement, Alvaxa issued Fred Hutch 1,429,412 shares of its common stock, which were subsequently exchanged for 2,191,514 shares of our common stock in connection with our acquisition of Alvaxa. Under the Fred Hutch Agreement, we are obligated to pay an annual license maintenance fee ranging from the mid-single digit thousands to approximately $0.1 million, depending on net sales of developed products in a given calendar year. We are also obligated to pay up to $300,000 in development milestone payments for each therapeutic developed product and up to $165,000 for each diagnostic developed product, in each case including each unique target covered by such developed product. We have no obligation to pay royalties under the Fred Hutch Agreement.

The Fred Hutch Agreement expires 20 years after the effective date. We may terminate the agreement for convenience, and Fred Hutch may terminate the agreement for our insolvency. Either party may terminate the agreement for breach of material obligations by such other party.

Trademarks, Trade Secrets and Know-How

Our trademark portfolio currently consists of two registered trademarks and one trademark application. In addition to patent and trademark protection, we rely upon unpatented trade secrets and know-how and continuing technological innovation to develop and maintain our competitive position. We seek to protect our proprietary information, in part, using confidentiality agreements with our commercial partners, collaborators, employees, and consultants, and employees. These and other agreements, such as invention assignment agreements, grant us ownership of technologies that are developed through a relationship with a third party.

Competition

The biotechnology and pharmaceutical industries have made substantial investments in recent years into the rapid development of novel immunotherapies for the treatment of a range of pathologies, including cancers and infectious diseases, making this a highly competitive market.

We face substantial competition from multiple sources, including large and specialty pharmaceutical, biopharmaceutical and biotechnology companies, academic research institutions and governmental agencies and public and private research institutions. Our competitors compete with us on the level of the technologies employed, or on the level of development of product candidates. In addition, many small biotechnology companies have formed collaborations with large, established companies to (i) obtain support for their research, development and commercialization of products or (ii) combine several treatment approaches to develop longer lasting or more efficacious treatments that may potentially directly compete with our current or future product candidates. We anticipate that we will continue to face increasing competition as new therapies and combinations thereof, technologies, and data emerge within the field of immunotherapy and, furthermore, within the treatment of cancers and infectious diseases.

In addition to the current standard of care treatments for patients with cancers and infectious diseases, numerous commercial and academic preclinical studies and clinical trials are being undertaken by a large number of parties to assess novel technologies and product candidates in the field of immunotherapy. Results from these studies and trials have fueled increasing levels of interest in the field of immunotherapy.

Large pharmaceutical companies that have commercialized or are developing immunotherapies to treat cancer include AstraZeneca, Bristol Myers Squibb, Gilead Sciences, Merck, Novartis, Pfizer, and Roche/Genentech.

On the technology level, other companies which can potentially develop competing product candidates which act to stimulate the body's immune response as a treatment for SCCHN and other solid tumors include companies developing cell-based therapeutics such as CAR-T/TCR/NK therapies as well as companies developing therapeutic vaccines including BioNTech, Moderna, Gritstone Oncology and Oncorus, among others. In addition, a number of companies are developing oncolytic virus approaches, including Boehringer Ingelheim, Johnson and Johnson, Regeneron, Vyriad, Replimune and Turnstone. Amgen has received FDA approval for its oncolytic virus-based product, T-VEC. Ablynx, a subsidiary of Sanofi, and Oncorus are actively pursuing the development of nanobodies as therapeutics.

Many of our competitors, either alone or in combination with their respective strategic partners, have significantly greater financial resources and expertise in research and development, manufacturing, the regulatory approval process, and marketing than we do. Mergers and acquisition activity in the pharmaceutical, biopharmaceutical and biotechnology sector is likely to result in greater resource concentration among a smaller number of our competitors.

Smaller or early-stage companies may also prove to be significant competitors, particularly through sizeable collaborative arrangements with established companies. These competitors also compete with us in recruiting and retain qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

Our commercial opportunity could be reduced or eliminated if one or more of our competitors develop and commercialize products that are safer, more effective, better tolerated, or of greater convenience or economic benefit than our proposed product offering. Our competitors also may be in a position to obtain FDA or other regulatory approval for their products more rapidly, resulting in a stronger or dominant market position before we are able to enter the market. The key competitive factors affecting the success of all of our programs are likely to be product safety, efficacy, convenience and treatment cost.

Government Regulation

Government authorities in the United States at the federal, state and local level and in other countries regulate, among other things, the research, development, testing, manufacture, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting,

marketing and export and import of biological products. Generally, before a new drug or biologic can be marketed, considerable data demonstrating its quality, safety and efficacy must be obtained, organized into a format specific for each regulatory authority, submitted for review and approved by the regulatory authority.

U.S. Biological Product Development

In the United States, the FDA regulates biologics under the Federal Food, Drug and Cosmetic Act, or FDCA, the Public Health Service Act, or the PHSA, and their implementing regulations. Biologics also are subject to other federal, state and local statutes and regulations. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state and local statutes and regulations requires the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or post-market may subject an applicant to administrative or judicial sanctions. These sanctions could include, among other actions, the FDA's refusal to approve pending applications, suspension or revocation of a license, a clinical hold, untitled or warning letters, product recalls or market withdrawals, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, restitution, disgorgement and civil or criminal penalties.

Our product candidates and any future biological product candidates we develop must be approved by the FDA through a biologics license application, or BLA, before they may be legally marketed in the United States. The BLA is a request for approval to market the biologic for one or more specified indications and must contain proof of safety, purity and potency. The FDA review and approval process generally involves the following:

- completion of extensive preclinical studies conducted in accordance with applicable regulations, including studies conducted in accordance with good laboratory practices, or GLP, requirements;
- submission to the FDA of an IND, which must become effective before human clinical trials may begin;
- approval by an Institutional Review Board, or IRB, or independent ethics committee at each clinical trial site before each trial may be initiated;
- performance of adequate and well-controlled human clinical trials in accordance with applicable IND regulations, good clinical practice, or GCP, requirements and other clinical trial-related regulations to establish the safety and efficacy of the investigational product for each proposed indication;
- submission to the FDA of a BLA;
- a determination by the FDA within 60 days of its receipt of a BLA to accept the filing for review;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities where the biologic will be produced to assess compliance with cGMP requirements to assure that the facilities, methods and controls are adequate to preserve the biologic's identity, strength, quality and purity;
- potential FDA audit of the preclinical study and clinical trial sites that generated the data in support of the BLA;
- payment of user fees for FDA review of the BLA (unless a fee waiver applies); and
- FDA review and approval of the BLA, including consideration of the views of any FDA advisory committee, prior to any commercial marketing or sale of the biologic in the United States.

Preclinical Studies and IND

Before testing any biological product candidate in humans, the product candidate enters the preclinical testing stage. Preclinical studies include laboratory evaluation of product biological characteristics, chemistry and formulation, as well as in vitro and animal studies to assess the potential for adverse events and in some cases to establish a rationale for therapeutic use. The conduct of preclinical studies is subject to federal regulations and requirements, including GLP regulations for safety/toxicology studies.

An IND sponsor must submit the results of the preclinical studies, together with manufacturing information, analytical data, any available clinical data or literature and plans for clinical trials, among other things, to the FDA as part of an IND. An IND is a request for authorization from the FDA to administer an investigational product to humans, and must become effective before human clinical trials may begin. Some long-term preclinical testing may continue after the IND is submitted. An IND automatically becomes effective 30 days after receipt by the FDA, unless before that time, the FDA raises concerns or questions related to one or more proposed clinical trials and places the trial on clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. As a result, submission of an IND may not result in the FDA allowing clinical trials to commence.

Clinical Trials

The clinical stage of development involves the administration of the investigational product to healthy volunteers or patients under the supervision of qualified investigators, generally physicians not employed by or under the trial sponsor's control, in accordance with GCP requirements, which include the requirement that all research subjects provide their informed consent for their participation in any clinical trial. Clinical trials are conducted under protocols detailing, among other things, the objectives of the clinical trial, dosing procedures, subject selection and exclusion criteria and the parameters to be used to monitor subject safety and assess efficacy, including stopping rules that assure a clinical trial will be stopped if certain adverse events should occur. Each protocol, and any subsequent amendments to the protocol, must be submitted to the FDA as part of the IND. Further, each clinical trial must be reviewed and approved by an IRB for each institution at which the clinical trial will be conducted to ensure that the risks to individuals participating in the clinical trials are minimized and are reasonable in relation to anticipated benefits. The IRB also approves the informed consent form that must be provided to each clinical trial subject or his or her legal representative, and must monitor the clinical trial until completed. There also are requirements governing the reporting of ongoing clinical trials and completed clinical trial results to public registries.

A sponsor who wishes to conduct a clinical trial outside of the United States may, but need not, obtain FDA authorization to conduct the clinical trial under an IND. If a foreign clinical trial is not conducted under an IND, the sponsor may submit data from the clinical trial to the FDA in support of a BLA. The FDA will accept a well-designed and well-conducted foreign clinical trial not conducted under an IND if the study was conducted in accordance with GCP requirements, and the FDA is able to validate the data through an onsite inspection if deemed necessary.

Clinical trials generally are conducted in three sequential phases, known as Phase 1, Phase 2 and Phase 3, and may overlap or be combined, such that the objectives of multiple phases are addressed within the design of a single trial.

- Phase 1 clinical trials generally involve a small number of healthy volunteers or disease-affected patients who are initially exposed to a single dose and then multiple doses of the product candidate. The primary purpose of these clinical trials is to assess the metabolism, pharmacologic action, side effect tolerability and safety of the product candidate. When conducted in disease-affected patients and including an endpoint of early activity or efficacy, such a trial may be a Phase 1/2 trial, comprising a Phase 1 portion and a Phase 2 portion.
- Phase 2 clinical trials involve studies in disease-affected patients to determine the dose required to produce the desired benefits. At the same time, safety and further pharmacokinetic and pharmacodynamic information is collected, possible adverse effects and safety risks are identified and a preliminary evaluation of efficacy is conducted. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials. Phase 2/3 trials may also be designed to sequentially address both dose finding and effectiveness in a single trial.
- Phase 3 clinical trials generally involve a large number of patients at multiple sites and are designed to provide the data necessary to demonstrate the effectiveness of the product for its intended use, its safety in use and to establish the overall benefit/risk relationship of the product candidate and provide an adequate basis for product labeling.

In August 2018, the FDA released a draft guidance entitled "Expansion Cohorts: Use in First-In-Human Clinical Trials to Expedite Development of Oncology Drugs and Biologics," which outlines how developers can utilize an adaptive trial design commonly referred to as a seamless trial design in early stages of oncology biological product development (i.e., the Phase 1 first-in-human clinical trial) to compress the traditional three phases of trials into one continuous trial called an expansion cohort trial. Information to support the design of individual expansion cohorts are included in IND applications and assessed by FDA. Expansion cohort trials can potentially bring efficiency to biological product development and reduce developmental costs and time.

Post-approval trials, sometimes referred to as Phase 4 clinical trials, may be conducted after initial marketing approval. These trials are used to gain additional experience from the treatment of patients in the intended therapeutic indication. In certain instances, the FDA may mandate the performance of Phase 4 clinical trials as a condition of approval of a BLA. Failure to exhibit due diligence with regard to conducting required Phase 4 clinical trials could result in withdrawal of licensure for biological products.

During all phases of clinical development, regulatory agencies require extensive monitoring and auditing of all clinical activities, clinical data, and clinical trial investigators. Progress reports detailing the results of the clinical trials, among other information, must be submitted at least annually to the FDA and written IND safety reports must be submitted to the FDA and the investigators for serious and unexpected suspected adverse events, findings from other studies or animal or in vitro testing that suggest a significant risk for human subjects, and any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator brochure.

Phase 1, Phase 2 and Phase 3 clinical trials may not be completed successfully within any specified period, if at all. The FDA or the sponsor may suspend or terminate a clinical trial at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the biological product candidate has been associated with unexpected serious harm to patients. Additionally, some clinical trials are overseen by an independent group of qualified experts organized by the clinical trial sponsor, known as a data safety monitoring board or committee. This group provides authorization for whether a trial may move forward at designated check points based on access to certain data from the trial. There are also requirements governing the reporting of ongoing clinical studies and clinical study results to public registries. Concurrent with clinical trials, companies usually complete additional animal studies and also must develop additional information about the chemistry and physical characteristics of the biological product candidate as well as finalize a process for manufacturing the product candidate in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product and, among other things, companies must develop methods for testing the identity, strength, quality, purity and potency of the final product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over their shelf life.

FDA Review Process

Following completion of the clinical trials, data are analyzed to assess whether the investigational product is safe and effective for the proposed indicated use or uses. The results of preclinical studies and clinical trials are then submitted to the FDA as part of a BLA, along with proposed labeling, chemistry and manufacturing information to ensure product quality and other relevant data. The BLA may include both negative and ambiguous results of preclinical studies and clinical trials, as well as positive findings. Data may come from company-sponsored clinical trials intended to test the safety and efficacy of a product candidate's use or from a number of alternative sources, including studies initiated by investigators. To support marketing approval, the data submitted must be sufficient in quality and quantity to establish the safety, purity and potency of the investigational product to the satisfaction of FDA. FDA approval of a BLA must be obtained before a biologic may be marketed in the United States.

Under the Prescription Drug User Fee Act, or PDUFA, as amended, each BLA must be accompanied by a user fee. The FDA adjusts the PDUFA user fees on an annual basis. The sponsor of an approved BLA is also subject to an annual prescription drug program fee. Fee waivers or reductions are available in certain circumstances, including a waiver of the application fee for the first application filed by a small business. Additionally, no user fees are assessed on BLAs for products designated as orphan drugs, unless the product also includes a non-orphan indication.

The FDA reviews all submitted BLAs before it accepts them for filing, and may request additional information rather than accepting the BLA for filing. The FDA decides whether to accept a BLA for filing within 60 days of receipt, and such decision could include a refusal to file by the FDA. Once the submission is accepted for filing, the FDA begins an in-depth review of the BLA. Under the goals and policies agreed to by the FDA under PDUFA, the FDA has ten months from the filing date in which to complete its initial review of an original BLA and respond to the applicant, and six months from the filing date of an original BLA designated for priority review. The FDA does not always meet its PDUFA goal dates for standard and priority BLAs, and the review process is often extended by FDA requests for additional information or clarification.

Before approving a BLA, the FDA will conduct a pre-approval inspection of the manufacturing facilities for the new product to determine whether they comply with cGMP requirements. The FDA will not approve the product unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. The FDA also may audit data from clinical trials to ensure compliance with GCP requirements. Additionally, the FDA may refer applications for novel products or products which present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved and under what conditions, if any. The FDA is not bound by recommendations of an advisory committee, but it considers such recommendations when making decisions on approval. The FDA likely will reanalyze the clinical trial data, which could result in extensive discussions between the FDA and the applicant during the review process. After the FDA evaluates a BLA, it will issue an approval letter or a complete response letter. An approval letter authorizes commercial marketing of the biologic with specific prescribing information for specific indications. A complete response letter indicates that the review cycle of the application is complete and the application will not be approved in its present form. A complete response letter usually describes all of the specific deficiencies in the BLA identified by the FDA. The complete response letter may require additional clinical data, pivotal Phase 3 clinical trial(s) as well as other significant and time-consuming requirements related to clinical trials, preclinical studies or manufacturing. If a complete response letter is issued, the applicant may either resubmit the BLA, addressing all of the deficiencies identified in the letter, or withdraw the application. Even if such data and information are submitted, the FDA may decide that the BLA does not satisfy the criteria for approval.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan designation to a biological product intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the United States, or more than 200,000 individuals in the United States and for which there is no reasonable expectation that the cost of developing and making the product available in the United States for this type of disease or condition will be recovered from sales of the product. Orphan drug designation for a biologic must be requested before submitting a BLA. After the FDA grants orphan drug designation, the identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. Orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review and approval process.

Orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages and user fee waivers. If a product that has orphan drug designation subsequently receives the first FDA approval for the disease or condition for which it has such designation, the product is entitled to orphan drug exclusivity, which means that the FDA may not approve any other applications to market the same biological product for the same indication for seven years from the date of such approval,

except in limited circumstances, such as a showing of clinical superiority to the product with orphan exclusivity by means of greater effectiveness, greater safety or providing a major contribution to patient care or in instances of drug supply issues. Competitors, however, may receive approval of either a different product for the same indication or the same product for a different indication but that could be used off-label in the orphan indication. Orphan drug exclusivity also could block the approval of one of our products for seven years if a competitor obtains approval before we do for the same product, as defined by the FDA, for the same indication we are seeking approval, or if our product is determined to be contained within the scope of the competitor's product for the same indication or disease. If a biological product designated as an orphan drug receives marketing approval for an indication broader than that which is designated, it may not be entitled to orphan drug exclusivity. Orphan drug status in the European Union has similar, but not identical, requirements and benefits.

Expedited Development and Review Programs

The FDA has a fast track program that is intended to expedite or facilitate the process for reviewing new biologics that meet certain criteria. Specifically, new biological product candidates are eligible for fast track designation if they are intended to treat a serious or life-threatening condition and preclinical or clinical data demonstrate the potential to address unmet medical needs for the condition. Fast track designation applies to both the product and the specific indication for which it is being studied. The sponsor of a biological product candidate can request the FDA to designate the product for fast track status any time before receiving BLA approval, but ideally no later than the pre-BLA meeting.

Any product submitted to the FDA for marketing, including under a fast track program, may be eligible for other types of FDA programs intended to expedite development and review, such as priority review and accelerated approval. Any product candidate is eligible for priority review if it treats a serious or life-threatening condition and, if approved, would provide a significant improvement in safety and effectiveness compared to available therapies. The FDA will attempt to direct additional resources to the evaluation of an application for a new biologic designated for priority review in an effort to facilitate the review.

A product candidate may also be eligible for accelerated approval, if it treats a serious or life-threatening condition and generally provides a meaningful advantage over available therapies. In addition, it must demonstrate an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, or IMM, that is reasonably likely to predict an effect on IMM or other clinical benefit. As a condition of approval, the FDA may require that a sponsor of a biological product candidate receiving accelerated approval perform adequate and well-controlled post-marketing clinical trials. If the FDA concludes that a biological product candidate shown to be effective can be safely used only if distribution or use is restricted, it will require such post-marketing restrictions, as it deems necessary to assure safe use of the product. If the FDA determines that the conditions of approval are not being met, the FDA can withdraw its accelerated approval for such biologic.

Additionally, a biological product candidate may be eligible for designation as a breakthrough therapy if the product candidate is intended, alone or in combination with one or more other drugs or biologics, to treat a serious or life-threatening condition and preliminary clinical evidence indicates that the product candidate may demonstrate substantial improvement over currently approved therapies on one or more clinically significant endpoints. The benefits of breakthrough therapy designation include the same benefits as fast track designation, plus intensive guidance from the FDA to ensure an efficient drug development program.

Fast track designation, priority review, accelerated approval and breakthrough therapy designation do not change the standards for approval, but may expedite the development or approval process.

Pediatric Information

Under the Pediatric Research Equity Act, or PREA, a BLA or supplement to a BLA must contain data to assess the safety and efficacy of the biological product candidate for the claimed indications in all relevant

pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The FDA may grant deferrals for submission of pediatric data or full or partial waivers. Unless otherwise required by regulation, PREA does not apply to any biological product candidate for an indication for which orphan designation has been granted.

The Food and Drug Administration Safety and Innovation Act, or FDASIA, amended the FDCA to require that a sponsor who is planning to submit a marketing application for a drug that includes a new active ingredient, new indication, new dosage form, new dosing regimen or new route of administration submit an initial Pediatric Study Plan, or PSP, within 60 days of an end-of-Phase 2 meeting or, if there is no such meeting, as early as practicable before the initiation of the registration-enabling trial. The initial PSP must include an outline of the pediatric study or studies that the sponsor plans to conduct, including study objectives and design, age groups, relevant endpoints and statistical approach, or a justification for not including such detailed information, and any request for a deferral of pediatric assessments or a full or partial waiver of the requirement to provide data from pediatric studies along with supporting information. The FDA and the sponsor must reach an agreement on the PSP. A sponsor can submit amendments to an agreed-upon initial PSP at any time if changes to the pediatric plan need to be considered based on data collected from preclinical studies, early phase clinical trials as well as other clinical development programs.

Post-Marketing Requirements

Following approval of a new product, the manufacturer and the approved product are subject to continuing regulation by the FDA, including, among other things, monitoring and record-keeping activities, reporting of adverse experiences, complying with promotion and advertising requirements, which include restrictions on promoting products for unapproved uses or patient populations (known as "off-label use") and limitations on industry-sponsored scientific and educational activities. Although physicians may prescribe legally available products for off-label uses, manufacturers may not market or promote such uses. Prescription drug and biologic promotional materials must be submitted to the FDA in conjunction with their first use. Further, if there are any modifications to the biologic, including changes in indications, labeling or manufacturing processes or facilities, the applicant may be required to submit and obtain FDA approval of a new BLA or BLA supplement, which may require the development of additional data or preclinical studies and clinical trials. The FDA may also place other conditions on approvals including the requirement for a Risk Evaluation and Mitigation Strategy, or REMS, to assure the safe use of the product. If the FDA concludes a REMS is needed, the sponsor of the BLA must submit a proposed REMS. The FDA will not approve the BLA without an approved REMS, if required. A REMS could include medication guides, physician communication plans or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. Any of these limitations on approval or marketing could restrict the commercial promotion, distribution, prescription or dispensing of products. Product approvals may be withdrawn for non-compliance with regulatory standards or if problems occur following initial marketing.

FDA regulations require that products be manufactured in specific facilities and in accordance with cGMP regulations. We rely, and expect to continue to rely, on third parties for the production of clinical and commercial quantities of our products in accordance with cGMP regulations. These manufacturers must comply with cGMP regulations that require, among other things, quality control and quality assurance, the maintenance of records and documentation and the obligation to investigate and correct any deviations from cGMP. Manufacturers and other entities involved in the manufacture and distribution of approved biologics are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP requirements and other laws. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain cGMP compliance. The discovery of violations, including failure to conform to cGMP regulations, could result in enforcement actions, and the discovery of post-approval problems with a product may result in restrictions on a product, manufacturer or holder of an approved BLA, including recall.

U.S. Healthcare Reform and Other U.S. Healthcare Laws

Manufacturing, sales, promotion and other activities following product approval are also subject to regulation by numerous regulatory authorities in the United States in addition to the FDA, including the Centers for Medicare & Medicaid Services, or CMS, other divisions of the Department of Health and Human Services, the Department of Justice, the Drug Enforcement Administration, the Consumer Product Safety Commission, the Federal Trade Commission, the Occupational Safety & Health Administration, the Environmental Protection Agency and state and local governments.

Healthcare providers, physicians and third-party payors in the United States and elsewhere play a primary role in the recommendation and prescription of pharmaceutical products. Arrangements with third-party payors and customers can expose pharmaceutical manufactures to broadly applicable fraud and abuse and other healthcare laws and regulations, including, without limitation, the federal Anti-Kickback Statute and the federal False Claims Act, or FCA, which may constrain the business or financial arrangements and relationships through which companies sell, market and distribute pharmaceutical products. In addition, transparency laws and patient privacy regulations by federal and state governments and by governments in foreign jurisdictions can apply to the manufacturing, sales, promotion and other activities of pharmaceutical manufactures. The applicable federal, state and foreign healthcare laws and regulations that can affect a pharmaceutical company's operations include:

- The federal Anti-Kickback Statute, which prohibits, among other things, knowingly and willfully soliciting, receiving, offering or paying any remuneration (including any kickback, bribe, or rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce, or in return for, either the referral of an individual, or the purchase, lease, order or recommendation of any good, facility, item or service for which payment may be made, in whole or in part, under the Medicare and Medicaid programs, or other federal healthcare programs. A person or entity can be found guilty of violating the statute without actual knowledge of the statute or specific intent to violate it. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the FCA. The Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, purchasers, and formulary managers on the other. There are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution;
- The federal civil and criminal false claims laws and civil monetary penalty laws, including the FCA, which prohibit any person or entity from, among other things, knowingly presenting, or causing to be presented, a false, fictitious or fraudulent claim for payment to, or approval by, the federal government or knowingly making, using or causing to be made or used a false record or statement, including providing inaccurate billing or coding information to customers or promoting a product off-label, material to a false or fraudulent claim to the federal government. As a result of a modification made by the Fraud Enforcement and Recovery Act of 2009, a claim includes "any request or demand" for money or property presented to the federal government. In addition, manufacturers can be held liable under the FCA even when they do not submit claims directly to government payors if they are deemed to "cause" the submission of false or fraudulent claims. The FCA also permits a private individual acting as a "whistleblower" to bring actions on behalf of the federal government alleging violations of the FCA and to share in any monetary recovery;
- The anti-inducement law, which prohibits, among other things, the offering or giving of remuneration, which includes, without limitation, any transfer of items or services for free or for less than fair market value (with limited exceptions), to a Medicare or Medicaid beneficiary that the person knows or should know is likely to influence the beneficiary's selection of a particular provider, practitioner or supplier of items or services reimbursable, whole or in part, by a federal or state governmental program;

  The federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses,

representations, or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payor (e.g., public or private) and knowingly and willfully falsifying, concealing or covering up by any trick or device a material fact or making any materially false statements in connection with the delivery of, or payment for, healthcare benefits, items or services relating to healthcare matters. Similar to the federal Anti-Kickback Statute, a person or entity can be found guilty of violating HIPAA without actual knowledge of the statute or specific intent to violate it;

- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their respective implementing regulations, which impose, among other things, specified requirements relating to the privacy, security and transmission of individually identifiable health information held by covered entities, including certain healthcare providers, health plans, and healthcare clearinghouses, as well as their respective business associates that create, receive, maintain or transmit individually identifiable health information for or on behalf of a covered entity, and their subcontractors that use, disclose or otherwise process individually identifiable health information. HITECH also created new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys' fees and costs associated with pursuing federal civil actions;
- The federal legislation commonly referred to as the Physician Payments Sunshine Act, created under the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, or collectively the ACA, and its implementing regulations, which requires manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to CMS, information related to payments or other transfers of value made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. Effective January 1, 2022, these reporting obligations will extend to include transfers of value made to certain non-physician providers such as physician assistants and nurse practitioners;
- Federal government price reporting laws, which require us to calculate and report complex pricing metrics in an accurate and timely manner to government programs;
- Federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers; and
- Analogous state laws and regulations, including: state anti-kickback and false claims laws, which may apply to our business practices, including, but not limited to, research, distribution, sales and marketing arrangements and claims involving healthcare items or services reimbursed by any third-party payor, including private insurers; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the U.S. federal government, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources; state laws that require drug manufacturers to file reports with states regarding pricing and marketing information, such as the tracking and reporting of gifts, compensations and other remuneration and items of value provided to healthcare professionals and entities; state and local laws requiring the registration of pharmaceutical sales representatives; and state and foreign laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts.

Pricing and rebate programs must comply with the Medicaid rebate requirements of the U.S. Omnibus Budget Reconciliation Act of 1990 and more recent requirements in the ACA. If products are made available to authorized users of the Federal Supply Schedule of the General Services Administration, additional laws and requirements apply. Products must meet applicable child-resistant packaging requirements under the U.S. Poison Prevention Packaging Act.

The distribution of pharmaceutical products is subject to additional requirements and regulations, including extensive record-keeping, licensing, storage and security requirements intended to prevent the unauthorized sale of pharmaceutical products.

The scope and enforcement of each of these laws is uncertain and subject to rapid change in the current environment of healthcare reform, especially in light of the lack of applicable precedent and regulations with respect to certain laws. Federal and state enforcement bodies have recently increased their scrutiny of interactions between healthcare companies and healthcare providers, which has led to a number of investigations, prosecutions, convictions and settlements in the healthcare industry. Prohibitions or restrictions on sales or withdrawal of future marketed products could materially affect our business in an adverse way. Changes in regulations, statutes or the interpretation of existing regulations could impact our business in the future by requiring, for example: (i) changes to our manufacturing arrangements; (ii) additions or modifications to product labeling; (iii) the recall or discontinuation of our products; or (iv) additional record-keeping requirements. If any such changes were to be imposed, they could adversely affect the operation of our business.

Ensuring our business arrangements comply with applicable healthcare laws, as well as responding to possible investigations by government authorities, can be time- and resource-consuming and can divert a company's attention from the business.

It is possible that governmental and enforcement authorities will conclude that a pharmaceutical manufacturer's business practices do not comply with current or future statutes, regulations or case law interpreting applicable fraud and abuse or other healthcare laws and regulations. The failure to comply with any of these laws or regulatory requirements subjects companies to possible legal or regulatory action. Depending on the circumstances, failure to meet applicable regulatory requirements can result in civil, criminal and administrative penalties, damages, fines, disgorgement, individual imprisonment, possible exclusion from participation in federal and state funded healthcare programs, contractual damages and the curtailment or restricting of our operations, as well as additional reporting obligations and oversight if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with these laws. Additionally, private individuals have the ability to bring actions on behalf of the U.S. government under the federal FCA as well as under the false claims laws of several states against a pharmaceutical manufacturer. The approval and commercialization of a pharmaceutical manufacturer's product candidates outside the United States will also likely subject it to foreign equivalents of the healthcare laws mentioned above, among other foreign laws. Lastly, if any of the physicians or other healthcare providers or entities with whom we expect to do business are found to be not in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs, which may also adversely affect our business. Any action for violation of these laws, even if successfully defended, could cause a pharmaceutical company to incur significant legal expenses and divert management's attention from the operation of the business.

In the United States, there have been and continue to be a number of legislative initiatives to contain healthcare costs. For example, in March 2010, the ACA was passed, which substantially changes the way healthcare is financed by both governmental and private insurers, and significantly impacts the U.S. pharmaceutical industry. The ACA, among other things, subjects biological products to potential competition by lower-cost biosimilars, addresses a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected, increases the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program and extends the rebate program to individuals enrolled in Medicaid managed care organizations, establishes annual fees and taxes on manufacturers of certain branded prescription drugs, and creates a new Medicare Part D coverage gap discount program, in which manufacturers must now, as amended by the Bipartisan Budget Act of 2018, effective January 1, 2019, agree to offer 70% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition to coverage under Medicare Part D for the manufacturer's outpatient drugs.

Some of the provisions of the ACA have yet to be fully implemented, while certain provisions have been subject to judicial and congressional challenges, as well as efforts by the Trump administration to repeal or replace certain aspects of the ACA. While Congress has not passed comprehensive repeal legislation, there have been a number of significant changes to the ACA and its implementation. The Tax Cuts and Jobs Act of 2017, or Tax Act, includes a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate." On December 14, 2018, a federal district court in Texas ruled the individual mandate is a critical and inseverable feature of the ACA, and therefore, because it was repealed as part of the Tax Act, the remaining provisions of the ACA are invalid as well. Additionally, on December 18, 2019, the U.S. Court of Appeals for the Fifth Circuit upheld the District Court ruling that the individual mandate was unconstitutional and remanded the case back to the District Court to determine whether the remaining provisions of the ACA are invalid as well. On March 2, 2020, the United States Supreme Court granted the petitions for writs of certiorari to review this case. It is uncertain when a decision will be reached. Additionally, on January 22, 2018, President Trump signed a continuing resolution on appropriations for fiscal year 2018 that delayed the implementation of certain ACA-mandated fees, including the so-called "Cadillac" tax on certain high cost employer-sponsored insurance plans, the annual fee imposed on certain high cost employer-sponsored insurance plans, the annual fee imposed on certain health insurance providers based on market share, and the medical device excise tax on non-exempt medical devices. Further, the Bipartisan Budget Act of 2018 among other things, amended the ACA, effective January 1, 2019, to reduce the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole."

Other legislative changes have been proposed and adopted in the United States since the ACA was enacted. On August 2, 2011, the Budget Control Act of 2011, among other things, created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions of Medicare payments to providers of 2% per fiscal year. These reductions went into effect on April 1, 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2030 unless additional congressional action is taken. The Coronavirus Aid, Relief and Economic Security Act, or CARES Act, which was signed into law in March 2020, along with other COVID-19 relief legislation suspended the 2% Medicare sequester from May 1, 2020 through March 31, 2021. On January 2, 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several types of providers.

Moreover, payment methodologies may be subject to changes in healthcare legislation and regulatory initiatives which could limit the amounts that federal and state governments will pay for healthcare products and services and result in reduced demand for certain pharmaceutical products or additional pricing pressures.

Additionally, there has been increasing legislative and enforcement interest in the United States with respect to specialty drug pricing practices. Specifically, there have been several recent U.S. congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drugs.

At the federal level, the Trump administration's budget for fiscal year 2021 includes a $135 billion allowance to support legislative proposals seeking to reduce drug prices, increase competition, lower out-of-pocket drug costs for patients, and increase patient access to lower-cost generic and biosimilar drugs. On March 10, 2020, the Trump administration sent "principles" for drug pricing to Congress, calling for legislation that would, among other things, cap Medicare Part D beneficiary out-of-pocket pharmacy expenses, provide an option to cap Medicare Part D beneficiary monthly out-of-pocket expenses, and place limits on pharmaceutical price increases.

Additionally, the Trump administration previously released a "Blueprint" to lower drug prices and reduce out of pocket costs of drugs that contained proposals to increase manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products and reduce the out of pocket costs of product candidates paid by consumers. The U.S. Department of Health and Human Services, or HHS, has solicited feedback on some of these measures and has implemented others under its existing authority. For example, in May 2019, CMS issued a final rule to allow Medicare Advantage Plans the option of using step therapy, a type of prior authorization, for Part B drugs beginning January 1, 2020. This final rule codified CMS's policy change that was effective January 1, 2019.

Further, on May 30, 2018, the Right to Try Act, was signed into law. The law, among other things, provides a federal framework for certain patients to access certain investigational new product candidates that have completed a Phase 1 clinical trial and that are undergoing investigation for FDA approval. Under certain circumstances, eligible patients can seek treatment without enrolling in clinical trials and without obtaining FDA permission under the FDA expanded access program. There is no obligation for a pharmaceutical manufacturer to make its product candidates available to eligible patients as a result of the Right to Try Act.

Lastly, on July 24, 2020 and September 13, 2020, the Trump administration announced several executive orders related to prescription drug pricing that seek to implement several of the administration's proposals. As a result, the FDA also released a final rule on September 24, 2020 providing guidance for states to build and submit importation plans for drugs from Canada. Further, on November 20, 2020, HHS finalized a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers. Further, in November 2020, CMS issued an interim final rule implementing the Most Favored Nation, or MFN, Model under which Medicare Part B reimbursement rates will be calculated for certain drugs and biologicals based on the lowest price drug manufacturers receive in Organization for Economic Cooperation and Development countries with a similar gross domestic product per capita. The MFN Model regulations mandate participation by identified Part B providers and will apply in all U.S. states and territories for a seven-year period beginning January 1, 2021, and ending December 31, 2027. On December 28, 2020, the United States District Court in Northern California issued a nationwide preliminary injunction against implementation of the interim final rule. The likelihood of implementation of any of the other Trump administration reform initiatives is uncertain, particularly in light of the recent U.S. presidential election.

At the state level, individual states are increasingly aggressive in passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. In addition, regional health care authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other health care programs. These measures could reduce the ultimate demand for our products, once approved, or put pressure on our product pricing.

We expect that additional foreign, federal and state healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, and result in reduced demand for our current product candidates and any future product candidates or additional pricing pressures. It is possible that additional governmental action is taken in response to the COVID-19 pandemic. For example, on August 6, 2020, President Trump issued an Executive Order that instructs the federal government to develop a list of "essential" medicines and then buy them and other medical supplies from U.S. manufacturers instead of from companies around the world, including China. The order is meant to reduce regulatory barriers to domestic pharmaceutical manufacturing and catalyze manufacturing technologies needed to keep drug prices low and the production of drug products in the United States.

Legislative and regulatory proposals, and enactment of laws, at the foreign, federal and state levels, directed at containing or lowering the cost of healthcare, will continue into the future. Further, we cannot predict the likelihood, nature, or extent of healthcare reform initiatives that may arise from future legislation or administrative action, particularly as a result of the recent presidential election.

U.S. Patent-Term Restoration and Marketing Exclusivity

Depending upon the timing, duration and specifics of FDA approval of our product candidates and any future product candidates we develop, some of our U.S. patents may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, commonly referred to as the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit restoration of the patent term of up to five years as compensation for patent term lost during product development and FDA regulatory review process. Patent-term restoration, however, cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date. The patent-term restoration period is generally one-half the time between the effective date of an IND and the submission date of a BLA plus the time between the submission date of a BLA and the approval of that application, except that the review period is reduced by any time during which the applicant failed to exercise due diligence. Only one patent applicable to an approved biologic is eligible for the extension and the application for the extension must be submitted prior to the expiration of the patent. The USPTO in consultation with the FDA, reviews and approves the application for any patent term extension or restoration. In the future, we may apply for restoration of patent term for our currently owned or licensed patents to add patent life beyond its current expiration date, depending on the expected length of the clinical trials and other factors involved in the filing of the relevant BLA.

An abbreviated approval pathway for biological products shown to be similar to, or interchangeable with, an FDA-licensed reference biological product was created by the Biologics Price Competition and Innovation Act of 2009 as part of the ACA. This amendment to the PHSA, in part, attempts to minimize duplicative testing. Biosimilarity, which requires that the biological product be highly similar to the reference product notwithstanding minor differences in clinically inactive components and that there be no clinically meaningful differences between the product and the reference product in terms of safety, purity and potency, can be shown through analytical studies, animal studies and a clinical trial or trials. Interchangeability requires that a biological product be biosimilar to the reference product and that the product can be expected to produce the same clinical results as the reference product in any given patient and, for products administered multiple times to an individual, that the product and the reference product may be alternated or switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biological product without such alternation or switch. A reference biological product is granted 12 years of data exclusivity from the time of first licensure of the product, and the FDA will not accept an application for a biosimilar or interchangeable product based on the reference biological product until four years after the date of first licensure of the reference product. "First licensure" typically means the initial date the particular product at issue was licensed in the United States. Date of first licensure does not include the date of licensure of (and a new period of exclusivity is not available for) a biological product if the licensure is for a supplement for the biological product or for a subsequent application by the same sponsor or manufacturer of the biological product (or licensor, predecessor in interest, or other related entity) for a change (not including a modification to the structure of the biological product) that results in a new indication, route of administration, dosing schedule, dosage form, delivery system, delivery device or strength, or for a modification to the structure of the biological product that does not result in a change in safety, purity, or potency. Therefore, one must determine whether a new product includes a modification to the structure of a previously licensed product that results in a change in safety, purity, or potency to assess whether the licensure of the new product is a first licensure that triggers its own period of exclusivity. Whether a subsequent application, if approved, warrants exclusivity as the "first licensure" of a biological product is determined on a case-by-case basis with data submitted by the sponsor.

Pediatric exclusivity is another type of regulatory market exclusivity in the United States. Pediatric exclusivity, if granted, adds six months to existing regulatory exclusivity periods. This six-month exclusivity,

which runs from the end of other exclusivity protection or patent term, may be granted based on the voluntary completion of a pediatric trial in accordance with an FDA-issued "Written Request" for such a trial.

U.S. regulation of companion diagnostics

Our product candidates may require use of an *in vitro* diagnostic to identify appropriate patient populations. These diagnostics, often referred to as companion diagnostics, are regulated as medical devices. In the United States, the FDCA and its implementing regulations, and other federal and state statutes and regulations govern, among other things, medical device design and development, preclinical and clinical testing, premarket clearance or approval, registration and listing, manufacturing, labeling, storage, advertising and promotion, sales and distribution, export and import and post-market surveillance. Unless an exemption applies, companion diagnostic tests require marketing clearance or approval from the FDA prior to commercial distribution. The two primary types of FDA marketing authorization applicable to a medical device are premarket notification, also called 510(k) clearance, and premarket approval, or PMA approval.

If use of companion diagnostic is essential to safe and effective use of a drug or biologic product, then the FDA generally will require approval or clearance of the diagnostic contemporaneously with the approval of the therapeutic product. On August 6, 2014, the FDA issued a final guidance document addressing the development and approval process for "*In Vitro* Companion Diagnostic Devices." According to the guidance, for novel candidates such as our product candidates, a companion diagnostic device and its corresponding drug or biologic candidate should be approved or cleared contemporaneously by FDA for the use indicated in the therapeutic product labeling. The guidance also explains that a companion diagnostic device used to make treatment decisions in clinical trials of a biologic product candidate generally will be considered an investigational device, unless it is employed for an intended use for which the device is already approved or cleared. If used to make critical treatment decisions, such as patient selection, the diagnostic device generally will be considered a significant risk device under the FDA's Investigational Device Exemption, or IDE, regulations. Thus, the sponsor of the diagnostic device will be required to comply with the IDE regulations. According to the guidance, if a diagnostic device and a drug are to be studied together to support their respective approvals, both products can be studied in the same investigational study, if the study meets both the requirements of the IDE regulations and the IND regulations. The guidance provides that depending on the details of the study plan and subjects, a sponsor may seek to submit an IND alone, or both an IND and an IDE. In July 2016, the FDA issued a draft guidance document intended to further assist sponsors of therapeutic products and sponsors of *in vitro* companion diagnostic devices on issues related to co-development of these products.

The FDA generally requires companion diagnostics intended to select the patients who will respond to cancer treatment to obtain approval of a PMA for that diagnostic contemporaneously with approval of the therapeutic. The review of these *in vitro* companion diagnostics in conjunction with the review of therapeutic candidates involves coordination of review by the FDA's Center for Biologics Evaluation and Research and by the FDA's Center for Devices and Radiological Health. The PMA process, including the gathering of clinical and preclinical data and the submission to and review by the FDA, can take several years or longer. It involves a rigorous premarket review during which the applicant must prepare and provide the FDA with reasonable assurance of the device's safety and effectiveness and information about the device and its components regarding, among other things, device design, manufacturing and labeling. PMA applications are also subject to an application fee.

PMAs for certain devices must generally include the results from extensive preclinical and adequate and well-controlled clinical trials to establish the safety and effectiveness of the device for each indication for which FDA approval is sought. In particular, for a diagnostic, the applicant must demonstrate that the diagnostic produces reproducible results when the same sample is tested multiple times by multiple users at multiple laboratories. In addition, as part of the PMA review, the FDA will typically inspect the manufacturer's facilities for compliance with the Quality System Regulation, or QSR, which imposes elaborate testing, control, documentation and other quality assurance requirements.

If the FDA evaluations of both the PMA application and the manufacturing facilities are favorable, the FDA will either issue an approval letter or a not-approvable letter, which usually contains a number of conditions that must be met in order to secure the final approval of the PMA, such as changes in labeling, or specific additional information, such as submission of final labeling, in order to secure final approval of the PMA. If the FDA concludes that the applicable criteria have been met, the FDA will issue a PMA for the approved indications, which can be more limited than those originally sought by the applicant. The PMA can include post-approval conditions that the FDA believes necessary to ensure the safety and effectiveness of the device, including, among other things, restrictions on labeling, promotion, sale and distribution.

If the FDA's evaluation of the PMA or manufacturing facilities is not favorable, the FDA will issue an order denying approval of the PMA or issue a not approvable order. A not approvable letter will outline the deficiencies in the application and, where practical, will identify what is necessary to make the PMA approvable. The FDA may also determine that additional clinical trials are necessary, in which case the PMA approval may be delayed for several months or years while the trials are conducted and then the data submitted in an amendment to the PMA. Once granted, PMA approval may be withdrawn by the FDA if compliance with post approval requirements, conditions of approval or other regulatory standards is not maintained or problems are identified following initial marketing. PMA approval is not guaranteed, and the FDA may ultimately respond to a PMA submission with a not approvable determination based on deficiencies in the application and require additional clinical trial or other data that may be expensive and time-consuming to generate and that can substantially delay approval.

After a device is placed on the market, it remains subject to significant regulatory requirements. Medical devices may be marketed only for the uses and indications for which they are cleared or approved. Device manufacturers must also establish registration and device listings with the FDA. A medical device manufacturer's manufacturing processes and those of its suppliers are required to comply with the applicable portions of the QSR, which cover the methods and documentation of the design, testing, production, processes, controls, quality assurance, labeling, packaging and shipping of medical devices. Domestic facility records and manufacturing processes are subject to periodic unscheduled inspections by the FDA. The FDA also may inspect foreign facilities that export products to the United States.

European Union Drug Development

In the European Union, or EU, our future products also may be subject to extensive regulatory requirements. As in the United States, medicinal products can be marketed only if a marketing authorization from the competent regulatory agencies has been obtained.

Similar to the United States, the various phases of preclinical and clinical research in the European Union are subject to significant regulatory controls. Although the EU Clinical Trials Directive 2001/20/EC has sought to harmonize the EU clinical trials regulatory framework, setting out common rules for the control and authorization of clinical trials in the EU, the EU member states have transposed and applied the provisions of the Directive differently. This has led to significant variations in the member state regimes. Under the current regime, before a clinical trial can be initiated it must be approved in each of the EU countries where the trial is to be conducted by two distinct bodies: the National Competent Authority, or NCA, and one or more Ethics Committees, or ECs. Under the current regime all suspected unexpected serious adverse reactions to the investigated drug that occur during the clinical trial have to be reported to the NCA and ECs of the member state where they occurred.

The EU clinical trials legislation currently is undergoing a transition process mainly aimed at harmonizing and streamlining clinical-trial authorization, simplifying adverse-event reporting procedures, improving the supervision of clinical trials and increasing their transparency. Recently enacted Clinical Trials Regulation EU No 536/2014 ensures that the rules for conducting clinical trials in the EU will be identical.

European Union Drug Review and Approval

In the European Economic Area, or EEA, which is comprised of the 28 member states of the EU and Iceland, Liechtenstein, Norway, medicinal products can only be commercialized after obtaining a Marketing Authorization, or MA. There are two types of marketing authorizations.

- The Community MA is issued by the European Commission through the Centralized Procedure, based on the opinion of the Committee for Medicinal Products for Human Use, or CHMP, of the EMA and is valid throughout the entire territory of the EEA. The Centralized Procedure is mandatory for certain types of products, such as biotechnology medicinal products, orphan medicinal products, advanced-therapy medicines such as gene-therapy, somatic cell-therapy or tissue-engineered medicines and medicinal products containing a new active substance indicated for the treatment of HIV, AIDS, cancer, neurodegenerative disorders, diabetes, auto-immune and other immune dysfunctions and viral diseases. The Centralized Procedure is optional for products containing a new active substance not yet authorized in the EEA, or for products that constitute a significant therapeutic, scientific or technical innovation or which are in the interest of public health in the EU.
- National MAs, which are issued by the competent authorities of the Member States of the EEA and only cover their respective territory, are available for products not falling within the mandatory scope of the Centralized Procedure. Where a product has already been authorized for marketing in a member state of the EEA, this National MA can be recognized in other member states through the Mutual Recognition Procedure. If the product has not received a National MA in any member state at the time of application, it can be approved simultaneously in various member state through the Decentralized Procedure. Under the Decentralized Procedure an identical dossier is submitted to the competent authorities of each of the member state in which the MA is sought, one of which is selected by the applicant as the Reference Member State, or RMS. The competent authority of the RMS prepares a draft assessment report, a draft summary of the product characteristics, or SPC, and a draft of the labeling and package leaflet, which are sent to the other member state, referred to as the Member States Concerned, for their approval. If the Member States Concerned raise no objections, based on a potential serious risk to public health, to the assessment, SPC, labeling, or packaging proposed by the RMS, the product is subsequently granted a national MA in all the member states (i.e., in the RMS and the Member States Concerned). Under the above described procedures, before granting the MA, the EMA or the competent authorities of the member states of the EEA make an assessment of the risk-benefit balance of the product on the basis of scientific criteria concerning its quality, safety and efficacy.

European Union Orphan Designation and Exclusivity

In the European Union, the EMA's Committee for Orphan Medicinal Products grants orphan drug designation to promote the development of products that are intended for the diagnosis, prevention or treatment of life-threatening or chronically debilitating conditions affecting not more than five in 10,000 persons in the European Union community (or where it is unlikely that the development of the medicine would generate sufficient return to justify the investment) and for which no satisfactory method of diagnosis, prevention or treatment has been authorized (or, if a method exists, the product would be a significant benefit to those affected).

In the European Union, orphan drug designation entitles a party to financial incentives such as reduction of fees or fee waivers and ten years of market exclusivity is granted following medicinal product approval. This period may be reduced to six years if the orphan drug designation criteria are no longer met, including where it is shown that the product is sufficiently profitable not to justify maintenance of market exclusivity. Orphan drug designation must be requested before submitting an application for MA. Orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process.

European Union Drug Marketing

Much like the Anti-Kickback Statute prohibition in the United States, the provision of benefits or advantages to physicians to induce or encourage the prescription, recommendation, endorsement, purchase, supply, order or use of medicinal products is also prohibited in the EU. The provision of benefits or advantages to physicians is governed by the national anti-bribery laws of European Union member states, such as the U.K. Bribery Act 2010. Infringement of these laws could result in substantial fines and imprisonment.

Payments made to physicians in certain EU member states must be publicly disclosed. Moreover, agreements with physicians often must be the subject of prior notification and approval by the physician's employer, his or her competent professional organization as well as the regulatory authorities of the individual EU member states. These requirements are provided in the national laws, industry codes or professional codes of conduct, applicable in the EU member states. Failure to comply with these requirements could result in reputational risk, public reprimands, administrative penalties, fines or imprisonment.

European Data Collection

The collection and use of personal health data in the EU is governed by the provisions of the Data Protection Directive, and as of May 2018 the General Data Protection Regulation, or GDPR. This directive imposes several requirements relating to the consent of the individuals to whom the personal data relates, the information provided to the individuals, notification of data processing obligations to the competent national data protection authorities and the security and confidentiality of the personal data. The Data Protection Directive and GDPR also impose strict rules on the transfer of personal data out of the EU to the United States. Failure to comply with the requirements of the Data Protection Directive, the GDPR, and the related national data protection laws of the EU member states may result in fines and other administrative penalties. The GDPR introduces new data protection requirements in the EU and substantial fines for breaches of the data protection rules. The GDPR regulations may impose additional responsibility and liability in relation to personal data that we process and we may be required to put in place additional mechanisms ensuring compliance with the new data protection rules. This may be onerous and adversely affect our business, financial condition, results of operations and prospects.

Rest of the World Regulation

For other countries outside of the EU and the United States, such as countries in Eastern Europe, Latin America or Asia, the requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. Additionally, the clinical trials must be conducted in accordance with GCP requirements and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

If we fail to comply with applicable foreign regulatory requirements, we may be subject to, among other things, fines, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions and criminal prosecution.

Reimbursement

Sales of our products, when and if approved, will depend, in part, on the extent to which our products will be covered by third-party payors, such as government health programs, commercial insurance and managed healthcare organizations. In the United States, no uniform policy of coverage and reimbursement for drug or biological products exists. Accordingly, decisions regarding the extent of coverage and amount of reimbursement to be provided for any of our products will be made on a payor-by-payor basis. As a result, coverage determination is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our products to each payor separately, with no assurance that coverage and adequate reimbursement will be obtained.

The U.S. government, state legislatures and foreign governments have shown significant interest in implementing cost containment programs to limit the growth of government-paid health care costs, including price-controls, restrictions on reimbursement and requirements for substitution of biosimilars for branded prescription drugs. For example, the ACA contains provisions that may reduce the profitability of drug products through increased rebates for drugs reimbursed by Medicaid programs, extension of Medicaid rebates to Medicaid managed care plans, mandatory discounts for certain Medicare Part D beneficiaries and annual fees based on pharmaceutical companies' share of sales to federal healthcare programs. Adoption of general controls and measures, coupled with the tightening of restrictive policies in jurisdictions with existing controls and measures, could limit payments for pharmaceutical drugs.

The Medicaid Drug Rebate Program requires pharmaceutical manufacturers to enter into and have in effect a national rebate agreement with the Secretary of the Department of Health and Human Services as a condition for states to receive federal matching funds for the manufacturer's outpatient drugs furnished to Medicaid patients. The ACA made several changes to the Medicaid Drug Rebate Program, including increasing pharmaceutical manufacturers' rebate liability by raising the minimum basic Medicaid rebate on most branded prescription drugs from 15.1% of average manufacturer price, or AMP, to 23.1% of AMP and adding a new rebate calculation for "line extensions" (i.e., new formulations, such as extended release formulations) of solid oral dosage forms of branded products, as well as potentially impacting their rebate liability by modifying the statutory definition of AMP. The ACA also expanded the universe of Medicaid utilization subject to drug rebates by requiring pharmaceutical manufacturers to pay rebates on Medicaid managed care utilization and by enlarging the population potentially eligible for Medicaid drug benefits.

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003, or the MMA, established the Medicare Part D program to provide a voluntary prescription drug benefit to Medicare beneficiaries. Under Part D, Medicare beneficiaries may enroll in prescription drug plans offered by private entities that provide coverage of outpatient prescription drugs. Unlike Medicare Part A and B, Part D coverage is not standardized. While all Medicare drug plans must give at least a standard level of coverage set by Medicare, Part D prescription drug plan sponsors are not required to pay for all covered Part D drugs, and each drug plan can develop its own drug formulary that identifies which drugs it will cover and at what tier or level. However, Part D prescription drug formularies must include drugs within each therapeutic category and class of covered Part D drugs, though not necessarily all the drugs in each category or class. Any formulary used by a Part D prescription drug plan must be developed and reviewed by a pharmacy and therapeutic committee. Government payment for some of the costs of prescription drugs may increase demand for products for which we receive marketing approval. However, any negotiated prices for our products covered by a Part D prescription drug plan likely will be lower than the prices we might otherwise obtain. Moreover, while the MMA applies only to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their own payment rates. Any reduction in payment that results from the MMA may result in a similar reduction in payments from non-governmental payors.

For a drug product to receive federal reimbursement under the Medicaid or Medicare Part B programs or to be sold directly to U.S. government agencies, the manufacturer must extend discounts to entities eligible to participate in the 340B drug pricing program. The required 340B discount on a given product is calculated based on the AMP and Medicaid rebate amounts reported by the manufacturer. As of 2010, the ACA expanded the types of entities eligible to receive discounted 340B pricing, although, under the current state of the law, with the exception of children's hospitals, these newly eligible entities will not be eligible to receive discounted 340B pricing on orphan drugs. In addition, as 340B drug pricing is determined based on AMP and Medicaid rebate data, the revisions to the Medicaid rebate formula and AMP definition described above could cause the required 340B discount to increase.

As noted above, the marketability of any products for which we receive regulatory approval for commercial sale may suffer if the government and third-party payors fail to provide coverage and reimbursement. Obtaining coverage and reimbursement for newly approved drugs and biologics is a time-consuming and costly process,

and coverage may be more limited than the purposes for which a drug is approved by the FDA or comparable foreign regulatory authorities. Assuming coverage is obtained for a given product by a third-party payor, the resulting reimbursement payment rates may not be adequate or may require co-payments that patients find unacceptably high. Additionally, coverage policies and third-party reimbursement rates may change at any time. Patients who are prescribed medications for the treatment of their conditions, and their prescribing physicians, generally rely on third-party payors to reimburse all or part of the costs associated with their prescription drugs. Patients are unlikely to use products unless coverage is provided and reimbursement is adequate to cover all or a significant portion of the cost of prescribed products.

In addition, in most foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing and reimbursement vary widely from country to country. For example, the EU provides options for its member states to restrict the range of medicinal products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. A member state may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our products. Historically, products launched in the European Union do not follow price structures of the United States and generally prices tend to be significantly lower.

Employees and Human Capital Resources

As of September 30, 2020, we had 24 full-time employees and 1 part-time employee. We consider our relationship with our employees to be good.

Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing and integrating our existing and new employees, advisors and consultants. The principal purposes of our equity incentive plans are to attract, retain and reward personnel through the granting of stock-based compensation awards in order to increase stockholder value and the success of our company by motivating such individuals to perform to the best of their abilities and achieve our objectives.

Facilities

Our principal executive offices are located in Rockville, Maryland, pursuant to a lease that expires in February 2027. We also lease office and laboratory space in Boston, Massachusetts, pursuant to a lease that expires in December 2026. We believe that our current facilities are adequate to meet our ongoing needs, and that, if we require additional space, we will be able to obtain additional facilities on commercially reasonable terms.

Legal Proceedings

We are not currently a party to any material legal proceedings. From time to time, we may become involved in other litigation or legal proceedings relating to claims arising from the ordinary course of business.

MANAGEMENT

Executive Officers and Directors

The following table sets forth information for our executive officers and directors as of December 31, 2020:

Name	Age	Position
Executive Officers		
John Celebi	49	President, Chief Executive Officer and Director
Anupama Hoey	50	Chief Business Officer
Marie-Louise Fjaellskog, M.D., Ph.D.	56	Chief Medical Officer
Robert Pierce, M.D.	56	Chief Scientific Officer
Erin Colgan	40	Senior Vice President of Finance
Non-Employee Directors		
Bob Holmen	57	Director
James Peyer, Ph.D.	34	Director
Samuel Broder, M.D.	75	Director
Thomas Ricks	67	Director

(1) Member of the Audit Committee
(2) Member of the Compensation Committee
(3) Member of the Nominating and Governance Committee

Executive Officers

John Celebi has served as our President and Chief Executive Officer and a member of our board of directors since February 2018. Prior to joining us, from June 2016 until February 2018, Mr. Celebi served as Chief Operating Officer of X4 Pharmaceuticals, Inc., a clinical-stage biopharmaceutical company. Prior to X4 Pharmaceuticals, from 2011 until June 2016, he served as Chief Business Officer at Igenica Biotherapeutics, Inc., an immunotherapy company. Prior to joining Igencia Biotherapeutics, Mr. Celebi served in various roles at ArQule, Inc., a biotechnology and pharmaceutical company from 2003 until 2011, including as Vice President of Business Development and New Product Planning and Alliance Management. Mr. Celebi received a B.S. in Biophysics from the University of California, San Diego and an M.B.A. from Carnegie Mellon University. We believe that Mr. Celebi's perspective and deep experience in the biotechnology industry, as well as his experience leading our company as the President and Chief Executive Officer, qualifies him to serve on our board of directors.

Anupama Hoey has served as our Chief Business Officer since October 2020. Prior to joining us, Ms. Hoey served as Chief Business Officer of Second Genome Inc., a biotechnology company, from July 2018 until June 2020. Prior to that, Ms. Hoey served as Chief Business Officer of Invenra Inc., a biotechnology company, from March 2017 until July 2018. Prior to Invenra, Ms. Hoey served as Vice President of Business Development of Arcus Biosciences, Inc. from November 2015 until December 2016. Ms. Hoey received a B.S. in Molecular Genetics from the Ohio State University, an M.S. from Case Western Reserve University and an M.B.A. from the University of San Francisco.

Marie-Louise Fjaellskog, M.D., Ph.D. has served as our Chief Medical Officer since June 2020. Prior to joining us, Dr. Fjaellskog served as Vice President, Clinical Development at Merus N.V., an immuno-oncology company from May 2019 until June 2020. Prior to joining Merus, Dr. Fjaellskog served as Vice President, Clinical Development at Infinity Pharmaceuticals, a biopharmaceutical company, from February 2018 until April 2019. From 2012 to February 2018, Dr. Fjaellskog held positions of increasing responsibility at Novartis, most recently as Global Clinical Program Leader. Dr. Fjaellskog has also served as an Associate Professor of Oncology at Uppsala University in Sweden since 2008, where she also received an M.D. and a Ph.D.

Robert Pierce, M.D. has served as our Chief Scientific Officer since March 2020. Prior to joining us, Dr. Pierce served as Scientific Director of the Immunopathology Lab in the Clinical Research Division of the

Fred Hutchinson Cancer Research Center from November 2016 until March 2020. Prior to that, Dr. Pierce served as Chief Scientific Officer of OncoSec Medical Incorporated, a biotechnology company, from 2014 until June 2016. Dr. Pierce received a B.A. in Philosophy from Yale College and an M.D. from Brown University.

Erin Colgan has served as our Senior Vice President of Finance since January 2021 and previously served as our Vice President of Finance from July 2020 to January 2021. Prior to joining us, Ms. Colgan served as the Vice President of FP+A and Commercial Planning at Intarcia Therapeutics from August 2019 to June 2020. Prior to Intarcia, from August 2010 to August 2019, Ms. Colgan held various roles of increasing responsibility at Vertex Pharmaceuticals, most recently as Senior Director, FP+A and Global Revenue. Ms. Colgan began her career in public accounting at PricewaterhouseCoopers where she worked in both audit and business development. Ms. Colgan holds a B.A. in Accounting from the University of Massachusetts, Amherst.

Non-Employee Directors

Bob Holmen has served as a member of our board of directors since January 2017. Mr. Holmen provides legal services focused on venture capital and private equity markets to investors through his boutique law firm Investor Counsel, where he has served as a Principal since 2016. Mr. Holmen has also served as a Managing Director since 2001 and Chief Financial Officer since 2012 at Miramar Venture Partners, a venture capital firm, and as a Principal of Holmen Ventures, a strategic financial consulting firm, since 2013. Prior to Miramar, Mr. Holmen served as an Executive Officer for CoCensys, Inc., a biopharmaceutical company, and First Consulting Group, Inc., a healthcare consulting firm. Mr. Holmen received a B.S. in Electrical Engineering from Stanford University and a J.D. from University of California, Berkeley School of Law. We believe that Mr. Holmen's education and professional background in advising companies in the biotechnology industry qualifies him to serve on our board of directors.

James Peyer, Ph.D. has served as a member of our board of directors since January 2020. In September 2019, Dr. Peyer founded Cambrian Biopharma, where he serves as the Chief Executive Officer. In 2018, Dr. Peyer founded Cleara Biotech, a biopharmaceutical company, where he served as Executive Director from February 2018 to June 2019. Dr. Peyer also founded and served as Managing Partner at Apollo Health Ventures GmbH from June 2016 until March 2019. Prior to his service at Apollo Ventures, Dr. Peyer served as a consultant at McKinsey & Company from August 2015 until June 2016. Dr. Peyer received a B.A. in Biology from the University of Chicago and a Ph.D. in Stem Cell Biology at The University of Texas Southwestern Medical Center at Dallas. We believe that Dr. Peyer's experience in the biopharmaceutical industry, his years of business and leadership experience and expertise qualifies him to serve on our board of directors.

Samuel Broder, M.D. has served as a member of our board of directors since April 2019. Prior to his retirement, Dr. Broder was Senior Vice President from 2012 to June 2016 and Head of the Health Sector from 2015 to June 2016 for Intrexon Corporation, a synthetic biology company. Prior to Intrexon, he served as the Executive Vice President for Medical Affairs and Chief Medical Officer at Celera Corporation from 1998 to 2010. Prior to Celera, Dr. Broder served as Senior Vice President, Research and Development and Chief Scientific Officer at IVAX Corporation from 1995 to 1998. Dr. Broder served as the director of the National Cancer Institute from 1989 to 1995 appointed by President Ronald Reagan, where he oversaw the development of numerous anti-cancer therapeutic agents. Dr. Broder received a B.S. from University of Michigan and an M.D. from the University of Michigan Medical School, with post-graduate training at Stanford University in Palo Alto. We believe that Dr. Broder's significant scientific experience with therapeutic agents qualifies him to serve on our board of directors.

Thomas Ricks has served as a member of our board of directors since 2015. Mr. Ricks served as former Chief Investment Officer of H&S Ventures, LLC, a Forbes 150 family office, from 2001 until his retirement in 2018. Prior to his service, Mr. Ricks served as Chief Executive Officer of The University of Texas Investment Management Company from 1996 to 2001. Mr. Ricks has been a director of Ovintiv, Inc. since 2019 and currently serves as Chair of the Human Resources and Compensation Committee, and on the Corporate

Responsibility and Governance Committee. He was a director of Newfield Exploration Company from 1992 to 2019 and most recently served as Chair of its Audit Committee. Mr. Ricks also served on the boards of several privately-held companies; BDM International (acquired by TRW), LifeCell Corporation, and Argus Pharmaceuticals. Mr. Ricks is a former director of the Ocean Institute, and a former member of the Investment Committees for St. David's Foundation and the University of California – Irvine Foundation. Mr. Ricks received a B.A. in Economics from Trinity College and an M.B.A. from the University of Chicago. We believe Mr. Ricks' extensive experience as a director of public company and private companies in the healthcare industry qualifies him to serve on our board of directors.

Family Relationships

There are no family relationships among any of our directors or executive officers.

Composition of Our Board of Directors

Our business and affairs are managed under the direction of our board of directors. We currently have five directors currently serving as members of our board of directors. Our current directors will continue to serve as directors until their resignation, removal or successor is duly elected.

Our amended and restated certificate of incorporation and amended and restated bylaws to become effective immediately prior to the closing of this offering will permit our board of directors to establish the authorized number of directors from time to time by resolution. Each director serves until the expiration of the term for which such director was elected or appointed, or until such director's earlier death, resignation or removal. In accordance with our amended and restated certificate of incorporation that will be in effect on the completion of this offering, our board of directors will be divided into three classes with staggered three-year terms. At each annual general meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Our directors will be divided among the three classes as follows:

- the Class I directors will be and , and their terms will expire at our first annual meeting of stockholders following this offering;
- the Class II directors will be and , and their terms will expire at our second annual meeting of stockholders following this offering; and
- the Class III directors will be and , and their terms will expire at our third annual meeting of stockholders following this offering.

We expect that any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one third of the directors. The division of our board of directors into three classes with staggered three-year terms may delay or prevent a change of our management or a change in control.

Our board of directors meets on a regular basis and additionally as required. The members of our current board of directors were elected in compliance with the provisions of our amended and restated certificate of incorporation and an amended and restated voting agreement among certain of our stockholders. The amended and restated voting agreement will terminate immediately prior to the closing of this offering, and following the closing of this offering none of our stockholders will have any special rights regarding the election or designation of members of our board of directors.

Director Independence

Our board of directors has undertaken a review of the independence of each director. Based on information provided by each director concerning her or his background, employment and affiliations, our board of directors

has determined that all of our directors except for do not have relationships that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is "independent" as that term is defined under the listing standards of the Nasdaq Stock Market. In making these determinations, our board of directors considered the current and prior relationships that each non-employee director has with our company and all other facts and circumstances our board of directors deemed relevant in determining their independence, including the beneficial ownership of our shares by each non-employee director and the transactions described in the section titled "Certain Relationships and Related Party Transactions."

Committees of Our Board of Directors

Our board of directors has established an audit committee, a compensation committee, and a nominating and corporate governance committee. The composition and responsibilities of each committee of our board of directors are described below. Members serve on these committees until their resignation or until otherwise determined by our board of directors. Our board of directors may establish other committees as it deems necessary or appropriate from time to time.

Audit Committee

Our audit committee consists of , and . Our board of directors has determined that each of , and satisfy the independence requirements under the listing standards of the Nasdaq Stock Market and Rule 10A-3(b)(1) of the Securities and Exchange Act of 1934, or the Exchange Act. The chair of our audit committee is , who our board of directors has determined is an "audit committee financial expert" within the meaning of SEC regulations. Each member of our audit committee can read and understand fundamental financial statements in accordance with applicable requirements. In arriving at these determinations, our board of directors has examined each audit committee member's scope of experience and the nature of their employment in the corporate finance sector.

The primary purpose of the audit committee is to discharge the responsibilities of our board of directors with respect to our corporate accounting and financial reporting processes, systems of internal control and financial statement audits, and to oversee our independent registered public accounting firm. Specific responsibilities of our audit committee include:

- helping our board of directors oversee our corporate accounting and financial reporting processes;
- managing the selection, engagement, qualifications, independence and performance of a qualified firm to serve as the independent registered public accounting firm to audit our financial statements;
- discussing the scope and results of the audit with the independent registered public accounting firm, and reviewing, with management and the independent accountants, our interim and year-end operating results;
- developing procedures for employees to submit concerns anonymously about questionable accounting or audit matters;
- reviewing related person transactions;
- obtaining and reviewing a report by the independent registered public accounting firm at least annually that describes our internal quality control procedures, any material issues with such procedures and any steps taken to deal with such issues when required by applicable law; and
- approving or, as permitted, pre-approving, audit and permissible non-audit services to be performed by the independent registered public accounting firm.

Our audit committee will operate under a written charter, to be effective prior to the completion of this offering, that satisfies the applicable listing standards of the Nasdaq Stock Market.

Compensation Committee

Our compensation committee consists of and . The chair of our compensation committee is . Our board of directors has determined that each of and is independent under the listing standards of the Nasdaq Stock Market, a "non-employee director" as defined in Rule 16b-3 promulgated under the Exchange Act.

The primary purpose of our compensation committee is to discharge the responsibilities of our board of directors in overseeing our compensation policies, plans and programs and to review and determine the compensation to be paid to our executive officers, directors and other senior management, as appropriate. Specific responsibilities of our compensation committee include:

- reviewing and approving the compensation of our chief executive officer, other executive officers and senior management;
- reviewing and recommending to our board of directors the compensation paid to our directors;
- administering our equity incentive plans and other benefit programs;
- reviewing, adopting, amending and terminating incentive compensation and equity plans, severance agreements, profit sharing plans, bonus plans, change-of-control protections and any other compensatory arrangements for our executive officers and other senior management; and
- reviewing and establishing general policies relating to compensation and benefits of our employees, including our overall compensation philosophy.

Our compensation committee will operate under a written charter, to be effective prior to the completion of this offering, that satisfies the applicable listing standards of the Nasdaq Stock Market.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee consists of and . The chair of our nominating and corporate governance committee is . Our board of directors has determined that each member of the nominating and corporate governance committee is independent under the listing standards of the Nasdaq Stock Market.

Specific responsibilities of our nominating and corporate governance committee will include:

- identifying and evaluating candidates, including the nomination of incumbent directors for reelection and nominees recommended by stockholders, to serve on our board of directors;
- considering and making recommendations to our board of directors regarding the composition and chairmanship of the committees of our board of directors;
- instituting plans or programs for the continuing education of our board of directors and orientation of new directors;
- developing and making recommendations to our board of directors regarding corporate governance guidelines and matters; and
- overseeing periodic evaluations of the board of directors' performance, including committees of the board of directors.

Our nominating and corporate governance committee will operate under a written charter, to be effective prior to the completion of this offering, that satisfies the applicable listing standards of the Nasdaq Stock Market.

Code of Business Conduct and Ethics

We have adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. Upon the completion of this offering, our code of business conduct and ethics will be available under the Corporate Governance section of our website at www.senseibio.com. In addition, we intend to post on our website all disclosures that are required by law or the listing standards of the Nasdaq Stock Market concerning any amendments to, or waivers from, any provision of the code. The reference to our website address does not constitute incorporation by reference of the information contained at or available through our website, and you should not consider it to be a part of this prospectus.

Compensation Committee Interlocks and Insider Participation

None of the members of the compensation committee is currently or has been at any time one of our officers or employees. None of our executive officers currently serves, or has served during the last year, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving as a member of our board of directors or compensation committee.

Non-Employee Director Compensation

With the exception of the payments provided pursuant to the consulting arrangement described below, we have not historically paid cash retainers or other cash compensation with respect to service on our board of directors, except for reimbursement of direct expenses incurred in connection with attending meetings of the board or committees.

The following table sets forth information regarding the compensation earned or paid to our non-employee directors during the year ended December 31, 2020. John Celebi, our President and Chief Executive Officer, is also a member of our board of directors, but did not receive any additional compensation for service as a director. The compensation of Mr. Celebi as a named executive officer is set forth below under "Executive Compensation—Summary Compensation Table."

Name	Option Awards ($)(1)(2)	All Other Compensation ($)	Total ($)
Bob Holmen	188,337	—	188,337
James Peyer, Ph.D.	62,779	—	62,779
Samuel Broder, M.D.	62,779	84,000(3)	146,779
Thomas Ricks	62,779	—	62,779

(1) Amounts reported represent the aggregate grant date fair value of option awards granted to our directors during 2020 under our 2018 Stock Incentive Plan, as amended, or 2018 Plan, computed in accordance with Financial Accounting Standard Board Accounting Standards Codification, Topic 718, or ASC Topic 718. The assumptions used in calculating the grant date fair value of the awards reported in this column are set forth in the notes to our audited consolidated financial statements included elsewhere in this prospectus. This amount does not reflect the actual economic value that may be realized by the non-employee director.

(2) As of December 31, 2020, Mr. Holmen, Dr. Peyer, Dr. Broder and Mr. Ricks held options to purchase 2,071,000, 937,000, 967,000 and 997,000 shares of our common stock, respectively.

(3) Consists of payments pursuant to the consulting arrangement described below.

We intend to adopt a non-employee director compensation policy effective upon the completion of this offering and on terms to be determined at a later date by our board of directors. Under the non-employee director policy, our non-employee directors will be eligible to receive compensation for service on our board of directors and committees of our board of directors.

Consulting Arrangements

In May 2018, we entered into an Independent Contractor and Strategic Advisory Services Agreement with Samuel Broder, M.D., pursuant to which Mr. Broder received $7,000 per month. We entered into an amended agreement as of April 5, 2020, pursuant to which Mr. Broder receives $7,000 per month.

EXECUTIVE COMPENSATION

Our named executive officers, consisting of our principal executive officer and the next two most highly compensated executive officers, as of December 31, 2020, were:

- John Celebi, our President and Chief Executive Officer;
- Robert Pierce, our Chief Scientific Officer; and
- Anupama Hoey, our Chief Business Officer.

Summary Compensation Table

The following table sets forth information concerning the compensation of our named executive officers during the fiscal year ended December 31, 2020:

Name and Principal Position	Year	Salary ($)	Bonus ($)	Option Awards ($)(1)	Non-Equity Incentive Plan Compensation ($)	All Other Compensation ($)	Total ($)
John Celebi	2020	394,625	—	1,775,500	118,965	19,040(5)	2,308,130
President and Chief Executive Officer							
Robert Pierce(2)	2020	266,806	—	670,000	102,000	30,980(6)	1,069,786
Chief Scientific Officer							
Anupama Hoey(3)	2020	74,529	25,000(4)	1,250,000	22,118	—	1,371,647
Chief Business Officer							

(1) The amounts disclosed represent the aggregate grant date fair value of the awards granted to our named executive officers during 2020 under our 2018 Plan, computed in accordance with ASC Topic 718. The assumptions used in calculating the grant date fair value of the awards are set forth in Note 10 to our audited consolidated financial statements included elsewhere in this prospectus. This amount does not reflect the actual economic value that may be realized by the named executive officer.
(2) Dr. Pierce joined as our Chief Scientific Officer in March 2020.
(3) Ms. Hoey joined as our Chief Business Officer in October 2020.
(4) Pursuant to her employment agreement, Ms. Hoey received a $25,000 signing and retention bonus upon joining our company, as further described below in "—Employment Agreements with our Named Executive Officers."
(5) Includes 401(k) plan matching contributions, a housing allowance and a vehicle allowance.
(6) Includes 401(k) plan matching contributions, a housing allowance, and a payment in connection with our acquisition of Alvaxa as further described in "Certain Relationships and Related Party Transactions—Business Combination."

Narrative to the Summary Compensation Table

Annual Base Salary

Our named executive officers receive a base salary to compensate them for services rendered to us. The base salary payable to each named executive officer is intended to provide a fixed component of compensation reflecting the executive's skill set, experience, role and responsibilities. Mr. Celebi's annual base salary was $385,500 from January 1, 2020 to March 31, 2020 and was $396,500 from April 1, 2020 to December 31, 2020. The base salaries for Dr. Pierce and Ms. Hoey during 2020 were $340,000 and $345,000, respectively.

Bonus

Our named executive officers are eligible to receive annual bonuses of up to a percentage of the applicable executive's gross base salary based on performance metrics, as determined by our board of directors. For 2020, the target bonus for each of Mr. Celebi, Dr. Pierce and Ms. Hoey was 30% of their respective base salaries. For 2020, our board of directors determined that the corporate performance goals had been achieved at a 100% level in the aggregate.

Employment Agreements with our Named Executive Officers

Below are descriptions of our employment agreements and offer letter agreements with our named executive officers. The agreements generally provide for at-will employment and set forth the named executive officer's initial base salary, eligibility for employee benefits and severance benefits upon a qualifying termination of employment. Furthermore, each of our named executive officers has executed a form of our standard proprietary information and inventions assignment agreement. The key terms of the employment agreements with our named executive officers, including potential payments upon termination or change of control, are described below. We plan to enter into new or revised employment agreements with our named executive officers prior to the completion of this offering.

John Celebi

On January 1, 2021, we entered into an amended and restated executive employment agreement with John Celebi, or the Celebi Employment Agreement, which provides for his continued at will employment as our President and Chief Executive Officer, with no specific term. The Celebi Employment Agreement provides for an annual base salary of $395,000, which amount is subject to review and adjustment from time to time, an annual discretionary bonus of up to 30% of this base salary, the amount of which will be decided in the sole discretion of our board of directors based upon our and Mr. Celebi's achievement of objectives and milestones determined on an annual basis by our board of directors, and reimbursement for reasonable travel expenses for so long as Mr. Celebi's primary residence is in Connecticut, not to exceed $4,000 per month.

In the event of his termination without cause (as such term is defined in the Celebi Employment Agreement) or resignation for good reason (as such term is defined in the Celebi Employment Agreement), Mr. Celebi shall be entitled to (i) salary continuation for the nine month period following such termination, or the Severance Period, provided that such salary continuation will be reduced by 50% of any amounts Mr. Celebi receives as salary from any other entity within the life sciences industry during the Severance Period, (ii) any annual bonus declared but not yet paid, (iii) accelerated vesting of the portion of her time-based equity awards that would have otherwise vested during the nine-month period following the termination and (iv) continuation of medical insurance through the Severance Period at no cost to Mr. Celebi, unless he begins subsequent employment prior to the end of such nine-month period. The foregoing severance benefits are conditioned upon Mr. Celebi's execution of a separation agreement, including a release of claims and compliance with certain restrictive covenants.

In connection with entering into the Celebi Employment Agreement, Mr. Celebi also entered into a standard confidential information and inventions assignment agreement with us, whereby Mr. Celebi agrees to maintain confidentiality regarding any confidential information regarding our company and assigns to us all intellectual property pertaining to our company.

Robert Pierce

On February 9, 2020, we entered into an executive employment agreement with Robert Pierce, or the Pierce Employment Agreement, which provides for his at will employment as our Chief Scientific Officer, with no specific term. The Pierce Employment Agreement provides for an annual base salary of $340,000, which amount

is subject to review and adjustment from time to time, an annual discretionary bonus of up to 30% of this base salary, the amount of which will be decided in the sole discretion of our board of directors based upon our and Dr. Pierce's achievement of objectives and milestones determined on an annual basis by our board of directors, and a one-time bonus in the event that Dr. Pierce is required to repay to Fred Hutchinson Cancer Research Center, or FHCRC, a portion of the home loan forgiveness provided by FHCRC. The Pierce Employment Agreement also provides for relocation expense reimbursement of up to $25,000, a housing stipend and repayment of certain other business-related expenses.

In the event of his termination without cause (as such term is defined in the Pierce Employment Agreement), Dr. Pierce shall be entitled to (i) salary continuation for the Severance Period, (ii) any annual bonus declared but not yet paid, (iii) accelerated vesting of the portion of his time-based equity awards that would have otherwise vested during the six-month period following the termination, (iv) any accrued but unpaid expenses and (v) continuation of medical insurance through the Severance Period at no cost to Dr. Pierce, unless he begins subsequent employment prior to the end of the Severance Period. The foregoing severance benefits are conditioned upon Dr. Pierce's execution of a separation agreement, including a release of claims and compliance with certain restrictive covenants.

In connection with entering into the Pierce Employment Agreement, Dr. Pierce also entered into a standard confidential information and inventions assignment agreement with us, whereby Dr. Pierce agrees to maintain confidentiality regarding any confidential information regarding our company and assigns to us all intellectual property pertaining to our company.

Anupama Hoey

On October 13, 2020, we entered into an employment agreement with Anupama Hoey, or the Hoey Employment Agreement, which provides for her at-will employment as our Chief Business Officer, with no specific term. The Hoey Employment Agreement provides for an annual base salary of $345,000, which amount is subject to review and adjustment from time to time, and an annual discretionary bonus of up to 30% of this base salary, the amount of which will be decided in the sole discretion of our board of directors based upon our and Ms. Hoey's achievement of objectives and milestones determined on an annual basis by our board of directors. The Hoey Employment Agreement also provides for a signing and retention payment of $25,000, which we paid to Ms. Hoey in October 2020, and which is subject to repayment if Ms. Hoey's employment terminates prior to October 14, 2021 other than in the event of her termination without cause or if Ms. Hoey terminates her employment for good reason (as such terms are defined in the Hoey Employment Agreement).

In the event of her termination without cause or if Ms. Hoey terminates her employment for good reason, Ms. Hoey shall be entitled to (i) an amount equal to Ms. Hoey's then current salary for six months, (ii) accelerated vesting of the portion of her time-based equity awards that would have otherwise vested during the six-month period following the termination, (iii) any accrued and unpaid business expenses, and (iv) continuation of medical insurance for six months at no cost to Ms. Hoey, unless she begins subsequent employment prior to the end of such Severance Period. The foregoing severance benefits are conditioned upon Ms. Hoey's execution of a separation agreement, including a release of claims and compliance with certain restrictive covenants.

In connection with entering into the Hoey Employment Agreement, Ms. Hoey also entered into a standard confidential information and inventions assignment agreement with us, whereby Ms. Hoey agrees to maintain confidentiality regarding any confidential information regarding our company and assigns to us all intellectual property pertaining to our company.

Equity-Based Incentive Awards

We believe that equity awards provide our executives with a strong link to our long-term performance, create an ownership culture and help to align the interests of our executives and our stockholders. To date, we

have only used stock option grants for this purpose because we believe they are an effective means by which to align the long-term interests of our executive officers with those of our stockholders. The use of stock options also can provide tax and other advantages to our executive officers relative to other forms of equity compensation. We believe that our equity awards are an important retention tool for our executive officers, as well as for our other employees.

We award stock options broadly to our employees, including to our non-executive employees. Grants to our executives and other employees are made at the discretion of our board of directors and are not made at any specific time period during a year.

Prior to this offering, all of the stock options we have granted were made pursuant to our 2018 Plan. Following this offering, we will grant equity incentive awards under the terms of our 2021 Equity Incentive Plan, or 2021 Plan. The terms of our equity plans are described under the section titled "—Equity Incentive Plans" below.

Outstanding Equity Awards as of December 31, 2020

The following table presents estimated information regarding outstanding equity awards held by our named executive officers as of December 31, 2020. All awards were granted pursuant to the 2018 Plan. See the section titled "—Equity Incentive Plans—2018 Stock Incentive Plan" below for additional information.

	Option Awards			
Name	Number of Securities Underlying Unexercised Options Exercisable	Number of Securities Underlying Unexercised Options Unexercisable	Option Exercise Price	Option Expiration Date
John Celebi	—	26,850,000(1)	$ 0.067	08/04/2030
President and Chief Executive Officer	880,000	400,000(2)	$ 2.56	04/01/2028
Robert Pierce	—	10,000,000(3)	$ 0.067	08/04/2030
Chief Scientific Officer	23,958	1,042(4)	$ 2.56	01/21/2029
Anupama Hoey	—	10,000,000(5)	$ 0.125	12/28/2030
Chief Business Officer				

(1) The unvested shares underlying this option vest as to 25% of the shares on February 15, 2021, with the remainder vesting in 36 equal monthly installments thereafter, subject to the officer's continued service through each applicable vesting date.
(2) The unvested shares underlying this option vest in 15 equal monthly installments until March 1, 2022, subject to the officer's continued service through each applicable vesting date.
(3) The unvested shares underlying this option vest as to 25% of the shares on March 18, 2021, with the remainder vesting in 36 equal monthly installments thereafter, subject to the officer's continued service through each applicable vesting date.
(4) The unvested shares underlying this option vest on January 22, 2021, subject to the officer's continued service through each applicable vesting date.
(5) The unvested shares underlying this option vest as to 25% of the shares on October 14, 2021, with the remainder vesting in 36 equal monthly installments thereafter, subject to the officer's continued service through each applicable vesting date.

Employee Benefit Plans

We believe that our ability to grant equity-based awards is a valuable and necessary compensation tool that aligns the long-term financial interests of our employees, consultants and directors with the financial interests of

our stockholders. In addition, we believe that our ability to grant options and other equity-based awards helps us to attract, retain and motivate employees, consultants and directors, and encourages them to devote their best efforts to our business and financial success. The principal features of our equity incentive plans and our 401(k) plan are summarized below. These summaries are qualified in their entirety by reference to the actual text of the plans, which, other than the 401(k) plan, are filed as exhibits to the registration statement of which this prospectus is a part.

2021 Equity Incentive Plan

Our board of directors adopted our 2021 Plan on and our stockholders approved our 2021 Plan on . Our 2021 Plan provides for the grant of incentive stock options, or ISOs, to employees, including employees of any of our parent or subsidiary corporations, and for the grant of nonstatutory stock options, or NSOs, stock appreciation rights, restricted stock awards, restricted stock unit awards, performance awards and other forms of stock awards to employees, directors, and consultants, including employees and consultants of our affiliates. Our 2021 Plan is a successor to the 2018 Plan, and will become effective on the execution of the underwriting agreement related to this offering.

Authorized Shares. Initially, the maximum number of shares of our common stock that may be issued under our 2021 Plan after it becomes effective will be shares, which is the sum of (i) new shares; plus (ii) the number of shares that remain available for issuance under our 2018 Plan at the time our 2021 Plan becomes effective; and (iii) any shares subject to outstanding stock options or other stock awards that were granted under our 2018 Plan that are forfeited, terminate, expire or are otherwise not issued. In addition, the number of shares of our common stock reserved for issuance under our 2021 Plan will automatically increase on January 1 of each calendar year, starting on January 1, 2022 through January 1, 2031, in an amount equal to % of the total number of shares of our capital stock outstanding on the last day of the calendar month before the date of each automatic increase, or a lesser number of shares determined by our board of directors. The maximum number of shares of our common stock that may be issued on the exercise of ISOs under our 2021 Plan is .

Shares subject to stock awards granted under our 2021 Plan that expire or terminate without being exercised in full, or that are paid out in cash rather than in shares, do not reduce the number of shares available for issuance under our 2021 Plan. Additionally, shares become available for future grant under our 2021 Plan if they were issued pursuant to stock awards granted under our 2021 Plan and we repurchase such shares or they are forfeited. This includes shares used to pay the exercise price of a stock award or to satisfy the tax withholding obligations related to a stock award.

Plan Administration. Our board of directors, or a duly authorized committee of our board of directors, will administer our 2021 Plan. The plan administrator may also delegate to one or more of our officers the authority to (i) designate employees (other than officers) to receive specified stock awards and (ii) determine the number of shares subject to such stock awards. Under our 2021 Plan, the plan administrator has the authority to determine and amend the terms of awards and underlying agreements, including:

- the recipients;
- the exercise, purchase or strike price of stock awards, if any;
- the number of shares subject to stock awards;
- the vesting schedule applicable to stock awards, together with any vesting acceleration; and
- the form of consideration, if any, payable on exercise or settlement of stock awards.

Under the 2021 Plan, the plan administrator also generally has the authority to effect, with the consent of any adversely affected participant:

- the reduction of the exercise, purchase, or strike price of any outstanding stock award;

- the cancellation of any outstanding stock award and the grant in substitution therefore of other stock awards, cash, or other consideration; or
- any other action that is treated as a repricing under generally accepted accounting principles.

Stock Options. ISOs and NSOs are granted under stock option agreements adopted by the plan administrator. The plan administrator determines the exercise price for stock options, within the terms and conditions of the 2021 Plan; provided, that the exercise price of a stock option generally cannot be less than 100% of the fair market value of our common stock on the date of grant. Options granted under the 2021 Plan vest at the rate specified in the stock option agreement as determined by the plan administrator.

Tax Limitations on ISOs. The aggregate fair market value, determined at the time of grant, of our common stock with respect to ISOs that are exercisable for the first time by an optionholder during any calendar year under all of our equity incentive plans may not exceed $100,000. Options or portions thereof that exceed such limit will generally be treated as NSOs. No ISO may be granted to any person who, at the time of the grant, owns or is deemed to own stock possessing more than 10% of our total combined voting power or that of any of our affiliates unless (i) the option exercise price is at least 110% of the fair market value of the stock subject to the option on the date of grant; and (ii) the option is not exercisable after the expiration of five years from the date of grant.

Restricted Stock Unit Awards. Restricted stock units are granted under restricted stock unit award agreements adopted by the plan administrator. Restricted stock units may be granted in consideration for any form of legal consideration that may be acceptable to our board of directors and permissible under applicable law. A restricted stock unit may be settled by cash, delivery of stock, a combination of cash and stock as deemed appropriate by the plan administrator, or in any other form of consideration set forth in the restricted stock unit agreement. Additionally, dividend equivalents may be credited in respect of shares covered by a restricted stock unit. Except as otherwise provided in the applicable award agreement, restricted stock units that have not vested will be forfeited once the participant's continuous service ends for any reason.

Restricted Stock Awards. Restricted stock awards are granted under restricted stock award agreements adopted by the plan administrator. A restricted stock award may be awarded in consideration for cash, check, bank draft or money order, past services to us, or any other form of legal consideration that may be acceptable to our board of directors and permissible under applicable law. The plan administrator determines the terms and conditions of restricted stock awards, including vesting and forfeiture terms. If a participant's service relationship with us ends for any reason, we may receive any or all of the shares of common stock held by the participant that have not vested as of the date the participant terminates service with us through a forfeiture condition or a repurchase right.

Stock Appreciation Rights. Stock appreciation rights are granted under stock appreciation grant agreements adopted by the plan administrator. The plan administrator determines the purchase price or strike price for a stock appreciation right, which generally cannot be less than 100% of the fair market value of our common stock on the date of grant. A stock appreciation right granted under the 2021 Plan vests at the rate specified in the stock appreciation right agreement as determined by the plan administrator.

Performance Awards. The 2021 Plan permits the grant of performance-based stock and cash awards. The plan administrator may structure awards so that the shares of our stock, cash, or other property will be issued or paid only following the achievement of certain pre-established performance goals during a designated performance period. The performance criteria that will be used to establish such performance goals may be based on any measure of performance selected by the plan administrator. The performance goals may be based on a company-wide basis, with respect to one or more business units, divisions, affiliates, or business segments, and in either absolute terms or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. Unless specified otherwise (i) in the award agreement at the time the award is

granted or (ii) in such other document setting forth the performance goals at the time the goals are established, we will appropriately make adjustments in the method of calculating the attainment of performance goals as follows: (1) to exclude restructuring and/or other nonrecurring charges; (2) to exclude exchange rate effects; (3) to exclude the effects of changes to generally accepted accounting principles; (4) to exclude the effects of any statutory adjustments to corporate tax rates; (5) to exclude the effects of items that are "unusual" in nature or occur "infrequently" as determined under generally accepted accounting principles; (6) to exclude the dilutive effects of acquisitions or joint ventures; (7) to assume that any business divested by us achieved performance objectives at targeted levels during the balance of a performance period following such divestiture; (8) to exclude the effect of any change in the outstanding shares of our common stock by reason of any stock dividend or split, stock repurchase, reorganization, recapitalization, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to common stockholders other than regular cash dividends; (9) to exclude the effects of stock based compensation and the award of bonuses under our bonus plans; (10) to exclude costs incurred in connection with potential acquisitions or divestitures that are required to be expensed under generally accepted accounting principles; (11) to exclude the goodwill and intangible asset impairment charges that are required to be recorded under generally accepted accounting principles; and (12) to exclude the effects of the timing of acceptance for review and/or approval of submissions to the FDA or any other regulatory body. In addition, we retain the discretion to reduce or eliminate the compensation or economic benefit due upon attainment of the goals. The performance goals may differ from participant to participant and from award to award.

Other Stock Awards. The plan administrator may grant other awards based in whole or in part by reference to our common stock. The plan administrator will set the number of shares under the stock award and all other terms and conditions of such awards.

Non-Employee Director Compensation Limit. The aggregate value of all compensation granted or paid to any non-employee director with respect to any calendar year, including stock awards granted and cash fees paid by us to such non-employee director, will not exceed $ in total value, or in the event such non-employee director is first appointed or elected to the board during such annual period, $ in total value (in each case, calculating the value of any such stock awards based on the grant date fair value of such stock awards for financial reporting purposes).

Changes to Capital Structure. In the event there is a specified type of change in our capital structure, such as a stock split, reverse stock split, or recapitalization, appropriate adjustments will be made to (1) the class and maximum number of shares reserved for issuance under the 2021 Plan, (2) the class and maximum number of shares by which the share reserve may increase automatically each year, (3) the class and maximum number of shares that may be issued on the exercise of incentive stock options, and (4) the class and number of shares and exercise price, strike price, or purchase price, if applicable, of all outstanding stock awards.

Corporate Transactions. The following applies to stock awards under the 2021 Plan in the event of a corporate transaction, unless otherwise provided in a participant's stock award agreement or other written agreement with us or one of our affiliates or unless otherwise expressly provided by the plan administrator at the time of grant. In the event of a corporate transaction, any stock awards outstanding under the 2021 Plan may be assumed, continued or substituted for by any surviving or acquiring corporation (or its parent company), and any reacquisition or repurchase rights held by us with respect to the stock award may be assigned to the successor (or its parent company). If the surviving or acquiring corporation (or its parent company) does not assume, continue or substitute for such stock awards, then with respect to any such stock awards that are held by participants whose continuous service has not terminated prior to the effective time of the transaction, or current participants, the vesting (and exercisability, if applicable) of such stock awards will be accelerated in full to a date prior to the effective time of the transaction (contingent upon the effectiveness of the transaction), and such stock awards will terminate if not exercised (if applicable) at or prior to the effective time of the transaction, and any reacquisition or repurchase rights held by us with respect to such stock awards will lapse (contingent upon the effectiveness of the transaction). With respect to performance awards with multiple vesting levels depending on

performance level, unless otherwise provided by an award agreement or by the administrator, the award will accelerate at 100% of target. If the surviving or acquiring corporation (or its parent company) does not assume, continue or substitute for such stock awards, then with respect to any such stock awards that are held by persons other than current participants, such awards will terminate if not exercised (if applicable) prior to the effective time of the transaction, except that any reacquisition or repurchase rights held by us with respect to such stock awards will not terminate and may continue to be exercised notwithstanding the transaction. The plan administrator is not obligated to treat all stock awards or portions of stock awards in the same manner and is not obligated to take the same actions with respect to all participants. In the event a stock award will terminate if not exercised prior to the effective time of a transaction, the plan administrator may provide, in its sole discretion, that the holder of such stock award may not exercise such stock award but instead will receive a payment equal in value to the excess (if any) of (i) the value of the property the participant would have received upon the exercise of the stock award over (ii) any exercise price payable by such holder in connection with such exercise.

Under our 2021 Plan, a corporate transaction is defined to include: (i) a sale of all or substantially all of our assets, (ii) the sale or disposition of more than 50% of our outstanding securities, (iii) the consummation of a merger or consolidation where we do not survive the transaction, and (iv) the consummation of a merger or consolidation where we do survive the transaction but the shares of our common stock outstanding before such transaction are converted or exchanged into other property by virtue of the transaction, unless otherwise provided in an award agreement or other written agreement between us and the award holder.

Change in Control. In the event of a change in control, as defined under our 2021 Plan, awards granted under our 2021 Plan will not receive automatic acceleration of vesting and exercisability, although this treatment may be provided for in an award agreement.

Under the 2021 Plan, a change in control is defined to include (i) the acquisition by any person or company of more than 50% of the combined voting power of our then outstanding stock; (ii) a merger, consolidation or similar transaction in which our stockholders immediately before the transaction do not own, directly or indirectly, more than 50% of the combined voting power of the surviving entity (or the parent of the surviving entity); (iii) the approval by our stockholders or our board of directors of a plan of complete dissolution or liquidation of the company, or the occurrence of a complete dissolution or liquidation of the company, except for a liquidation into a parent corporation; (iv) a sale, lease, exclusive license or other disposition of all or substantially all of our assets other than to an entity more than 50% of the combined voting power of which is owned by our stockholders; and (v) an unapproved change in the majority of our board of directors.

Transferability. A participant may not transfer stock awards under our 2021 Plan other than by will, the laws of descent and distribution, or as otherwise provided under our 2021 Plan.

Plan Amendment or Termination. Our board of directors has the authority to amend, suspend, or terminate our 2021 Plan; provided, that such action does not materially impair the existing rights of any participant without such participant's written consent. Certain material amendments also require the approval of our stockholders. No ISOs may be granted after the tenth anniversary of the date our board of directors adopted our 2021 Plan. No stock awards may be granted under our 2021 Plan while it is suspended or after it is terminated.

2021 Employee Stock Purchase Plan

Our board of directors adopted, and our stockholders approved, our 2021 Employee Stock Purchase Plan, or the ESPP, in . The ESPP will become effective on the execution of the underwriting agreement related to this offering. The purpose of the ESPP is to secure the services of new employees, to retain the services of existing employees, and to provide incentives for such individuals to exert maximum efforts toward our success and that of our affiliates. The ESPP is intended to qualify as an "employee stock purchase plan" within the meaning of Section 423 of the Code for U.S. employees.

Share Reserve. Following this offering, the ESPP authorizes the issuance of shares of our common stock under purchase rights granted to our employees or to employees of any of our designated affiliates. The number of shares of our common stock reserved for issuance will automatically increase on January 1 of each calendar year, beginning on January 1, 2022 through January 1, 2031, by the lesser of (i) % of the total number of shares of our common stock outstanding on the last day of the calendar month before the date of the automatic increase; and (ii) shares; provided that before the date of any such increase, our board of directors may determine that such increase will be less than the amount set forth in clauses (i) and (ii). As of the date hereof, no shares of our common stock have been purchased under the ESPP.

Administration. Our board of directors has delegated its authority to administer the ESPP to our compensation committee. The ESPP is implemented through a series of offerings under which eligible employees are granted purchase rights to purchase shares of our common stock on specified dates during such offerings. Under the ESPP, we may specify offerings with durations of not more than 27 months, and may specify shorter purchase periods within each offering. Each offering will have one or more purchase dates on which shares of our common stock will be purchased for employees participating in the offering.

Payroll Deductions. Generally, all regular employees, including executive officers, employed by us or by any of our designated affiliates, may participate in the ESPP and may contribute, normally through payroll deductions, up to % of their earnings (as defined in the ESPP) for the purchase of our common stock under the ESPP. Unless otherwise determined by our board of directors, common stock will be purchased for the accounts of employees participating in the ESPP at a price per share that is at least the lesser of (i) 85% of the fair market value of a share of our common stock on the first date of an offering; or (ii) 85% of the fair market value of a share of our common stock on the date of purchase. For the initial offering, which we expect will commence on the execution and delivery of the underwriting agreement relating to this offering, the fair market value on the first day of the offering period will be the price at which shares of common stock are first sold to the public.

Limitations. Employees may have to satisfy one or more of the following service requirements before participating in the ESPP, as determined by our board of directors, including: (i) being customarily employed for more than 20 hours per week; (ii) being customarily employed for more than five months per calendar year; or (iii) continuous employment with us or one of our affiliates for a period of time (not to exceed two years). No employee may purchase shares under the ESPP at a rate in excess of $25,000 worth of our common stock based on the fair market value per share of our common stock at the beginning of an offering for each year such a purchase right is outstanding. Finally, no employee will be eligible for the grant of any purchase rights under the ESPP if immediately after such rights are granted, such employee has voting power over 5% or more of our outstanding capital stock measured by vote or value under Section 424(d) of the Code.

Changes to Capital Structure. In the event that there occurs a change in our capital structure through such actions as a stock split, merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, liquidating dividend, combination of shares, exchange of shares, change in corporate structure, or similar transaction, the board of directors will make appropriate adjustments to: (i) the number of shares reserved under the ESPP; (ii) the maximum number of shares by which the share reserve may increase automatically each year; (iii) the number of shares and purchase price of all outstanding purchase rights; and (iv) the number of shares that are subject to purchase limits under ongoing offerings.

Corporate Transactions. In the event of certain significant corporate transactions, including: (i) a sale of all or substantially all of our assets; (ii) the sale or disposition of 90% of our outstanding securities; (iii) the consummation of a merger or consolidation where we do not survive the transaction; and (iv) the consummation of a merger or consolidation where we do survive the transaction but the shares of our common stock outstanding immediately before such transaction are converted or exchanged into other property by virtue of the transaction, any then-outstanding rights to purchase our stock under the ESPP may be assumed, continued or substituted for by any surviving or acquiring entity (or its parent company). If the surviving or acquiring entity (or its parent

company) elects not to assume, continue, or substitute for such purchase rights, then the participants' accumulated payroll contributions will be used to purchase shares of our common stock within ten business days before such corporate transaction, and such purchase rights will terminate immediately.

Amendment or Termination. Our board of directors has the authority to amend or terminate our ESPP, provided that except in certain circumstances such amendment or termination may not materially impair any outstanding purchase rights without the holder's consent. We will obtain stockholder approval of any amendment to our ESPP as required by applicable law or listing requirements.

2018 Stock Incentive Plan

Our board of directors and our stockholders approved the 2018 Plan, which became effective in March 26, 2018. The 2018 Plan provides for the grant of ISOs to our employees and our parent and subsidiary corporations' employees, and for the grant of NSOs, restricted stock awards and other forms of stock compensation to our employees, including officers, consultants and directors.

Authorized Shares. As of September 30, 2020, a total of 89,507,783 shares of our common stock were reserved for issuance under the 2018 Plan. As of September 30, 2020, 79,722,731 shares of our common stock were subject to outstanding option awards and 9,558,338 shares of our common stock remained available for future issuance. Following the effectiveness of the 2021 Plan, no additional awards will be granted under the 2018 Plan. Any outstanding awards granted under our 2018 Plan will remain subject to the terms of our 2018 Plan and applicable award agreements.

Administration. Our board of directors or a duly authorized committee of our board of directors administers the 2018 Plan and the stock awards granted under it. Under the 2018 Plan, the administrator has the authority to: (i) construe and interpret the 2018 Plan and any agreement thereunder; (ii) to determine the fair market value of our common stock; (iii) to select award recipients; (iv) to determine whether an option will be an ISO or an NSO; (v) to determine the number of shares subject to awards; (vi) to establish the terms and conditions of the awards; (vii) to amend, cancel, accept the surrender of, or modify any award; (viii) to accelerate the vesting of or terminate the restrictions of an award; (ix) to amend the terms of an award agreement, as required by the Internal Revenue Code of 1986, as amended, or the Code, or with the consent as the participant, as applicable; and (x) to establish policies and procedures for the exercise of awards.

Stock Options. ISOs and NSOs are granted pursuant to award agreements adopted by the plan administrator. The plan administrator determines the exercise price for a stock option, within the terms and conditions of the 2018 Plan; provided, that the exercise price of an ISO generally cannot be less than 100% (or 110% in the case of ISOs granted to certain stockholders) of the fair market value of our common stock on the date of grant. Options granted under the 2018 Plan vest at the rate specified by the plan administrator. Payment for the purchase of common stock issued upon the exercise of an option may be made (i) in cash; (ii) by good check payable to the Company or electronic funds transfer of immediately available funds to the Company; or (iii) in accordance with the terms of the applicable award agreement. The plan administrator determines the term of stock options granted under the 2018 Plan, up to a maximum of 10 years in the case of ISOs (or five years in the case of ISOs granted to certain stockholders).

Changes in Capital Structure. In the event there is a specified type of change in our capital structure, such as a stock dividend, division, combination, reclassification or similar change in the capital structure of the Company, appropriate adjustments will be made to (i) the number of shares authorized or reserved for issuance under the 2018 Plan; and (ii) the exercise prices of and number of shares subject to outstanding awards under the 2018 Plan.

Transferability. A participant may not transfer stock awards under our 2018 Plan other than by will, the laws of descent and distribution, or as otherwise provided under our 2018 Plan or an award granted thereunder.

Plan Amendment or Termination. Our board of directors may terminate, amend or modify the 2018 Plan; provided, that no amendment of the 2018 Plan may adversely affect any outstanding stock award.

Nonqualified Deferred Compensation

Our named executive officers did not participate in, or earn any benefits under, a nonqualified deferred compensation plan sponsored by us during fiscal 2020.

Termination or Change in Control Benefits

Our named executive officers may become entitled to certain benefits in connection with a qualifying termination. Each of our named executive officers' employment agreements entitles them to certain benefits, upon a qualifying termination. For additional discussion, please see "Employment Agreements with our Named Executive Officers."

Health and Welfare; Perquisites

All of our current named executive officers are eligible to participate in our employee benefit plans, including our medical, dental, vision, disability and life insurance plans, in each case on the same basis as all of our other employees. We generally do not provide perquisites or personal benefits to our named executive officers, except in limited circumstances (including Mr. Celebi's housing and vehicle allowances and Dr. Pierce's housing allowance).

401(k) Plan

We maintain a safe harbor 401(k) plan that provides eligible U.S. employees with an opportunity to save for retirement on a tax advantaged basis. Eligible employees are able to defer eligible compensation up to certain limits of the Code, which are updated annually. We have the ability to make matching and discretionary contributions to the 401(k) plan. Currently, make matching contributions or discretionary contributions to the 401(k) plan up to a maximum of 4% of such employee's annual compensation. The 401(k) plan is intended to be qualified under Section 401(a) of the Code, with the related trust intended to be tax exempt under Section 501(a) of the Code. As a tax-qualified retirement plan, contributions to the 401(k) plan are deductible by us when made, and contributions and earnings on those amounts are not generally taxable to the employees until withdrawn or distributed from the 401(k) plan.

Limitations of Liability and Indemnification Matters

On the completion of this offering, our amended and restated certificate of incorporation will contain provisions that limit the liability of our current and former directors for monetary damages to the fullest extent permitted by Delaware law. Delaware law provides that directors of a corporation will not be personally liable for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director's duty of loyalty to the corporation or its stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions; or
- any transaction from which the director derived an improper personal benefit.

Such limitation of liability does not apply to liabilities arising under federal securities laws and does not affect the availability of equitable remedies such as injunctive relief or rescission.

Our amended and restated certificate of incorporation that will be in effect on the completion of this offering will authorize us to indemnify our directors, officers, employees and other agents to the fullest extent permitted by Delaware law. Our amended and restated bylaws that will be in effect on the completion of this offering will provide that we are required to indemnify our directors and officers to the fullest extent permitted by Delaware law and may indemnify our other employees and agents. Our amended and restated bylaws that will be in effect on the completion of this offering will also provide that, on satisfaction of certain conditions, we will advance expenses incurred by a director or officer in advance of the final disposition of any action or proceeding, and permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in that capacity regardless of whether we would otherwise be permitted to indemnify him or her under the provisions of Delaware law. We have entered and expect to continue to enter into agreements to indemnify our directors, executive officers and other employees as determined by the board of directors. With certain exceptions, these agreements provide for indemnification for related expenses including attorneys' fees, judgments, fines and settlement amounts incurred by any of these individuals in any action or proceeding. We believe that these amended and restated certificate of incorporation and amended and restated bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers. We also maintain customary directors' and officers' liability insurance.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against our directors for breach of their fiduciary duty. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions.

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, or the Securities Act, may be permitted for directors, executive officers or persons controlling us, we have been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Other than compensation arrangements for our directors and executive officers, which are described elsewhere in this prospectus, below we describe transactions since January 1, 2018 to which we were a party or will be a party, in which:

- the amounts involved exceeded or will exceed $120,000; and
- any of our directors, executive officers or holders of more than 5% of our voting securities, or any member of the immediate family of, or person sharing the household with, the foregoing persons, had or will have a direct or indirect material interest.

Series BB Convertible Preferred Stock Financing

From December 2020 through January 2021, we issued an aggregate of 165,956,208 shares of our Series BB convertible preferred stock at a purchase price of $0.207383 per share for an aggregate gross proceeds of $34.4 million in cash. The following table summarizes purchases of convertible preferred stock by holders of more than five percent of our voting securities and their affiliated entities, our directors and our executive officers.

Name	Series BB Preferred Stock(1)
Cambrian BioPharma, Inc.	4,821,996
Entities affiliated with Future Ventures	8,679,592
Entities affiliated with Presight Capital	28,931,976
Ricks Family Trust	3,037,849

(1) Upon the closing of this offering, each share of our Series BB preferred stock will convert into one share of common stock.

Series AA Convertible Preferred Stock and Warrant Financing

From January 2020 through the date of this prospectus, we issued an aggregate of 747,683,172 shares of our Series AA convertible preferred stock to a total of 128 accredited investors at a price per share of $0.082135 per share. We received aggregate gross proceeds of $26.1 million for the sale of 317,608,273 shares of Series AA convertible preferred stock. The redemption of convertible notes resulted in the issuance of 219,764,874 shares of Series AA convertible preferred stock. In exchange for our convertible preferred stock series A through F, including cumulative and unpaid dividends, we issued 210,310,025 shares of Series AA convertible preferred stock as part of the Recapitalization. In connection with the issuance or our Series AA convertible preferred stock, (1) the principal and accrued interest under the Secured Note, the Existing Stockholder Notes and the Existing Bridge Note described below under the heading "—Convertible Note and Warrant Financings" converted into an aggregate of shares of our Series AA convertible preferred stock, (2) we issued warrants to purchase an aggregate of shares of our common stock, (3) accrued and unpaid dividends payable to holders of our convertible preferred stock, and (4) immediately prior to the issuance of our Series AA convertible preferred stock, all shares of convertible preferred stock then outstanding were converted into shares of our common stock. In connection with the issuance of our Series AA convertible preferred stock, certain purchasers of Series AA convertible preferred stock were entitled to convert certain shares of common stock held by such purchaser into shares of Series AA convertible preferred stock. The following table summarizes purchases of convertible preferred stock by holders of more than five percent of our voting securities and their affiliated entities, our directors and our executive officers, as well as the number of shares of common stock such persons received upon conversion of shares of our then-outstanding convertible preferred stock.

Name	Series AA Convertible Preferred Stock(1)	Shares of Common Stock
Cambrian BioPharma, Inc.	110,729,827(2)	0
Entities affiliated with Future Ventures	66,962,926	0
H&S Investments I, L.P.	209,380,490	1,679,939
Entities affiliated with Presight Capital	61,149,082	0

(1) Immediately prior to the closing of this offering, each share of our Series AA convertible preferred stock will convert into one share of common stock. For a description of the material rights and privileges of the convertible preferred stock, see Note 8 to our audited consolidated financial statements included elsewhere in this prospectus.
(2) Includes shares acquired upon exercise of warrants in January 2021 issued in connection with the financing.

Convertible Note and Warrant Financings

Transferred Note

In March 2020, Cambrian BioPharma, Inc., or Cambrian, purchased an outstanding convertible promissory note issued by us to a prior investor and, as a result, we issued a replacement convertible promissory note, or the Transferred Note, to Cambrian in the principal amount of $1.0 million.

In November 2020, Cambrian converted the Transferred Note into 31,591,824 shares of our Series AA convertible preferred stock.

Existing Bridge Note

In November 2019, we issued an unsecured convertible promissory note, or the Existing Bridge Note, to Cambrian, in a principal amount of $1.0 million. The Existing Bridge Note converted into shares of our Series AA convertible preferred stock in the Series AA convertible preferred stock and warrant financing described above.

Secured Note

In September 2019, we issued a secured convertible promissory note, or the Secured Note, to H&S Investments I, L.P., or H&S, in a principal amount of up to a maximum of $3.0 million to be paid in installments. Pursuant to the terms of the Secured Note, H&S paid two installments, equal to an aggregate principal amount of $1.5 million. Prior to the payment of all required installments, the Secured Note converted into shares of our Series AA convertible preferred stock in the Series AA convertible preferred stock and warrant financing described above.

In connection with the issuance of the Secured Note, we entered into a Security Agreement with H&S, providing for a security interest in all of our (1) goods and equipment, (2) inventory, (3) contract rights and general intangibles, (4) accounts, accounts receivable, royalties, license rights and all other forms of obligation arising out of the sale or leads or good, the licensing of technology or the rendering of services, (4) commercial tort claims, (5) documents, cash, deposit accounts, securities, investment property, letters of credit, certificates of deposit, instruments, chattel paper and supporting obligation, (6) all patents and patent application, and (7) any claims, rights and interests in any of the aforementioned property.

Existing Stockholder Notes and Warrants

From December 2018 to November 2019, we issued unsecured convertible promissory notes, or collectively, the Existing Stockholder Notes, to certain of our existing stockholders in an aggregate principal amount of $11.4 million. In connection with the issuance of the Existing Stockholder Notes, we issued warrants to purchase an aggregate of 1,287,824 shares of our common stock to the holders of the Existing Stockholder Notes. The following table summarizes purchases of our Existing Stockholder Notes and the issuance of the related warrants to purchase common stock by our directors, executive officers and holders of more than 5% of any class of our capital stock:

Name	Principal Amount of Existing Stockholder Notes	Warrants to Purchase Common Stock
H&S Investments I, L.P.	$ 3,000,000	750,000
Ricks Family Trust	$ 375,000	69,963

The Existing Stockholder Notes converted into shares of our Series AA convertible preferred stock in the Series AA convertible preferred stock and warrant financing described above.

Investors' Rights Agreement

We are party to an investors' rights agreement, or IRA with certain holders of our convertible preferred stock, including our 5% stockholders and their affiliates. The IRA provides these stockholders with certain registration rights, including the right to demand that we file a registration statement or request that their shares be covered by a registration statement that we are otherwise filing, and also the right to obligate us to an agreement to provide for additional rights to demand that we file a registration statement or request that their shares be covered by a registration statement that we have filed and maintain as effective. The IRA also provides these stockholders with information rights, which will terminate immediately before consummation of this offering. In connection with this offering, the holders of shares of our common stock issuable on conversion of outstanding shares of our convertible preferred stock, will be entitled to rights with respect to the registration of their shares of common stock under the Securities Act under this agreement.

For a description of these registration rights, see the section titled "Description of Capital Stock—Registration Rights."

Business Combination

In May 2020, we entered into a Stock Purchase Agreement to purchase 100% of the shares of Alvaxa. Dr. Pierce, the Company's Chief Scientific Officer, and his spouse together held a majority of the shares of Alvaxa. Under the Stock Purchase Agreement, we paid an aggregate of $0.2 million and issued 14,610,093 shares of our common stock to the shareholders of Alvaxa. Dr. Pierce and his spouse collectively received $65,000 and 8,125,737 shares of our common stock in connection with the acquisition.

Indemnification Agreements

Our amended and restated certificate of incorporation that will be in effect on the completion of this offering will contain provisions limiting the liability of directors, and our amended and restated bylaws that will be in effect on the completion of this offering will provide that we will indemnify each of our directors and officers to the fullest extent permitted under Delaware law. Our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect on the completion of this offering will also provide our board of directors with discretion to indemnify our employees and other agents when determined appropriate by the board. In addition, we have entered into an indemnification agreement with each of our directors and executive officers, which requires us to indemnify them. For more information regarding these agreements, see the section titled "Executive Compensation —Limitations of Liability and Indemnification Matters."

Policies and Procedures for Related Person Transactions

Our board of directors will adopt written related person transaction policy, to be effective upon the completion of this offering, setting forth the policies and procedures for the review and approval or ratification of related-person transactions. This policy will cover, with certain exceptions set forth in Item 404 of Regulation S-K under the Securities Act, any transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships in which we were or are to be a participant, where the amount involved exceeds $120,000 and a related person had or will have a direct or indirect material interest, including, without limitation, purchases of goods or services by or from the related person or entities in which the related person has a material interest, indebtedness, guarantees of indebtedness and employment by us of a related person. In reviewing and approving any such transactions, our audit committee is tasked to consider all relevant facts and circumstances, including whether the transaction is on terms comparable to those that could be obtained in an arm's length transaction and the extent of the related person's interest in the transaction. All of the transactions described in this section occurred prior to the adoption of this policy.

PRINCIPAL STOCKHOLDERS

The following table sets forth information with respect to the beneficial ownership of our common stock as of January 14, 2020 by:

- each of our named executive officers;
- each of our directors;
- all of our executive officers and directors as a group; and
- each person or group of affiliated persons known by us to beneficially own more than 5% of our common stock.

We have determined beneficial ownership in accordance with the rules and regulations of the SEC, and the information is not necessarily indicative of beneficial ownership for any other purpose. Applicable percentage ownership is based on 1,082,802,314 shares of common stock outstanding as of January 14, 2020, after giving effect to the automatic conversion of shares of our convertible preferred stock outstanding as of January 14, 2021 into an aggregate of 913,639,380 shares of our common stock immediately prior to the closing of this offering. In computing the number of shares beneficially owned by an individual or entity and the percentage ownership of that person, shares of common stock subject to options and warrants held by such person that are currently exercisable or will become exercisable within 60 days of January 14, 2020 are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person. The following table does not give effect to any shares that may be acquired by our stockholders, directors or executive officers pursuant to the directed share program.

Unless otherwise indicated, the address of each beneficial owner listed below is c/o Sensei Biotherapeutics, Inc., 1405 Research Blvd, Suite 125, Rockville, MD 20850. We believe, based on information provided to us, that each of the stockholders listed below has sole voting and investment power with respect to the shares beneficially owned by the stockholder unless noted otherwise, subject to community property laws where applicable.

Name of Beneficial Owner	Number Shares Beneficially Owned Prior to Offering	Percentage of Shares Beneficially Owned	
		Before Offering	After Offering
Greater than 5% Stockholders			
Cambrian BioPharma Inc.(1)	225,556,979	20.8	
Future Ventures, L.P.(2)	76,860,025	7.1	
H&S Investments I, L.P.(3)	213,198,133	19.7	
Presight Sensei Co-Invest Fund, L.P.(4)	68,261,989	6.3	
Directors and Named Executive Officers			
John Celebi(5)	8,231,875	*	
Robert Pierce, M.D.(6)	3,551,263	*	
Anupama Hoey	—	*	
Bob Holmen(7)	1,348,375	*	
James Peyer, Ph.D.(1)	225,556,979	20.8	
Samuel Broder, M.D.(8)	444,458	*	
Thomas Ricks(9)	15,044,426	1.4	
All directors and executive officers as a group (9 persons)	254,177,376	23.3	

* Represents beneficial ownership of less than 1%.

(1) Consists of 109,575,698 shares of common stock, 110,729,827 shares of Series AA convertible preferred stock, 4,821,996 shares of Series BB convertible preferred stock and 429,458 shares issuable pursuant to

stock options exercisable within 60 days following January 14, 2021 held by Cambrian Biopharma Inc, or Cambrian. Cambrian is a Delaware corporation and Mr. Peyer serves as Cambrian's Chief Executive Officer. In such capacity Mr. Peyer may direct the voting and disposition of the shares held by Cambrian, subject in certain instances to the approval of Cambrian's Board of Directors. Cambrian's business address is 19 Morris Avenue, Brooklyn Navy Yard, Building 128, Brooklyn, New York 11025.

(2) Consists of 1,168,807 shares of common stock, 62,945,151 shares of Series AA convertible preferred stock and 8,161,917 shares of Series BB convertible preferred stock held by Future Ventures, L.P., and 48,700 shares of common stock, 4,017,775 shares of Series AA convertible preferred stock and 517,675 shares of Series BB convertible preferred stock held by Future Ventures Side Fund, L.P. The shares directly held by Future Ventures L.P. and Future Ventures Side Fund, L.P. are indirectly held by Future Ventures GP, LLC, the general partner of Future Ventures, L.P. and Future Ventures Side Fund, L.P. The managing members of Future Ventures GP, LLC are Maryanna Saenko and Steve Jurvetson. Future Ventures GP, LLC, Maryanna Saenko and Steve Jurvetson may be deemed to have voting and dispositive power with respect to the shares held by Future Ventures, L.P. and Future Ventures Side Fund, L.P. The principal business address of Future Ventures, L.P. and Future Ventures Side Fund, L.P. is 465 1st Street, Los Altos, California 94022.

(3) Consists of 3,079,888 shares of common stock, 209,368,245 shares of Series AA convertible preferred stock and warrants exercisable for 750,000 shares of common stock held by H&S Investments I, L.P. H&S Ventures, LLC, its general partner, and Michael Schulman, manager of H&S Ventures, may be deemed to have voting and dispositive power with respect to the shares held. The principal business address of H&S Investments I, L.P. is 2101 E Coast Highway 3rd Floor Corona Del Mar, CA 92625.

(4) Consists of 45,875,448 shares of our Series AA convertible preferred stock held by Presight Sensei Co-Invest Fund, L.P., or Presight Co-Invest, 3,098,557 shares of our Series AA convertible preferred stock held by Apeiron Investment Group, Ltd., or Apeiron, and 19,287,984 shares of our Series BB convertible preferred stock held by Apeiron. The general partner of Presight Co-Invest is Presight Sensei Co-Invest Management, L.L.C., or Presight Co-Invest Management, which is wholly owned by Apeiron. As a result, each of Apeiron and Presight Co-Invest Management may be deemed to share beneficial ownership of the securities held by Presight Co-Invest. Christian Angermayer is the majority shareholder of Apeiron and may be deemed to share beneficial ownership of the securities beneficially owned by Apeiron. The business address for (i) Presight Co-Invest and Presight Co-Invest Management is 340 South Lemon Avenue #3391 Walnut, CA 91789 and (ii) Apeiron and Christian Angermayer is Block A, Apt.12, Il-Piazzetta, Tower Road, SLM1605, Sliema, Malta.

(5) Consists of shares issuable pursuant to stock options exercisable within 60 days following January 14, 2021.

(6) Consists of 3,526,263 shares of common stock and 25,000 shares issuable pursuant to stock options exercisable within 60 days following January 14, 2021.

(7) Consists of 800,000 shares of common stock and 548,375 shares issuable pursuant to stock options exercisable within 60 days following January 14, 2021

(8) Consists of shares issuable pursuant to stock options exercisable within 60 days following January 14, 2021.

(9) Consists of 11,447,156 shares of our Series AA convertible preferred stock, 3,037,849 shares of our Series BB convertible preferred stock and a warrant to purchase 69,963 shares of our common stock held by Ricks Family Trust, and 489,458 shares issuable pursuant to stock options exercisable within 60 days following January 14, 2021 held by Thomas Ricks. Thomas Ricks is a trustee of the Ricks Family Trust and accordingly may be deemed to have voting and dispositive power with respect to the shares held by Ricks Family Trust.

DESCRIPTION OF CAPITAL STOCK

General

Following the completion of this offering, our authorized capital stock will consist of shares of common stock, $0.0001 par value per share, and shares of preferred stock, $0.0001 par value per share, all of which shares of preferred stock will be undesignated. Our board of directors may establish the rights and preferences of the preferred stock from time to time. As of September 30, 2020, we had outstanding 85,786,348 shares of common stock, held by stockholders of record. As of September 30, 2020, after giving effect to the automatic conversion of all of the outstanding shares of our convertible preferred stock (including the 283,047,271 shares of our convertible preferred stock issued subsequent to September 30, 2020) into 913,639,380 shares of common stock, there would have been 999,425,728 shares of common stock issued and outstanding, held by stockholders of record.

The following is a summary of the rights of our common stock and preferred stock and some of the provisions of our amended and restated certificate of incorporation and amended and restated bylaws, which will each become effective upon the closing of this offering, the investors' rights agreement and relevant provisions of Delaware General Corporation Law. Because it is only a summary, it does not contain all the information that may be important to you. For a complete description you should refer to our amended and restated certificate of incorporation, amended and restated bylaws and investors' rights agreement, copies of which have been filed as exhibits to the registration statement of which this prospectus is a part, as well as the relevant provisions of Delaware General Corporation Law.

Common Stock

Holders of our common stock are entitled to one vote per share of common stock. Our common stock does not have cumulative voting rights. Accordingly, the holders of a majority of the outstanding shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they so choose, other than any directors that holders of any preferred stock we may issue may be entitled to elect. Subject to preferences that may be applicable to any then outstanding preferred stock, holders of our common stock are entitled to receive ratably those dividends, if any, as may be declared by the board of directors out of legally available funds. In the event of our liquidation, dissolution or winding up, the holders of our common stock will be entitled to share ratably in the assets legally available for distribution to stockholders after the payment of or provision for all of our debts and other liabilities, subject to the prior rights of any preferred stock then outstanding. Holders of our common stock have no preemptive rights or other subscription rights and there are no redemption or sinking funds provisions applicable to our common stock. All outstanding shares of our common stock are, and the common stock to be outstanding upon the completion of this offering will be, duly authorized, validly issued, fully paid and nonassessable. The rights, preferences and privileges of holders of our common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

Preferred Stock

As of January 14, 2021, there were 747,683,172 shares of our Series AA convertible preferred stock outstanding and 165,956,208 shares of our Series BB convertible preferred stock outstanding. Immediately prior to the closing of this offering, all of our previously outstanding shares of convertible convertible preferred stock will have been converted into common stock, there will be no authorized shares of our previously convertible preferred stock and we will have no shares of convertible preferred stock outstanding. Under the terms of our amended and restated certificate of incorporation, which will become effective immediately prior to the closing of this offering, our board of directors has the authority, without further action by our stockholders, to issue up to shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the dividend, voting and other rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in our control and may adversely affect the market price of the common stock and the voting and other rights of the holders of common stock. We have no current plans to issue any shares of preferred stock.

Options

As of September 30, 2020, options to purchase 79,722,731 of our common stock were outstanding under our 2018 Stock Incentive Plan, as amended, of which were vested and exercisable as of that date.

Warrants

As of September 30, 2020, 22,545,202 shares of our common stock were issuable upon the exercise of outstanding warrants, with a weighted average exercise price of $0.20 per share.

Registration Rights

We are party to an investors' rights agreement that provides that certain holders of our convertible preferred stock, including certain holders of at least 5% of our capital stock, have certain registration rights, we refer to the shares with these registration rights as registrable securities as set forth below. The registration of shares of our common stock by the exercise of registration rights described below would enable the holders to sell these shares without restriction under the Securities Act when the applicable registration statement is declared effective. We will pay the registration expenses, other than underwriting discounts and commissions, of the shares registered by the demand and piggyback registrations described below.

Generally, in an underwritten offering, the managing underwriter, if any, has the right, subject to specified conditions, to limit the number of shares such holders may include. The demand and piggyback registration rights described below will expire three years after the closing of this offering, of which this prospectus is a part, or with respect to any particular stockholder, such time after the closing of this offering that such stockholder can sell all of its shares entitled to registration rights under Rule 144 of the Securities Act during any 90-day period.

Demand Registration Rights

Beginning 180 days after the effective date of the registration statement of which this prospectus is a part, subject to specified limitations set forth in the investors' rights agreement, at any time, the holders of at least two-thirds of the registrable securities then outstanding may demand that we register all or a portion of their shares. Such request for registration must cover shares with an anticipated aggregate offering price, net of underwriting discounts and commissions, of at least $50 million.

In addition, subject to specified limitations set forth in the investors' rights agreement, at any after we become eligible to file a registration statement on Form S-3, certain holders of at least 30% of the registrable securities then outstanding may request that we register their registrable securities on Form S-3 for purposes of a public offering for which the anticipated offering price to the public would exceed, net of selling expenses, of at least $5 million. We will not be required to effect more than two registrations on Form S-3 within any 12-month period.

Piggyback Registration Rights

In connection with this offering, the holders of an aggregate of shares of our common stock were entitled to, and the necessary percentage of holders waived, their rights to notice of this offering and to include

their shares of registrable securities in this offering. After this offering, in the event that we propose to register any of our securities under the Securities Act, either for our own account or for the account of other security holders, the holders of these shares will be entitled to certain piggyback registration rights allowing the holder to include their shares in such registration, subject to certain marketing and other limitations. As a result, whenever we propose to file a registration statement under the Securities Act, other than with respect to a demand registration or a registration statement on Forms S-4 or S-8, the holders of these shares are entitled to notice of the registration and have the right to include their shares in the registration, subject to limitations that the underwriters may impose on the number of shares included in the offering.

Expenses of Registration

We are required to pay all expenses, including fees and expenses of one counsel to represent the selling stockholders (up to $50,000 total), relating to any demand or piggyback registration, other than underwriting discounts and commissions, stock transfer taxes and any additional fees of counsel for the selling stockholders, subject to specified conditions and limitations. We are not required to pay registration expenses if a demand registration request is withdrawn at the request of a majority of holders of registrable securities to be registered, unless holders of a majority of the registrable securities agree to forfeit their right to one demand registration.

The investors' rights agreement contains customary cross-indemnification provisions, pursuant to which we are obligated to indemnify the selling stockholders in the event of material misstatements or omissions in the applicable registration statement attributable to us, and the selling stockholders are obligated to indemnify us for material misstatements or omissions in the registration statement attributable to them, subject to certain limitations.

Termination of Registration Rights

The registration rights granted under the investors' rights agreement will terminate upon the earlier of a liquidation event or such time that Rule 144 or another similar exemption from registration statement is available for the sale of all of such holder's shares without limitation during a three-month period.

Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws

Some provisions of Delaware law, our amended and restated certificate of incorporation and our amended and restated bylaws contain provisions that could make the following transactions more difficult: an acquisition of us by means of a tender offer; an acquisition of us by means of a proxy contest or otherwise; or the removal of our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions which provide for payment of a premium over the market price for our shares.

These provisions, summarized below, are intended to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of the increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

Stockholder Meetings

Our amended and restated bylaws provide that a special meeting of stockholders may be called only by our chairman of the board, chief executive officer or president, or by a resolution adopted by a majority of our board of directors.

Requirements for Advance Notification of Stockholder Nominations and Proposals

Our amended and restated bylaws establish advance notice procedures with respect to stockholder proposals to be brought before a stockholder meeting and the nomination of candidates for election as directors, other than nominations made by or at the direction of the board of directors or a committee of the board of directors.

Elimination of Stockholder Action by Written Consent

Our amended and restated certificate of incorporation and amended and restated bylaws eliminate the right of stockholders to act by written consent without a meeting.

Staggered Board

Our board of directors is divided into three classes. The directors in each class serve for a three-year term, one class being elected each year by our stockholders. For more information on the classified board, see "Management—Board Composition and Election of Directors." This system of electing and removing directors may tend to discourage a third-party from making a tender offer or otherwise attempting to obtain control of us, because it generally makes it more difficult for stockholders to replace a majority of the directors.

Removal of Directors

Our amended and restated certificate of incorporation provides that no member of our board of directors may be removed from office by our stockholders except for cause and, in addition to any other vote required by law, upon the approval of not less than two thirds of the total voting power of all of our outstanding voting stock then entitled to vote in the election of directors.

Stockholders Not Entitled to Cumulative Voting

Our amended and restated certificate of incorporation does not permit stockholders to cumulate their votes in the election of directors. Accordingly, the holders of a majority of the outstanding shares of our common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they choose, other than any directors that holders of our convertible preferred stock may be entitled to elect.

Delaware Anti-Takeover Statute

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits persons deemed to be "interested stockholders" from engaging in a "business combination" with a publicly held Delaware corporation for three years following the date these persons become interested stockholders unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. Generally, an "interested stockholder" is a person who, together with affiliates and associates, owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation's voting stock. Generally, a "business combination" includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by the board of directors.

Choice of Forum

Our amended and restated certificate of incorporation to be effective immediately after the closing of this offering will provide that the Court of Chancery of the State of Delaware (or, if and only if the Court of Chancery of the State of Delaware lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of

Delaware) and any appellate court therefrom is the sole and exclusive forum for the following claims or causes of action under the Delaware statutory or common law: (i) any derivative claim or cause of action brought on our behalf; (ii) any claim or cause of action for a breach of fiduciary duty owed by any of our current or former directors, officers, or other employees to us or our stockholders; (iii) any claim or cause of action against us or any of our current or former directors, officers or other employees arising out of or pursuant to any provision of the DGCL, our amended and restated certificate of incorporation, or our bylaws (as each may be amended from time to time); (iv) any claim or cause of action seeking to interpret, apply, enforce or determine the validity of our amended and restated certificate of incorporation or our amended and restated bylaws (as each may be amended from time to time, including any right, obligation, or remedy thereunder); (v) any claim or cause of action as to which the DGCL confers jurisdiction to the Court of Chancery of the State of Delaware; and (vi) any claim or cause of action against us or any of our current or former directors, officers, or other employees governed by the internal-affairs doctrine, in all cases to the fullest extent permitted by law and subject to the court's having personal jurisdiction over the indispensable parties named as defendants. This choice of forum provision would not apply to claims or causes of action brought to enforce a duty or liability created by the Securities Act, the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction, or the Securities Act. Our amended and restated certificate of incorporation to be effective on the closing of this offering will further provide that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. Additionally, our amended and restated certificate of incorporation to be effective immediately after the closing of this offering will provide that any person or entity holding, owning or otherwise acquiring any interest in any of our securities shall be deemed to have notice of and consented to these provisions.

Amendment of Charter Provisions

The amendment of any of the above provisions, except for the provision making it possible for our board of directors to issue convertible preferred stock, would require approval by holders of at least two thirds of the total voting power of all of our outstanding voting stock.

The provisions of Delaware law, our amended and restated certificate of incorporation and our amended and restated bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in the composition of our board and management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock will be American Stock Transfer & Trust Company, LLC. The transfer agent's address is 6201 15th Avenue, Brooklyn, New York 11219.

Exchange Listing

We have applied to list our common stock on the Nasdaq Global Market under the symbol "SNSE".

SHARES ELIGIBLE FOR FUTURE SALE

Immediately prior to this offering, there was no public market for our common stock. Future sales of substantial amounts of common stock in the public market, or the perception that such sales may occur, could adversely affect the market price of our common stock. Although we intent to apply to list our common stock on the Nasdaq Global Market, we cannot assure you that there will be an active public market for our common stock.

Following the closing of this offering, based on the number of shares of our common stock outstanding as of September 30, 2020, we will have outstanding an aggregate of shares of common stock.

Of these shares, all shares of common stock sold in this offering will be freely tradable without restriction or further registration under the Securities Act, except for any shares purchased by our "affiliates," as that term is defined in Rule 144 under the Securities Act. Shares purchased by our affiliates would be subject to the Rule 144 resale restrictions described below, other than the holding period requirement.

The remaining shares of our common stock outstanding after this offering will be "restricted securities," as that term is defined in Rule 144 under the Securities Act. These restricted securities are eligible for public sale only if they are registered under the Securities Act or if they qualify for an exemption from registration under Rule 144 or 701 under the Securities Act, each of which is summarized below. We expect that substantially all of these shares will be subject to the lock-up period under the lock-up agreements described below.

shares of common stock that are either subject to outstanding options or warrants or reserved for future issuance under our equity incentive plans will become eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules, the lock-up agreements described below and Rules 144 and 701 under the Securities Act.

Lock-Up Agreements

We, along with our directors, executive officers and substantially all of our other stockholders, optionholders and warrantholders, have agreed with the underwriters that for a period of 180 days after the date of this prospectus, or, with respect to the shares purchased in our Series BB financing, 120 days, subject to specified exceptions, we or they will not offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to sale of, or otherwise dispose of or transfer any shares of common stock, or any securities convertible into or exercisable or exchangeable for shares of common stock, request or demand that we file a registration statement related to our common stock or enter into any swap or other agreement that transfers to another, in whole or in part, directly or indirectly, the economic consequence of ownership of the common stock. Upon expiration of the lock-up period, certain of our stockholders and warrantholders will have the right to require us to register their shares under the Securities Act. See "—Registration Rights" below and "Description of Capital Stock—Registration Rights."

Upon the expiration of the lock-up period, substantially all of the shares subject to such lock-up restrictions will become eligible for sale, subject to the limitations discussed above.

Rule 144

In general, non-affiliate persons who have beneficially owned restricted shares of our common stock for at least six months, and any affiliate of the company who owns either restricted or unrestricted shares of our common stock, are entitled to sell their securities without registration with the SEC under an exemption from registration provided by Rule 144 under the Securities Act.

Non-Affiliates

Any person who is not deemed to have been one of our affiliates at the time of, or at any time during the three months preceding, a sale may sell an unlimited number of restricted securities under Rule 144 if:

- the restricted securities have been held for at least six months, including the holding period of any prior owner other than one of our affiliates (subject to certain exceptions);
- we have been subject to the Exchange Act periodic reporting requirements for at least 90 days before the sale; and
- we are current in our Exchange Act reporting at the time of sale.

Any person who is not deemed to have been an affiliate of ours at the time of, or at any time during the three months preceding, a sale and has held the restricted securities for at least one year, including the holding period of any prior owner other than one of our affiliates, will be entitled to sell an unlimited number of restricted securities without regard to the length of time we have been subject to Exchange Act periodic reporting or whether we are current in our Exchange Act reporting. Non-affiliate resales are not subject to the manner of sale, volume limitation or notice filing provisions of Rule 144.

Affiliates

Persons seeking to sell restricted securities who are our affiliates at the time of, or any time during the three months preceding, a sale, would be subject to the restrictions described above. They are also subject to additional restrictions, by which such person would be required to comply with the manner of sale and notice provisions of Rule 144 and would be entitled to sell within any three-month period only that number of securities that does not exceed the greater of either of the following:

- 1% of the number of shares of our common stock then outstanding; or
- the average weekly trading volume of our common stock on the stock exchange on which our shares are listed during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale.

Additionally, persons who are our affiliates at the time of, or any time during the three months preceding, a sale may sell unrestricted securities under the requirements of Rule 144 described above, without regard to the six month holding period of Rule 144, which does not apply to sales of unrestricted securities.

Rule 701

In general, under Rule 701 of the Securities Act, any of our employees, directors, officers, consultants or advisors who purchases shares from us in connection with a compensatory stock or option plan or other written agreement before the effective date of a registration statement under the Securities Act is entitled to sell such shares 90 days after such effective date in reliance on Rule 144. Securities issued in reliance on Rule 701 are restricted securities and, subject to the contractual restrictions described above, beginning 90 days after the date of this prospectus, may be sold by persons other than "affiliates," as defined in Rule 144, subject only to the manner of sale provisions of Rule 144 and by "affiliates" under Rule 144 without compliance with its one-year minimum holding period requirement. However, substantially all Rule 701 shares are subject to lock-up agreements as described above and will become eligible for sale upon the expiration of the restrictions set forth in those agreements.

Form S-8 Registration Statements

We intend to file one or more registration statements on Form S-8 under the Securities Act to register all shares of common stock subject to outstanding stock options and common stock issued or issuable under the 2021 Plan, ESPP and 2018 Plan. We expect to file the registration statement covering shares offered pursuant to

these stock plans shortly after the date of this prospectus, permitting the resale of such shares by non-affiliates in the public market without restriction under the Securities Act and the sale by affiliates in the public market subject to compliance with the resale provisions of Rule 144.

Registration Rights

Holders of shares of our common stock, which includes all of the shares of common stock issuable upon the automatic conversion of our convertible convertible preferred stock immediately prior to the closing of this offering, or their transferees will be entitled to various rights with respect to the registration of these shares under the Securities Act upon the completion of this offering. Registration of these shares under the Securities Act would result in these shares becoming fully tradable without restriction under the Securities Act immediately upon the effectiveness of the registration, except for shares purchased by affiliates.

See “Description of Capital Stock—Registration Rights” for additional information. Shares covered by a registration statement will be eligible for sale in the public market upon the expiration or release from the terms of the lock-up agreement.

MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS FOR NON-U.S. HOLDERS

The following summary describes certain material U.S. federal income tax consequences of the acquisition, ownership, and disposition of our common stock acquired in this offering by Non-U.S. Holders (as defined below). This discussion is not a complete analysis of all potential U.S. federal income tax consequences relating thereto, and does not address foreign, state, and local consequences that may be relevant to Non-U.S. Holders in light of their particular circumstances, nor does it address U.S. federal tax consequences (such as gift and estate taxes) other than income taxes. This discussion is limited to Non-U.S. Holders that hold our common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a Non-U.S. Holder's particular circumstances, including the impact of the alternative minimum tax, the special tax accounting rules under Section 451(b) of the Code, and the Medicare contribution tax on net investment income. Special rules different from those described below may apply to certain Non-U.S. Holders that are subject to special treatment under the Internal Revenue Code of 1986, as amended, or the Code, such as financial institutions, insurance companies, tax-exempt organizations, broker-dealers and traders in securities, U.S. expatriates, "controlled foreign corporations," "passive foreign investment companies," corporations that accumulate earnings to avoid U.S. federal income tax, corporations organized outside of the United States, any state thereof or the District of Columbia that are nonetheless treated as U.S. taxpayers for U.S. federal income tax purposes, persons that hold our common stock as part of a "straddle," "hedge," "conversion transaction," "synthetic security" or integrated investment or other risk reduction strategy, persons who acquire our common stock through the exercise of an option or otherwise as compensation, "qualified foreign pension funds" as defined in Section 897(l)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds, partnerships and other pass-through entities or arrangements, and investors in such pass-through entities or arrangements. Such Non-U.S. Holders are urged to consult their own tax advisors to determine the U.S. federal, state, local, and other tax consequences that may be relevant to them. Furthermore, the discussion below is based upon the provisions of the Code, and Treasury Regulations, rulings, and judicial decisions thereunder as of the date hereof, and such authorities may be repealed, revoked, or modified, perhaps retroactively, so as to result in U.S. federal income tax consequences different from those discussed below. We have not requested a ruling from the U.S. Internal Revenue Service, or the IRS, with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS will agree with such statements and conclusions.

This discussion is for informational purposes only and is not tax advice. Persons considering the purchase of our common stock pursuant to this offering should consult their own tax advisors concerning the U.S. federal income, estate, and other tax consequences of acquiring, owning, and disposing of our common stock in light of their particular situations as well as any consequences arising under the laws of any other taxing jurisdiction, including any state, local, or foreign tax consequences.

For the purposes of this discussion, a "Non-U.S. Holder" is, for U.S. federal income tax purposes, a beneficial owner of common stock that is neither a U.S. Holder, nor a partnership (or other entity treated as a partnership for U.S. federal income tax purposes regardless of its place of organization or formation). A "U.S. Holder" means a beneficial owner of our common stock that is for U.S. federal income tax purposes any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation or other entity treated as a corporation for U.S. federal income tax purposes created or organized in or under the laws of the United States, any state thereof, or the District of Columbia;
- an estate the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust if it (1) is subject to the primary supervision of a court within the United States and one or more U.S. persons have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable U.S. Treasury Regulations to be treated as a U.S. person.

Distributions

Distributions, if any, made on our common stock to a Non-U.S. Holder to the extent made out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles) generally will constitute dividends for U.S. tax purposes and will be subject to withholding tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty, subject to the discussions below regarding effectively connected income, backup withholding, and foreign accounts. To obtain a reduced rate of withholding under a treaty, a Non-U.S. Holder generally will be required to provide us with a properly executed IRS Form W-8BEN (in the case of individuals) or IRS Form W-8BEN-E (in the case of entities), or other appropriate form, certifying the Non-U.S. Holder's entitlement to benefits under that treaty. This certification must be provided to us and/or our paying agent prior to the payment of dividends and must be updated periodically. In the case of a Non-U.S. Holder that is an entity, Treasury Regulations and the relevant tax treaty provide rules to determine whether, for purposes of determining the applicability of a tax treaty, dividends will be treated as paid to the entity or to those holding an interest in that entity. If a Non-U.S. Holder holds stock through a financial institution or other agent acting on the holder's behalf, the holder will be required to provide appropriate documentation to such agent. The holder's agent will then be required to provide certification to us and/or our paying agent, either directly or through other intermediaries. If a Non-U.S. Holder is eligible for a reduced rate of U.S. federal withholding tax under an income tax treaty and such Non-U.S. Holder does not timely file the required certification, such Non-U.S. Holder may be able to obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim for a refund with the IRS.

We generally are not required to withhold tax on dividends paid to a Non-U.S. Holder that are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, are attributable to a permanent establishment or fixed base that such holder maintains in the United States) if a properly executed IRS Form W-8ECI, stating that the dividends are so connected, is furnished to us (or, if stock is held through a financial institution or other agent, to such agent). In general, such effectively connected dividends will be subject to U.S. federal income tax, on a net income basis at the regular rates applicable to U.S. residents. A corporate Non-U.S. Holder receiving effectively connected dividends may also be subject to an additional "branch profits tax," which is imposed, under certain circumstances, at a rate of 30% (or such lower rate as may be specified by an applicable treaty) on the corporate Non-U.S. Holder's effectively connected earnings and profits, subject to certain adjustments. Non-U.S. Holders should consult their tax advisors regarding any applicable income tax treaties that may provide for different rules.

To the extent distributions on our common stock, if any, exceed our current and accumulated earnings and profits, they will first reduce the Non-U.S. Holder's adjusted basis in our common stock, but not below zero, and then will be treated as gain to the extent of any excess amount distributed, and taxed in the same manner as gain realized from a sale or other disposition of common stock as described in the next section.

Gain on Disposition of Our Common Stock

Subject to the discussions below regarding backup withholding and foreign accounts, a Non-U.S. Holder generally will not be subject to U.S. federal income tax with respect to gain realized on a sale or other taxable disposition of our common stock unless (a) the gain is effectively connected with a trade or business of such holder in the United States (and, if required by an applicable income tax treaty, is attributable to a permanent establishment or fixed base that such holder maintains in the United States), (b) the Non-U.S. Holder is a nonresident alien individual and is present in the United States for 183 or more days in the taxable year of the disposition and certain other conditions are met, or (c) we are or have been a "United States real property holding corporation" within the meaning of Code Section 897(c)(2) at any time within the shorter of the five-year period preceding such disposition or such holder's holding period in our common stock. In general, we would be a United States real property holding corporation if our interests in U.S. real property comprise (by fair market value) at least half of our worldwide real property interests and our other assets used or held for use in a trade or business. We believe that we are not, and do not anticipate becoming, a United States real property holding

corporation. Even if we are treated as a United States real property holding corporation, gain realized by a Non-U.S. Holder on a disposition of our common stock will not be subject to U.S. federal income tax so long as (1) the Non-U.S. Holder owned, directly, indirectly and constructively, no more than 5% of our common stock at all times within the shorter of (i) the five-year period preceding the disposition or (ii) the holder's holding period and (2) our common stock is regularly traded on an established securities market, as defined in applicable Treasury Regulations. There can be no assurance that our common stock will continue to qualify as regularly traded on an established securities market. If a Non-U.S. Holder's gain on disposition of our common stock is taxable because we are a United States real property holding corporation and such Non-U.S. Holder's ownership of our common stock exceeds 5%, such Non-U.S. Holder will be taxed on such disposition generally in the manner as gain that is effectively connected with the conduct of a U.S. trade or business (subject to the provisions under an applicable income tax treaty), except that the branch profits tax generally will not apply to a corporate Non-U.S. Holder.

Non-U.S. Holders described in (a) above will be required to pay tax on the net gain derived from the sale at regular U.S. federal income tax rates, and corporate Non-U.S. Holders described in (a) above may be subject to the additional branch profits tax on such gain at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. Gain described in (b) above will be subject to U.S. federal income tax at a flat 30% rate or such lower rate as may be specified by an applicable income tax treaty, which gain may be offset by certain U.S.-source capital losses (even though a Non-U.S. Holder is not considered a resident of the United States), provided that the Non-U.S. Holder has timely filed U.S. federal income tax returns with respect to such losses.

Information Reporting Requirements and Backup Withholding

Generally, we must report information to the IRS with respect to any dividends we pay on our common stock (even if the payments are exempt from withholding), including the amount of any such dividends, the name and address of the recipient, and the amount, if any, of tax withheld. A similar report is sent to the holder to whom any such dividends are paid. Pursuant to tax treaties or certain other agreements, the IRS may make its reports available to tax authorities in the recipient's country of residence.

Dividends paid by us (or our paying agents) to a Non-U.S. Holder may also be subject to U.S. backup withholding. U.S. backup withholding generally will not apply to a Non-U.S. Holder who provides a properly executed IRS Form W-8BEN, IRS Form W-8BEN-E, or IRS Form W-ECI, or otherwise establishes an exemption. Notwithstanding the foregoing, backup withholding may apply if the payor has actual knowledge, or reason to know, that the holder is a U.S. person who is not an exempt recipient.

U.S. information reporting and backup withholding requirements generally will apply to the proceeds of a disposition of our common stock effected by or through a U.S. office of any broker, U.S. or foreign, except that information reporting and such requirements may be avoided if the holder provides a properly executed IRS Form W-8BEN or IRS Form W-8BEN-E or otherwise meets documentary evidence requirements for establishing non-U.S. person status or otherwise establishes an exemption. Generally, U.S. information reporting and backup withholding requirements will not apply to a payment of disposition proceeds to a Non-U.S. Holder where the transaction is effected outside the United States through a non-U.S. office of a non-U.S. broker. Information reporting and backup withholding requirements may, however, apply to a payment of disposition proceeds if the broker has actual knowledge, or reason to know, that the holder is, in fact, a U.S. person. For information reporting purposes, certain brokers with substantial U.S. ownership or operations will generally be treated in a manner similar to U.S. brokers.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be credited against the tax liability of persons subject to backup withholding, provided that the required information is timely furnished to the IRS.

Foreign Accounts

Sections 1471 through 1474 of the Code (commonly referred to as FATCA) impose a U.S. federal withholding tax of 30% on certain payments to a foreign financial institution (as specifically defined by applicable rules) unless such institution enters into an agreement with the U.S. government to withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding U.S. account holders of such institution (which includes certain equity holders of such institution, as well as certain account holders that are foreign entities with U.S. owners). FATCA also generally imposes a federal withholding tax of 30% on certain payments to a non-financial foreign entity unless such entity provides the withholding agent with either a certification that it does not have any substantial direct or indirect U.S. owners or provides information regarding substantial direct and indirect U.S. owners of the entity. An intergovernmental agreement between the United States and an applicable foreign country may modify those requirements. The withholding tax described above will not apply if the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from the rules.

FATCA withholding currently applies to payments of dividends, if any, on our common stock and, subject to the proposed Treasury Regulations described in this paragraph, generally also would apply to payments of gross proceeds from the sale or other disposition of our common stock. The U.S. Treasury Department released proposed regulations which, if finalized in their present form, would eliminate the federal withholding tax of 30% applicable to the gross proceeds of a disposition of our common stock. In its preamble to such proposed regulations, the U.S. Treasury Department stated that taxpayers may generally rely on the proposed regulations until final regulations are issued. Non-U.S. holders are encouraged to consult with their own tax advisors regarding the possible implications of FATCA on their investment in our common stock.

EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR REGARDING THE TAX CONSEQUENCES OF PURCHASING, HOLDING, AND DISPOSING OF OUR COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY RECENT OR PROPOSED CHANGE IN APPLICABLE LAW.

UNDERWRITING

Citigroup Global Markets Inc., Piper Sandler & Co. and Berenberg Capital Markets LLC, the Representatives, are acting as joint book-running managers of this offering and as representatives of the underwriters named below. Subject to the terms and conditions stated in the underwriting agreement dated the date of this prospectus, the underwriters named below have severally agreed to purchase, and we have agreed to sell to them, the number of shares of our common stock indicated below:

Underwriter	Number of Shares
Citigroup Global Markets Inc.	
Piper Sandler & Co.	
Berenberg Capital Markets LLC	
Oppenheimer & Co. Inc.	
Total	

The underwriting agreement provides that the obligations of the underwriters to purchase the shares of our common stock included in this offering are subject to approval of legal matters by counsel and to other conditions. The underwriters are obligated to purchase all of the shares of our common stock (other than those covered by the over-allotment option described below) if they purchase any of the shares.

Shares of our common stock sold by the underwriters to the public will initially be offered at the initial public offering price set forth on the cover of this prospectus. Any shares of our common stock sold by the underwriters to securities dealers may be sold at a discount from the initial public offering price not to exceed $ per share. After the initial public offering of the shares of our common stock, if all the shares of our common stock are not sold at the initial public offering price, the underwriters may change the offering price and the other selling terms. Any shares sold by the underwriters to securities dealers may be sold at a discount of up to $ per share from the initial public offering price. The representatives have advised us that the underwriters do not intend to make sales to discretionary accounts.

If the underwriters sell more shares of our common stock than the total number set forth in the table above, we have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to additional shares of our common stock at the initial public offering price less the underwriting discount. The underwriters may exercise the option solely for the purpose of covering over-allotments, if any, in connection with this offering. To the extent the option is exercised, each underwriter must purchase a number of additional shares of our common stock approximately proportionate to that underwriter's initial purchase commitment set forth in the table above. Any shares of our common stock issued or sold under the option will be issued and sold on the same terms and conditions as the other shares of our common stock that are the subject of this offering.

We, our officers and directors and substantially all of our stockholders have agreed that, subject to specified limited exceptions, for a period of 180 days from the date of this prospectus, or, with respect to the shares purchased in our December 2020 Series BB financing, 120 days, we and they will not, without the prior written consent of the Representatives, offer, sell, contract to sell, pledge or otherwise dispose of, including the filing of a registration statement in respect of, or hedge any shares of our common stock or any securities convertible into, or exercisable or exchangeable for, our common stock. The Representatives in their sole discretion may release any of the securities subject to these lock-up agreements at any time, which, in the case of officers and directors, shall be with notice.

Prior to this offering, there has been no public market for our common stock. Consequently, the initial public offering price for the shares of our common stock will be determined by negotiations between us and the representatives. Among the factors considered in determining the initial public offering price will be our results of operations, our current financial condition, our future prospects, our markets, the economic conditions in and

future prospects for the industry in which we compete, our management, and currently prevailing general conditions in the equity securities markets, including current market valuations of publicly traded companies considered comparable to our company. We cannot assure you, however, that the price at which the shares of our common stock will sell in the public market after this offering will not be lower than the initial public offering price or that an active trading market in our shares of common stock will develop and continue after this offering.

We have applied to list our common stock on the Nasdaq Global Market under the symbol "SNSE."

The following table shows the per share and total public offering price, underwriting discounts and commissions that we are to pay to the underwriters and proceeds to us, before expenses, in connection with this offering. These amounts are shown assuming both no exercise and full exercise of the underwriters' over-allotment option:

		Total	
	Per share	No exercise	Full exercise
Public offering price	$	$	$
Underwriting discounts and commissions paid by us	$	$	$
Proceeds to us, before expenses	$	$	$

We estimate that expenses payable by us in connection with this offering, exclusive of underwriting discounts and commissions, will be approximately $. We have also agreed to reimburse the underwriters for expenses in an amount up to $ relating to the clearance of this offering with the Financial Industry Regulatory Authority, Inc. In addition, the underwriters have agreed to reimburse us for certain of our expenses that we have incurred in connection with this offering.

At our request, the underwriters have reserved for sale, at the initial public offering price, up to five percent of the shares offered by this prospectus for sale to some of our directors, officers, employees, business associates and related persons through a directed share program. If these persons purchase reserved shares, this will reduce the number of shares available for sale to the general public. Any reserved shares that are not so purchased will be offered by the underwriters to the general public on the same terms as the other shares offered by this prospectus. In addition, we have requested that the underwriters make issuer directed allocations to certain existing investors.

In connection with this offering, the underwriters may purchase and sell shares of our common stock in the open market. Purchases and sales in the open market may include short sales, purchases to cover short positions, which may include purchases pursuant to the underwriters' over-allotment option, and other transactions that would stabilize, maintain or otherwise affect the price of our common stock.

- Short sales involve secondary market sales by the underwriters of a greater number of shares of our common stock than they are required to purchase in this offering:
  - "Covered" short sales are sales of shares of our common stock in an amount up to the number of shares of our common stock represented by the underwriters' over-allotment option.
  - "Naked" short sales are sales of shares of our common stock in an amount in excess of the number of shares of our common stock represented by the underwriters' over-allotment option.
- The underwriters can close out a short position by purchasing additional shares of our common stock, either pursuant to the underwriters' over-allotment option or in the open market.
  - To close a naked short position, the underwriters must purchase shares of our common stock in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the shares of our common stock in the open market after pricing that could adversely affect investors who purchase in this offering.

- To close a covered short position, the underwriters must purchase shares of our common stock in the open market or exercise their over-allotment option. In determining the source of shares of our common stock to close the covered short position, the underwriters will consider, among other things, the price of shares of our common stock available for purchase in the open market as compared to the price at which they may purchase shares of our common stock through their over-allotment option.
- As an additional means of facilitating this offering, the underwriters may bid for, and purchase, shares of our common stock on the Nasdaq Global Market, as long as such bids do not exceed a specified maximum, to stabilize the price of the shares of our common stock.

Purchases to cover short positions and stabilizing purchases, as well as other purchases by the underwriters for their own accounts, may have the effect of preventing or retarding a decline in the market price of the shares. They may also cause the price of the shares of our common stock to be higher than the price that would otherwise prevail in the open market in the absence of these transactions. The underwriters may conduct these transactions on the Nasdaq Global Market, in the over-the-counter market or otherwise. The underwriters are not required to engage in any of these transactions and may discontinue them at any time.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act, or to contribute to payments the underwriters may be required to make because of any of those liabilities.

A prospectus in electronic format may be made available on websites maintained by one or more of the underwriters or their respective affiliates. The representatives may agree with us to allocate a number of shares of our common stock to underwriters for sale to their online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations. Other than the prospectus in electronic format, the information on the underwriters' or their respective affiliates' websites and any information contained in any other website maintained by any of the underwriters or their respective affiliates is not part of this prospectus, has not been approved and/or endorsed by us or the underwriters and should not be relied upon by investors in this offering.

Other Relationships

The underwriters are full-service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage activities. The underwriters and their respective affiliates may, from time to time, engage in transactions with and perform services for us in the ordinary course of their business for which they may receive customary fees and reimbursement of expenses. In the ordinary course of their various business activities, the underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (which may include bank loans or credit default swaps) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. The underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long or short positions in such securities and instruments.

Notice to Prospective Investors in the European Economic Area

In relation to each member state of the European Economic Area that has implemented the Prospectus Directive (each, a relevant member state), with effect from and including the date on which the Prospectus Directive is implemented in that relevant member state (the relevant implementation date), an offer of shares of our common stock described in this prospectus may not be made to the public in that relevant member state other than:

- to any legal entity which is a qualified investor as defined in the Prospectus Directive;

- to fewer than 100 or, if the relevant member state has implemented the relevant provision of the 2010 PD Amending Directive, 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the relevant Dealer or Dealers nominated by us for any such offer; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no such offer of shares of our common stock shall require us or any underwriter to publish a prospectus pursuant to Article 3 of the Prospectus Directive.

For purposes of this provision, the expression an "offer of securities to the public" in any relevant member state means the communication in any form and by any means of sufficient information on the terms of the offer and the shares of our common stock to be offered so as to enable an investor to decide to purchase or subscribe for any shares of our common stock, as the expression may be varied in that member state by any measure implementing the Prospectus Directive in that member state, the expression "Prospectus Directive" means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the relevant member state) and includes any relevant implementing measure in the relevant member state, and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

The sellers of the shares of our common stock have not authorized and do not authorize the making of any offer of shares of our common stock through any financial intermediary on their behalf, other than offers made by the underwriters with a view to the final placement of the shares of our common stock as contemplated in this prospectus. Accordingly, no purchaser of the shares of our common stock, other than the underwriters, is authorized to make any further offer of the shares of our common stock on behalf of the sellers or the underwriters.

Notice to Prospective Investors in the United Kingdom

This prospectus is only being distributed to, and is only directed at, persons in the United Kingdom that are qualified investors within the meaning of Article 2(1)(e) of the Prospectus Directive that are also (1) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, or the Order, or (2) high net worth entities, and other persons to whom it may lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order (each such person being referred to as a relevant person).

This prospectus and its contents are confidential and should not be distributed, published or reproduced (in whole or in part) or disclosed by recipients to any other persons in the United Kingdom. Any person in the United Kingdom that is not a relevant person should not act or rely on this document or any of its contents.

Notice to Prospective Investors in Australia

No prospectus or other disclosure document (as defined in the Corporations Act 2001 (Cth) of Australia, or Corporations Act) in relation to our common stock has been or will be lodged with the Australian Securities & Investments Commission, or ASIC. This document has not been lodged with ASIC and is only directed to certain categories of exempt persons. Accordingly, if you receive this document in Australia:

- you confirm and warrant that you are either:
  - a "sophisticated investor" under Section 708(8)(a) or (b) of the Corporations Act;
  - a "sophisticated investor" under Section 708(8)(c) or (d) of the Corporations Act and that you have provided an accountant's certificate to us which complies with the requirements of Section 708(8)(c)(i) or (ii) of the Corporations Act and related regulations before the offer has been made; a person associated with the company under Section 708(12) of the Corporations Act; or

- a "professional investor" within the meaning of Section 708(11)(a) or (b) of the Corporations Act, and to the extent that you are unable to confirm or warrant that you are an exempt sophisticated investor, associated person or professional investor under the Corporations Act any offer made to you under this document is void and incapable of acceptance; and
- you warrant and agree that you will not offer any of our common stock for resale in Australia within 12 months of that common stock being issued unless any such resale offer is exempt from the requirement to issue a disclosure document under Section 708 of the Corporations Act.

Notice to Prospective Investors in Canada

The securities may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the securities must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to Section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Notice to Prospective Investors in Chile

The shares of our common stock are not registered in the Securities Registry (Registro de Valores) or subject to the control of the Chilean Securities and Exchange Commission (Superintendencia de Valores y Seguros de Chile). This prospectus and other offering materials relating to the offer of the shares do not constitute a public offer of, or an invitation to subscribe for or purchase, the shares in the Republic of Chile, other than to individually identified purchasers pursuant to a private offering within the meaning of Article 4 of the Chilean Securities Market Act (Ley de Mercado de Valores) (an offer that is not "addressed to the public at large or to a certain sector or specific group of the public").

Notice to Prospective Investors in France

Neither this prospectus nor any other offering material relating to the shares of our common stock described in this prospectus has been submitted to the clearance procedures of the *Autorité des Marchés Financiers* or of the competent authority of another member state of the European Economic Area and notified to the *Autorité des Marchés Financiers*. The shares of our common stock have not been offered or sold and will not be offered or sold, directly or indirectly, to the public in France. Neither this prospectus nor any other offering material relating to the shares of our common stock has been or will be:

- released, issued, distributed or caused to be released, issued or distributed to the public in France; or
- used in connection with any offer for subscription or sale of the shares of our common stock to the public in France.

Such offers, sales and distributions will be made in France only:

- to qualified investors (*investisseurs qualifiés*) and/or to a restricted circle of investors (*cercle restreint d'investisseurs*), in each case investing for their own account, all as defined in and in accordance with articles L.411-2, D.411-1, D.411-2, D.734-1, D.744-1, D.754-1and D.764-1 of the French Code monétaire et financier;
- to investment services providers authorized to engage in portfolio management on behalf of third parties; or
- in a transaction that, in accordance with article L.411-2-II-1° -or-2° -or 3° of the French Code *monétaire et financier* and article 211-2 of the General Regulations (*Règlement Général*) of the *Autorité des Marchés Financiers*, does not constitute a public offer (*appel public à l'épargne*).

The shares of our common stock may be resold directly or indirectly, only in compliance with articles L.411-1, L.411-2, L.412-1 and L.621-8 through L.621-8-3 of the French Code *monétaire et financier*.

Notice to Prospective Investors in Hong Kong

The shares of our common stock may not be offered or sold in Hong Kong by means of any document other than (1) in circumstances which do not constitute an offer to the public within the meaning of the Companies Ordinance (Cap. 32, Laws of Hong Kong), or (2) to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder, or (3) in other circumstances which do not result in the document being a "prospectus" within the meaning of the Companies Ordinance (Cap. 32, Laws of Hong Kong) and no advertisement, invitation or document relating to the shares of our common stock may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the laws of Hong Kong) other than with respect to shares of our common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder.

Notice to Prospective Investors in the State of Israel

In the State of Israel this prospectus shall not be regarded as an offer to the public to purchase shares of common stock under the Israeli Securities Law, 5728 - 1968, which requires a prospectus to be published and authorized by the Israel Securities Authority, if it complies with certain provisions of Section 15 of the Israeli Securities Law, 5728 - 1968, including, inter alia, if: (1) the offer is made, distributed or directed to not more than 35 investors, subject to certain conditions, or the Addressed Investors; or (2) the offer is made, distributed or directed to certain qualified investors defined in the First Addendum of the Israeli Securities Law, 5728 - 1968, subject to certain conditions, or Qualified Investors. The Qualified Investors shall not be taken into account in the count of the Addressed Investors and may be offered to purchase securities in addition to the 35 Addressed Investors. We have not and will not take any action that would require us to publish a prospectus in accordance with and subject to the Israeli Securities Law, 5728 - 1968. We have not and will not distribute this prospectus or make, distribute or direct an offer to subscribe for our common stock to any person within the State of Israel, other than to Qualified Investors and up to 35 Addressed Investors.

Qualified Investors may have to submit written evidence that they meet the definitions set out in of the First Addendum to the Israeli Securities Law, 5728 - 1968. In particular, we may request that Qualified Investors will each represent, warrant and certify to us and/or to anyone acting on our behalf: (1) that it is an investor falling within one of the categories listed in the First Addendum to the Israeli Securities Law, 5728 - 1968; (2) which of the categories listed in the First Addendum to the Israeli Securities Law, 5728 - 1968 regarding Qualified Investors is applicable to it; (3) that it will abide by all provisions set forth in the Israeli Securities Law, 5728 - 1968 and the regulations promulgated thereunder in connection with this offering; (4) that the shares of common

stock that it will be issued are, subject to exemptions available under the Israeli Securities Law, 5728 - 1968: (a) for its own account; (b) for investment purposes only; and (c) not issued with a view to resale within the State of Israel, other than in accordance with the provisions of the Israeli Securities Law, 5728 -1968; and (5) that it is willing to provide further evidence of its Qualified Investor status. Addressed Investors may have to submit written evidence in respect of their identity and may have to sign and submit a declaration containing, inter alia, the Addressed Investor's name, address and passport number or Israeli identification number.

Notice to Prospective Investors in Japan

The shares of our common stock offered in this prospectus have not been and will not be registered under the Financial Instruments and Exchange Law of Japan. The shares of our common stock have not been offered or sold and will not be offered or sold, directly or indirectly, in Japan or to or for the account of any resident of Japan (including any corporation or other entity organized under the laws of Japan), except (1) pursuant to an exemption from the registration requirements of the Financial Instruments and Exchange Law and (2) in compliance with any other applicable requirements of Japanese law.

Notice to Prospective Investors in Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares of our common stock may not be circulated or distributed, nor may the shares of our common stock be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (1) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA, (2) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275 of the SFA or (3) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to compliance with conditions set forth in the SFA.

Where the shares of our common stock are subscribed or purchased under Section 275 of the SFA by a relevant party which is:

- a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor, shares, debentures and units of shares of our common stock and debentures of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares of our common stock pursuant to an offer made under Section 275 of the SFA except:
  - to an institutional investor (for corporations, under Section 274 of the SFA) or to a relevant person defined in Section 275(2) of the SFA, or to any person pursuant to an offer that is made on terms that such shares, debentures and units of shares of our common stock and debentures of that corporation or such rights and interest in that trust are acquired at a consideration of not less than $200,000 (or its equivalent in a foreign currency) for each transaction, whether such amount is to be paid for in cash or by exchange of securities or other assets, and further for corporations, in accordance with the conditions specified in Section 275 of the SFA;
  - where no consideration is or will be given for the transfer; or
  - where the transfer is by operation of law.

LEGAL MATTERS

The validity of the shares of common stock being offered by this prospectus will be passed upon for us by Cooley LLP, Palo Alto, California. The underwriters are being represented by Goodwin Procter LLP, New York, New York.

EXPERTS

The financial statements as of December 31, 2019 and 2018, and for each of the two years in the period ended December 31, 2019, included in this Prospectus, have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report appearing herein (which report expresses an unqualified opinion on the financial statements and includes an explanatory paragraph referring to substantial doubt about the Company's ability to continue as a going concern). Such financial statements have been so included in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1, including exhibits and schedules, under the Securities Act, with respect to the shares of common stock being offered by this prospectus. This prospectus, which constitutes part of the registration statement, does not contain all of the information in the registration statement and its exhibits. For further information with respect to us and the common stock offered by this prospectus, we refer you to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference. You can read our SEC filings, including the registration statement, over the Internet at the SEC's website at www.sec.gov.

Upon the completion of this offering, we will be subject to the information reporting requirements of the Securities Exchange Act of 1934 and we will file reports, proxy statements and other information with the SEC. These reports, proxy statements and other information will be available for inspection and copying at the public reference room and web site of the SEC referred to above. We also maintain a website at www.senseibio.com, at which, following the completion of this offering, you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on or accessible through our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only.

SENSEI BIOTHERAPEUTICS, INC.

INDEX TO FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of Sensei Biotherapeutics, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Sensei Biotherapeutics, Inc. and subsidiary (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of operations, convertible preferred stock, common stock and stockholders' deficit, and cash flows, for each of the two years in the period ended December 31, 2019, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

Going Concern

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has incurred cumulative operating losses and negative cash flows from operations and has stated that substantial doubt exists about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Deloitte & Touche LLP

Baltimore, Maryland

November 12, 2020

We have served as the Company's auditor since 2016.

SENSEI BIOTHERAPEUTICS, INC.
CONSOLIDATED BALANCE SHEETS
(In thousands, except share and per share data)

	December 31, 2019	December 31, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 251	$ 653
Prepaid expenses	251	504
Other current assets	—	123
Total current assets	502	1,280
Property and equipment, net	268	123
Deposits	447	447
Total assets	$ 1,217	$ 1,850
Liabilities, convertible preferred stock and stockholders' deficit		
Current liabilities:		
Accounts payable	$ 3,451	$ 1,108
Current portion of long-term debt, including $6,187 and $696 with related parties as of December 31, 2019 and 2018, respectively	16,055	696
Accrued interest, including $323 and $3 with related parties as of December 31, 2019 and 2018, respectively	1,398	3
Other current liabilities	810	856
Total current liabilities	21,714	2,663
Non-current liabilities:		
Long-term debt, net of current portion	—	4,050
Accrued interest	—	501
Other non-current liabilities	620	571
Total liabilities	22,334	7,785
Commitments and contingencies (Note 7)		
Convertible preferred stock, $0.0001 par value; 20,000,000 shares authorized, 15,257,663 issued and outstanding at December 31, 2019 and 2018; liquidation value of $85,683 thousand at December 31, 2019	47,545	47,545
Stockholders' deficit:		
Common stock, $0.0001 par value; 90,000,000 shares authorized, 17,738,409 shares and 17,628,909 shares issued and outstanding at December 31, 2019 and 2018, respectively	2	2
Additional paid-in capital	23,648	22,090
Accumulated deficit	(92,312)	(75,572)
Total stockholders' deficit	(68,662)	(53,480)
Total liabilities, convertible preferred stock and stockholders' deficit	$ 1,217	$ 1,850

The accompanying notes are an integral part of these consolidated financial statements.

SENSEI BIOTHERAPEUTICS, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except share and per share data)

	Year Ended December 31,	
	2019	2018
Operating expenses:		
Research and development	$ 8,350	$ 8,227
General and administrative	4,085	4,513
Total operating expenses	12,435	12,740
Loss from operations	(12,435)	(12,740)
Other expense:		
Interest expense, including $320 and $3 with related parties in 2019 and 2018, respectively	(2,256)	(327)
Fair value adjustments on embedded debt derivatives, including $1,070 with related parties in 2019	(1,973)	—
Loss on extinguishment	(75)	—
Other (expense) income, net	(1)	28
Net loss	(16,740)	(13,039)
Cumulative dividends on convertible preferred stock	(3,804)	(3,804)
Net loss attributable to common stockholders	(20,544)	(16,843)
Net loss per common share, basic and diluted	$ (1.16)	$ (0.96)
Weighted-average number of shares used in computing net loss per common share, basic and diluted	17,636,028	17,628,909

The accompanying notes are an integral part of these consolidated financial statements.

SENSEI BIOTHERAPEUTICS, INC.
CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK, COMMON STOCK AND STOCKHOLDERS' DEFICIT
(In thousands, except share data)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount			
Balance at January 1, 2018	15,257,663	$47,545	17,628,909	$ 1,763	$ 19,083	$ (62,533)	$ (41,687)
Stock-based compensation expense	—	—	—	—	1,192	—	1,192
Change in par value	—	—	—	(1,761)	1,761	—	—
Issuance of common stock warrants	—	—	—	—	54	—	54
Net loss	—	—	—	—	—	(13,039)	(13,039)
Balance at December 31, 2018	15,257,663	47,545	17,628,909	2	22,090	(75,572)	(53,480)
Stock-based compensation expense	—	—	—	—	1,176	—	1,176
Exercise of common stock warrants	—	—	109,500	—	154	—	154
Issuance of common stock warrants	—	—	—	—	228	—	228
Net loss	—	—	—	—	—	(16,740)	(16,740)
Balance at December 31, 2019	15,257,663	$47,545	17,738,409	$ 2	$ 23,648	$ (92,312)	$ (68,662)

The accompanying notes are an integral part of these consolidated financial statements.

SENSEI BIOTHERAPEUTICS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended December 31,	
	2019	2018
Operating activities		
Net loss	$ (16,740)	$ (13,039)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation expense	1,176	1,192
Depreciation and amortization	73	44
Accretion on debt	1,469	—
Fair value adjustments on embedded debt derivatives	1,973	—
Interest on capital lease	9	—
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	377	(267)
Deposit	—	(447)
Accounts payable	2,342	931
Accrued interest	894	327
Other liabilities	(144)	946
Net cash used in operating activities	(8,571)	(10,313)
Investing activities		
Purchases of property and equipment	(53)	(31)
Net cash used in investing activities	(53)	(31)
Financing activities		
Proceeds from the exercise of common stock warrants	154	—
Capital lease payments	(27)	—
Proceeds on the issuance of debt, including $3,750 and $750 with related parties in 2019 and 2018, respectively	8,095	750
Net cash provided by financing activities	8,222	750
Net decrease in cash and cash equivalents	(402)	(9,594)
Cash and cash equivalents at beginning of period	653	10,247
Cash and cash equivalents at end of period	$ 251	$ 653
Supplemental disclosure of noncash financing information:		
Capital equipment	$ 166	$ —
Interest on financing	$ 9	$ —

The accompanying notes are an integral part of these consolidated financial statements.

SENSEI BIOTHERAPEUTICS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018

1. ORGANIZATION AND OPERATIONS

Business

Sensei Biotherapeutics, Inc. (the "Company" or "Sensei") is a clinical-stage immunotherapy company that was incorporated in Delaware on December 1, 2017. The Company is engaged in the discovery and development of next generation therapies with an initial focus on treatments for cancer.

The total numbers of authorized preferred stock and common stock of Sensei are 20,000,000 and 90,000,000, respectively, with a par value of $0.0001 for each share. Panacea Pharmaceuticals, Inc. ("Panacea"), was incorporated in 1999 as a Maryland corporation. Panacea is a wholly owned subsidiary of Sensei and is currently doing business under the name Sensei Biotherapeutics, Inc.

Going Concern

Since inception, the Company has incurred cumulative operating losses and negative cash flows from operations. These operating losses and negative cash flows have been financed principally from the issuance of debt and equity securities. The Company's ability to continue as a going concern is dependent upon the ability to raise additional debt or equity capital. There can be no assurance that such capital will be available in sufficient amounts or on terms acceptable to the Company. These factors raise substantial doubt about the Company's ability to continue as a going concern. The accompanying consolidated financial statements do not include any adjustments relating to the recoverability of the recorded assets or the classification of liabilities that may be necessary should the Company be unable to continue as a going concern. Risks to which the Company is exposed include uncertainties related to the ability to achieve revenue-generating products; current and potential competitors with greater financial, technological, production, and marketing resources; dependence on key management personnel; and raising additional capital, as needed. Based upon the Company's current plans, management believes there currently is insufficient financial resources to fund the Company's operations for at least 12 months from the issuance date of the 2019 consolidated financial statements.

To address the Company's capital needs, including planned clinical trials, the Company must continue to actively pursue additional equity or debt financing. The Company has been in ongoing discussions with potential venture and institutional investors including investment bankers with respect to such financing. Adequate financing opportunities might not be available to the Company, when and if needed, on acceptable terms or at all. If the Company is unable to obtain additional financing in sufficient amounts or on acceptable terms under such circumstances, the Company's operating results and prospects will be adversely affected.

The accompanying consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the ordinary course of business. The consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might result from the outcome of this uncertainty.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation and Principles of Consolidation

The Company has prepared the accompanying consolidated financial statements in conformity with generally accepted accounting principles in the United States ("US GAAP"). The consolidated financial statements include those accounts of the Company and its subsidiaries after elimination of all intercompany accounts and transactions.

Use of Estimates

The preparation of consolidated financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of expenses during the reporting periods presented. Estimates are used for, but are not limited to, the Company's ability to continue as a going concern, depreciation of equipment, the Company's enterprise value, fair value of financial instruments, and contingencies. Actual results may differ from those estimates.

Cash and Cash Equivalents

Cash equivalents are highly liquid investments with an original maturity of 90 days or less at the date of purchase and consist of time deposits and investments in money market funds with commercial banks and financial institutions.

Concentrations of Credit Risk and Off-Balance Sheet Risk

The Company maintains its cash in bank deposit and checking accounts that at times exceed insured limits. The Company has not experienced any losses in such accounts and believes it is not exposed to any significant credit risk.

Property and Equipment

Property and equipment are recorded at cost and depreciated or amortized over the estimated useful lives of the assets. Repairs or maintenance costs are expensed as incurred. Depreciation is computed using the straight-line method over the following estimated useful lives:

Office equipment and furniture	3—7 years
Research equipment	1—7 years
Capital lease	Lesser of the asset life or lease term

Fair Value of Financial Instruments

US GAAP requires disclosure of fair value information about financial instruments, whether or not recognized in the balance sheet, for which it is practicable to estimate that value. The framework provides a fair value hierarchy that prioritizes the inputs for the valuation techniques. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements) and minimizes the use of unobservable inputs. The most observable inputs are used, when available. The three levels of the fair value hierarchy are described as follows:

Level 1—Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that the Company has the ability to access.

Level 2—Inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; inputs other than quoted prices that are observable for the asset or liability; and inputs that are derived from, or corroborated by, observable market data by correlation or other means.

Level 3—Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

Classification of Convertible Preferred Stock

The Company classifies convertible preferred stock outside of stockholders' deficit on its balance sheets as the requirements of triggering a deemed liquidation event are not within the Company's control. In the event of a deemed liquidation event, the proceeds from the event are distributed in accordance with liquidation preferences (Note 8). The Company adjusts the carrying value of the convertible preferred stock to their redemption values when it becomes probable a redemption event will occur.

Research and Development

Research and development costs are expensed in the period incurred. Research and development costs include payroll and personnel expense; consulting costs; external contract research and development costs; raw materials and allocated overhead such as depreciation and amortization, rent and utilities. Advance payments for goods and services to be used in future research and development activities are recorded as prepaid expenses and are expensed over the service period as the services are provided or when the goods are consumed.

Clinical trial costs are a component of research and development expenses. The Company estimates expenses incurred for clinical trials that are in process based on services performed under contractual agreements with clinical research organizations and actual clinical investigators. Included in the estimates are (1) the fee per patient enrolled as specified in the clinical trial contract with each institution participating in the clinical trial and (2) progressive data on patient enrollments obtained from participating clinical trial sites and the actual services performed. Changes in clinical trial assumptions, such as the length of time estimated to enroll all patients, rate of screening failures, patient drop-out rates, number and nature of adverse event reports, and the total number of patients enrolled can impact the average and expected cost per patient and the overall cost of the clinical trial. The Company monitors the progress of the trials and their related activities and adjusts, when applicable, the accruals accordingly. Adjustments to accruals are charged to expense in the period in which the facts that give rise to the adjustment become known. In the event of early termination of a clinical trial or site, the Company would accrue an amount based on estimates of the remaining noncancellable obligations associated with winding down the clinical trial or cancelation of a participating site.

Stock-Based Compensation

The Company accounts for all stock-based compensation, including stock options and warrants, at fair value and recognizes stock-based compensation expense for those equity awards, net of actual forfeitures, over the requisite service period, which is generally the vesting period of the respective award.

The fair value of the Company's stock options and warrants on the date of grant was determined by the Company with the assistance of a third-party valuation specialist in accordance with the guidance in the American Institute of Certified Public Accountants Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*, as the Company's common stock is not actively traded.

Income Taxes

Income taxes are accounted for using the asset and liability method of accounting for taxes. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the consolidated financial statement carrying amounts of existing assets and liabilities and their respective tax bases, including operating loss carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the year in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

A valuation allowance is established when necessary to reduce net deferred tax assets to the amount expected to be realized through future operations. Income tax expense consists of taxes payable for the current period and the net change during the period in deferred tax assets and liabilities.

The Company evaluates its uncertain tax positions based on a determination of whether and how much of a tax benefit taken by the Company in its tax filings or positions is more likely than not to be realized. Potential interest and penalties associated with any uncertain tax positions are recorded as a component of income tax expense. Management has evaluated the Company's tax position and concluded that the Company has taken no uncertain tax positions that would require adjustment or disclosure in the consolidated financial statements.

Net Loss Per Share

The Company follows the two-class method when computing net loss per share as the Company has issued shares that meet the definition of participating securities. The two-class method determines net loss per share for each class of common and participating securities according to dividends declared or accumulated, and participation rights in undistributed earnings. The two-class method requires income available to common stockholders for the period to be allocated between common and participating securities based upon their respective rights to receive dividends as if all income for the period had been distributed.

Basic net loss per share attributable to common stockholders is computed by dividing the net loss attributable to common stockholders by the weighted average number of common shares outstanding for the period. Diluted net loss attributable to common stockholders is computed by adjusting net loss attributable to common stockholders to reallocate undistributed earnings based on the potential impact of dilutive securities. Diluted loss per share attributable to common stockholders is computed by dividing the diluted net loss attributable to common stockholders by the weighted average number of common shares outstanding for the period, including potential dilutive common stock. For purpose of this calculation, outstanding stock options, stock warrants and convertible preferred stock are considered potential dilutive common stock and are excluded from the computation of net loss per share as their effect is anti-dilutive.

The Company's convertible preferred stock contractually entitles the holders of such shares to participate in dividends but does not contractually require the holders of such shares to participate in losses of the Company. Accordingly, in periods in which the Company reports a net loss, such losses are not allocated to such participating securities. In periods in which the Company reports a net loss attributable to common stockholders, diluted net loss per share attributable to common stockholders is the same as basic net loss per share attributable to common stockholders, since dilutive common shares are not assumed to be outstanding if their effect is anti-dilutive. The Company reported a net loss attributable to common stockholders for the years ended December 31, 2019 and 2018.

Comprehensive Loss

There were no differences between net loss and comprehensive loss presented in the consolidated statements of operations for 2019 and 2018.

Segments

Operating segments are defined as components of an entity for which separate financial information is available and that is regularly reviewed by the chief operating decision maker ("CODM'), in deciding how to allocate resources to an individual segment and in assessing performance. The Company's CODM is its chief executive officer. The Company has determined it operates in one segment.

Emerging Growth Company Status

The Company is an "emerging growth company," ("EGC") as defined in the Jumpstart Our Business Startups Act, (the "JOBS Act"), and may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not EGCs. The Company may take advantage of these exemptions until it is no longer an EGC under Section 107 of the JOBS Act and has elected to use the

extended transition period for complying with new or revised accounting standards. As a result of this election, the Company's financial statements may not be comparable to companies that comply with public company Financial Accounting Standards Board ("FASB") standards' effective dates. The Company may take advantage of these exemptions up until the last day of the fiscal year following the fifth anniversary of an offering or such earlier time that it is no longer an EGC.

Recently Issued Accounting Standards

In February 2016, the FASB issued Accounting Standards Updates ("ASU") No. 2016-02, *Leases (Topic 842)*, as amended, with guidance regarding the accounting for and disclosure of leases. The update requires lessees to recognize the liabilities related to all leases, including operating leases on the balance sheet. This update also requires lessees and lessors to disclose key information about their leasing transactions. This update is effective for entities other than public business entities, including emerging growth companies that elected to defer compliance with new or revised financial accounting standards until a company that is not an issuer is required to comply with such standards, for annual reporting periods beginning after December 15, 2021, and interim periods within annual periods beginning after December 15, 2022. Early adoption is permitted. The Company is currently assessing the impact of adopting ASU No. 2016-02 on the consolidated financial statements and related disclosures.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments-Credit Losses: Measurement of Credit Losses on Financial Instruments (Topic 326)*. ASU No. 2016-13 requires measurement and recognition of expected credit losses for financial assets. In April 2019, the FASB issued clarification to ASU No. 2016-13 within ASU No. 2019-04, *Codification Improvements to Topic 326, Financial Instruments-Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments*. This update is effective for entities other than public business entities, including emerging growth companies that elected to defer compliance with new or revised financial accounting standards until a company that is not an issuer is required to comply with such standards, for annual reporting periods beginning after December 15, 2021.The Company is currently evaluating the impact that ASU No. 2016-13 will have on the consolidated financial statements and related disclosures.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement* (*Topic 820*), Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement. This update removed the following disclosure requirements: (1) the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy; (2) the policy for timing of transfers between levels; and (3) the valuation processes for Level 3 fair value measurements. Additionally, this update added the following disclosure requirements: (1) the changes in unrealized gains and losses for the period included in other comprehensive income and loss for recurring Level 3 fair value measurements held at the end of the reporting period; (2) the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements. For certain unobservable inputs, an entity may disclose other quantitative information (such as the median or arithmetic average) in lieu of the weighted average if the entity determines that other quantitative information would be a more reasonable and rational method to reflect the distribution of unobservable inputs used to develop Level 3 fair value measurements. ASU No. 2018-13 will be effective for fiscal years beginning after December 15, 2019 with early adoption permitted. As of December 31, 2019, the Company has not elected to early adopt this update but does not expect that the adoption of this update will have a material effect on the consolidated financial statements and related disclosures.

In December 2019, the FASB issued ASU No. 2019-12, *Simplifying the Accounting for Income Taxes*. ASU No. 2019-12 eliminates certain exceptions related to the approach for intra-period tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. It also clarifies and simplifies other aspects of the accounting for income taxes. This update is effective for entities other than public business entities, including emerging growth companies that elected to defer compliance with new or revised financial accounting standards until a company that is not an issuer is required to comply with such standards, for annual reporting periods beginning after December 15,

2021, and interim periods within annual periods beginning after December 15, 2022. The Company is currently evaluating the impact that ASU No. 2019-12 will have on the consolidated financial statements and related disclosures.

In August 2020, the FASB issued ASU No. 2020-06, *Debt – Debt with Conversion and Other (Subtopic 470-20) and Derivatives and Hedging – Contracts in Entity's Own Equity (Subtopic 815-40)*. This update simplifies the accounting for convertible debt instruments by removing certain accounting separation models as well as the accounting for debt instruments with embedded conversion features that are not required to be accounted for as derivative instruments. The update also updates and improves the consistency of earnings per share calculations for convertible instruments. The amendments in this ASU are effective for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years. The Company is currently evaluating the impact that the implementation of this update will have on the Company's consolidated financial statements and related disclosures.

3. PROPERTY AND EQUIPMENT, NET

Property and equipment, net consist of the following (in thousands):

	December 31,	
	2019	2018
Office equipment and furniture	$ 14	$ 14
Research equipment	641	423
Total property and equipment	655	437
Less accumulated depreciation and amortization	(387)	(314)
Property and equipment, net	$ 268	$ 123

Depreciation and amortization expense for the years ended December 31, 2019 and 2018, was $73 thousand and $44 thousand, respectively.

4. OTHER CURRENT LIABILITIES

Other current liabilities consist of the following (in thousands):

	December 31,	
	2019	2018
Compensation and benefits	$685	$649
Other	125	207
Total other current liabilities	$810	$856

5. DEBT

Debt consists of the following (in thousands):

	December 31,	
	2019	2018
2019 Notes	$ 2,345	$ —
2019 Secured Notes (related party)	3,854	—
2019 Bridge Note	1,000	—
2019 Special Note	2,570	—
2018 Bridge Notes (related party)	3,000	750
2017 Notes	4,050	4,050
Discounts	(764)	(54)
Total debt	16,055	4,746
Less current portion	(16,055)	(696)
Noncurrent debt	$ —	$4,050

As of December 31, 2019, all debts are due in 2020 and are presented as current liabilities in the Company's consolidated balance sheet.

2019 Notes

During the period from April 2019 through September 2019, the Company issued $2,345 thousand of convertible promissory notes ("2019 Notes"). Interest on the principal amount outstanding is fixed at 10% with a one-year maturity date, if not previously converted to shares of the Company's equity securities.

The 2019 Notes can convert at the option of the holders in the event the Company sells shares of its equity securities on or before the maturity date with total proceeds of not less than $5 million or $20 million, depending upon the underlying 2019 Notes agreement, to any third-party investor. The 2019 Notes and unpaid interest will convert into equity securities subject to the same terms and conditions applicable to the equity securities sold.

The 2019 Notes include detachable warrants to purchase 351,257 of the Company's common stock at exercise prices between $1.35 and $2.56 per share. The detachable warrants have an expiration date of ten years from the issuance date, or fiscal year 2029. The estimated fair value of the detachable warrants was determined using the Black-Scholes option-pricing model (Level 3 hierarchy) and totaled $51 thousand upon issuance. The fair value of the detachable warrants was treated as a discount on the 2019 Notes and amortized as incremental interest expense using the effective interest method over the life of the 2019 Notes.

2019 Secured Notes (Related Party)

In September and October 2019, the Company issued an aggregate of $1,500 thousand in secured convertible promissory notes ("2019 Secured Notes") with a repayment premium of 150% of the principal amount. Interest on the principal amount outstanding is fixed at 10% with a maturity date of December 31, 2020. The repayment premium of $2,250 thousand is being amortized as incremental interest expense using the effective interest method over the life of the 2019 Secured Notes.

The 2019 Secured Notes will automatically convert in the event the Company sells shares of its equity securities on or before the maturity date with total proceeds of not less than $25 million to any third-party investor, excluding the conversion of the 2019 Secured Notes or other convertible securities for capital raising purposes. The 2019 Secured Notes, unpaid interest plus the repayment premium shall convert into equity securities subject to the same terms and conditions applicable to the equity securities sold.

The automatic conversion features of the 2019 Secured Notes were determined by management to be embedded derivative instruments. The embedded derivative instruments are initially measured at fair value and classified as a liability on the balance sheet, within the same line item as the 2019 Secured Notes. Subsequent changes in fair value are in net loss as fair value adjustments on embedded debt derivatives expense. To determine the fair value of the aggregated automatic conversion features, management utilized a "with-and-without" in a modified convertible bond model, incorporating the automatic conversion features. Key assumptions utilized in determining the initial fair value were: (a) 5% to 10% probability of settlement at the maturity date of December 31, 2020; (b) 25% probability of settlement on a change of control or upon a qualified initial public offering in 9 to 10 months of issuance; and (c) 65% probability of settlement on a qualified financing in 6 months of issuance. Based upon the modified convertible bond model utilized by management, the fair value of the automatic conversion features was determined to be $940 thousand upon issuance of the 2019 Secured Notes and is being amortized as incremental interest expense using the effective interest method over the life of the 2019 Secured Notes.

In 2019, the Company recognized an additional $617 thousand of interest expense relating to amortization of the repayment premium and the initial discount related to the embedded derivative instrument.

2019 Bridge Note

In November 2019, the Company issued a $1,000 thousand bridge convertible promissory note ("2019 Bridge Note"). Interest on the principal amount is fixed at 7% and commences 60 days after the issuance date with a maturity date of December 31, 2020.

The 2019 Bridge Note is convertible in the event the Company sells shares of its preferred equity security on or before the maturity date with total proceeds of not less than $8 million to any third-party investor, including the conversion of the certain secured 2019 Note but excluding the principal and interest under any other promissory notes.

2019 Special Note

In April 2019, the Company issued a $1,000 thousand convertible promissory note ("2019 Special Note"). Interest on the principal amount outstanding is fixed at 10% with a one-year maturity date, if not previously converted to shares of the Company's equity securities.

The 2019 Special Note can convert at the option of the holders in the event the Company sells shares of its equity securities on or before the maturity date with total proceeds of not less than $20 million to any third-party investor. The 2019 Special Note and unpaid interest will convert into equity securities subject to the same terms and conditions applicable to the equity securities sold.

The 2019 Special Note contains a feature requiring amendment of the original instrument if the Company issues additional instruments with preferable terms relative to those contained in the 2019 Special Note. In September 2019, the original agreement was amended requiring a 150% repayment premium in addition to the original 10% interest rate based upon the Company's issuance of the 2019 Secured Notes. The contractual amendment was treated as a debt extinguishment and a loss of $75 thousand was recorded in net loss as a loss on extinguishment expense. The repayment premium of $1,500 thousand is being amortized as incremental interest expense using the effective interest method over the life of the 2019 Special Note.

The automatic conversion features of the 2019 Special Note were determined by management to be embedded derivative instruments. The embedded derivative instruments are initially measured at fair value and classified as a liability on the balance sheet, within the same line item as the 2019 Special Note. Subsequent changes in fair value are in net loss as fair value adjustments on embedded debt derivatives expense. To determine the fair value of the aggregated automatic conversion features, management utilized a

"with-and-without" in a modified convertible bond model, incorporating the automatic conversion features. Key assumptions utilized in determining the initial fair value were: (a) 10% probability of settlement at the maturity date of December 31, 2020; (b) 25% probability of settlement on a change of control or upon a qualified initial public offering in 10 months of issuance; and (c) 65% probability of settlement on a qualified financing in 6 months of issuance. Based upon the modified convertible bond model utilized by management, the fair value of the automatic conversion features was determined to be $663 thousand upon issuance of the 2019 Special Note and is being amortized as incremental interest expense using the effective interest method over the life of the 2019 Special Note.

The 2019 Special Note includes a detachable warrant allowing the purchase of 186,567 of the Company's common stock at an exercise price of $1.34 per share. The detachable warrant has an expiration date of ten years from the issuance date, or fiscal year 2029. The fair value of the detachable warrant was treated as a discount on the 2019 Special Note and amortized as incremental interest expense using the effective interest method over the life of the 2019 Special Note. The estimated fair value of the detachable warrant was determined using the Black-Scholes option-pricing model (Level 3 hierarchy) and totaled $74 thousand upon issuance.

In 2019, the Company recognized an additional $609 thousand of interest expense relating to amortization of the repayment premium, discount related to the detachable warrant and the initial discount related to embedded derivative instruments.

On March 27, 2020, the Company consented to the exchange of the 2019 Special Note where the original holder of the 2019 Special Note sold it to a current equity owner of the Company. The detachable warrant issued in conjunction with the 2019 Special Note for 186,657 common stock were not included in the exchange and were subsequently canceled.

2018 Bridge Notes (Related Party)

The Company issued $2,250 thousand and $750 thousand 2018 convertible promissory notes ("2018 Bridge Notes") in 2019 and 2018, respectively, to fund the Company's operations. Interest on the principal amount outstanding is fixed at 10% with an amended maturity date to permit the conversion of all 2018 Bridge Notes into Series AA preferred stock, as described further in Note 16, *Subsequent Events*.

The 2018 Bridge Notes are convertible in the event the Company sells shares of its equity securities with total proceeds of not less than $5 million to any third-party investor, excluding the conversion of the 2018 Bridge Notes or other convertible securities for capital raising purposes. At the election of the lender, the 2018 Bridge Notes and unpaid interest shall convert into equity securities subject to the same terms and conditions applicable to the equity securities sold.

The 2018 Bridge Notes include detachable warrants to purchase 562,500 and 187,500 shares issued in 2019 and 2018, respectively, of the Company's common stock at an exercise price of $2.56 per share. The detachable warrants expire on December 19, 2028. The estimated fair value of the detachable warrants was determined using the Black-Scholes option-pricing model (Level 3 hierarchy), treated as a discount on the 2018 Bridge Notes and amortized as incremental interest expense using the effective interest method over the life of the 2018 Bridge Notes.

2017 Notes

The Company issued $4,050 thousand convertible promissory notes in 2017 ("2017 Notes") in exchange for cash of the same amount. Interest on the principal amount outstanding is fixed at 8% with an original maturity date of April 30, 2018, convertible into preferred stock at a share price equal to $13.50, unless converted prior to the maturity date. After December 31, 2019, the maturity date was extended to December 31, 2020.

The 2017 Notes provide the lenders with certain conversion rights for all unpaid principal and interest in the event (i) the Company sells shares of its preferred stock on or before December 31, 2020, with total proceeds of not less than $5 million to any third-party investor, including the conversion of the 2017 Notes or such lower amount as agreed by the lenders; (ii) the Company enters into a merger, combination, or sale of all or substantially all of the stock or assets of the Company—at such time all unpaid principal and interest shall convert to Series G preferred shares at a share price equal to $13.50; or (iii) of maturity on December 31, 2020.

6. FAIR VALUE MEASUREMENTS

The following table presents information about the Company's financial liabilities measured at fair value on a recurring basis and indicate the level of the fair value hierarchy utilized to determine such fair values (in thousands):

	Fair Value Measurements as of December 31, 2019			
	Level 1	Level 2	Level 3	Total
Current liabilities				
Embedded debt derivatives	$ —	$ —	$3,920	$3,920
Total liabilities measured at fair value	$ —	$ —	$3,920	$3,920

The Company's embedded debt derivatives are measured at fair value using a probability-weighted discounted cash flow valuation methodology. The determination of the fair value of embedded debt derivatives includes inputs not observable in the market and as such, represents a Level 3 measurement. The methodology utilized requires inputs based on certain subjective assumptions, including probabilities of debt settlement scenarios and a discount rate. This approach results in the classification of these embedded debt derivatives as Level 3 of the fair value hierarchy. The assumptions utilized to value the embedded debt derivatives at December 31, 2019 were the probability of (a) 3% probability of settlement at the contractual maturity date; (b) 5% probability of settlement on a change of control or upon a qualified initial public offering prior to the contractual maturity date; and (c) 92% probability of settlement on a qualified financing prior to the contractual maturity date. For the year ended December 31, 2019, the Company recognized a $2.0 million expense in the statement of operations as other expense—fair value adjustments on embedded debt derivatives.

The following table provides a reconciliation of embedded debt derivatives measured at fair value on a recurring basis using significant unobservable inputs (Level 3) (in thousands):

	Amount
Balance at December 31, 2018	$ —
Additions	1,947
Change in fair value	1,973
Balance at December 31, 2019	$3,920

There were no transfers among Level 1, Level 2 or Level 3 categories in the year ended December 31, 2019.

7. COMMITMENTS AND CONTINGENCIES

Operating Lease

As of December 31, 2019, the Company leases office facility and other equipment under operating leases, which expire at various dates through 2024. Lease expense for the years ended December 31, 2019 and 2018 was $1,107 thousand and $1,028 thousand, respectively.

The following table presents the future annual minimum payments required under noncancellable operating leases at December 31, (in thousands):

2020	$1,171
2021	1,177
2022	1,204
2023	1,234
2024	524
2025	—
Total operating lease obligations	$5,310

Capital Lease

The Company leases research equipment under a capital finance lease. The capital lease asset is classified within property and equipment, net within the Company's consolidated balance sheets.

The following table presents the future annual minimum payments under the capitalized lease, together with the present value of net minimum lease payments at December 31, (in thousands):

2020	$ 41
2021	41
2022	41
2023	41
2024	14
Total capital lease obligations	178
Less amount representing interest	(31)
Present value of minimum capital lease obligations	$147

License Agreements

In the normal course of business, the Company enters into licensing agreements with various parties to obtain the right to make, use, and sell licensed products currently in development.

Litigation

The Company records estimated losses from loss contingencies (such as a loss arising from a litigation) when it determines that it is probable a liability has been incurred and the amount of loss can be reasonably estimated. Litigation is subject to many factors that are difficult to predict so that there can be no assurance, in the event of a material unfavorable result in one or more claims, the Company will not incur material costs.

During 2017, the Company became actively involved in a matter pending in the Ontario (Canada) Superior Court of Justice which names, among multiple other defendants, the Company and two former officers of the Company. The claims pending in this matter allege breach of contract by the Company and seek declaratory and other relief, including monetary damages from the Company, and the individual defendants, including the Company's former officers. The claims by such plaintiffs were originally made in a lawsuit filed in Ontario in October 2011, but was not pursued by such plaintiffs in any material manner until 2017. The Company believes that there is no merit to the claims alleged against the Company and its former officers, including no alleged breach of contract by the Company and intends to vigorously defend against the claims pertaining to the Company and its former officers. At the present stage of the suit, management believes the outcome in this matter is not likely to have any material impact on the Company's results, cash flows, or financial position.

8. CONVERTIBLE PREFERRED STOCK

For the years ended 2019 and 2018, there were no transactions involving Series A, B, C, D, E, and F convertible preferred stock. During 2018, the Company changed the par value of its convertible preferred stock from $0.10 to $0.0001 per share. The change had no impact on the number of shares of convertible preferred stock outstanding.

The following is a summary of the Company's Series A, B, C, D, E, and F convertible preferred stock at December 31, 2019 and 2018 (in thousands, except for share and par value data):

	Par Value	Outstanding	Value
Series A convertible preferred stock	$ 0.0001	2,035,428	$ 1,425
Series B convertible preferred stock	$ 0.0001	1,809,996	2,715
Series C convertible preferred stock	$ 0.0001	2,156,667	6,470
Series D convertible preferred stock	$ 0.0001	2,969,693	9,800
Series E convertible preferred stock	$ 0.0001	4,285,879	17,135
Series F convertible preferred stock	$ 0.0001	2,000,000	10,000
Total		15,257,663	$ 47,545

A summary of the more significant rights and preferences of the Company's convertible preferred stock are as follows:

Dividend Rights

Dividends are cumulative and accrue annually on all outstanding series of preferred stock at 8% per annum.

Dividends are payable in cash, when and if determined and declared by the board of directors. The dividend rate is subject to adjustment for stock splits, stock dividends, recapitalizations, and other similar events that impact the number of shares outstanding.

Holders of Series C, D, E, and F convertible preferred stock are entitled to receive dividends pari passu prior and in preference to holders of Series A and B convertible preferred stock and common stock. Holders of Series A and B convertible preferred stock are entitled to receive dividends pari passu prior and in preference to common stockholders.

Cumulative and unpaid dividends will convert into shares of common stock when the underlying convertible preferred stock is converted to common stock. The conversion rates for the cumulative and unpaid dividends are the same as those for the underlying convertible preferred stock.

The following is a summary of cumulative and unpaid dividends on the Company's convertible preferred stock (in thousands):

	December 31,	
	2019	2018
Series A convertible preferred stock	$ 2,173	$ 2,059
Series B convertible preferred stock	3,872	3,655
Series C convertible preferred stock	8,071	7,551
Series D convertible preferred stock	10,965	10,181
Series E convertible preferred stock	10,751	9,379
Series F convertible preferred stock	2,311	1,511
Total	$ 38,143	$ 34,336

Liquidation Rights

In the event of liquidation, before any distribution of assets shall be made to the common stockholders, the holders of outstanding shares of convertible preferred stock are first entitled to be paid the following per share amounts on a pari passu basis, prior to the payment of accrued but unpaid dividends described above:

Series A convertible preferred stock	$0.70
Series B convertible preferred stock	$1.50
Series C convertible preferred stock	$3.00
Series D convertible preferred stock	$3.30
Series E convertible preferred stock	$4.00
Series F convertible preferred stock	$5.00

Voting Rights

Holders of outstanding shares of convertible preferred stock are entitled to the number of votes equal to the number of whole shares of common stock into which the applicable convertible preferred stock is convertible. The Company may not undertake certain defined actions—such as the repurchase or redemption of any shares of common stock, the disposal of substantially all of its assets, the amendment of the articles of incorporation or by-laws, or the creation of any new class or series of equity or debt instruments—without first obtaining the consent or approval of 66.67% of the holders of Series A and Series B convertible preferred stock. Holders of the Series C, D, E, and F convertible preferred stock have additional voting rights that require the Company to obtain the consent or approval of 66.67% of these shareholders prior to (i) redeeming any shares of common stock or convertible preferred stock over 5% of the Company's issued and outstanding stock, (ii) creating a class of stock with rights and preferences superior to the Series E convertible preferred stock, (iii) declaring or paying dividends on shares of common stock, or (iv) recapitalizing or merging with any other corporation or increasing the number of members of the board of directors.

Conversion Rights

At the option of the holder, each share of all series of convertible preferred stock is convertible into an equal number of shares of common stock. The conversion price is subject to adjustment should specified dilutive events occur. All shares of the convertible preferred stock automatically convert into shares of the Company's common stock upon the earlier of (i) an underwritten firm commitment public offering resulting in aggregate net cash proceeds of $40 million at a per share price equal to or greater than $8.00 or (ii) the execution of a definitive agreement for the purchase of common stock of the Company sufficient to effect a change of control, merger, or reorganization at a per share price in excess of $4.00. The Company has reserved approximately 15.3 million shares of common stock for the potential conversion of the convertible preferred stock.

9. COMMON STOCK

During 2018, the Company changed the par value of its common stock from $0.10 to $0.0001 per share. The change had no impact on the number of shares of common stock outstanding. Common stockholders are entitled to one vote for each share of common stock held at all meetings of stockholders and written actions in lieu of meetings. Common stockholders are entitled to receive dividends, if and when declared by the board of directors. No dividends have been declared or paid by the Company through December 31, 2019.

10. STOCK-BASED COMPENSATION

In 2018, the board of directors approved the Company's 2018 Stock Incentive Plan (the "2018 Plan")—which supersedes and replaces previous incentive stock plans—and reserved 5.0 million common shares for issuance under the 2018 Plan. All previously issued and outstanding stock-based awards issued under

predecessor incentive plans were adopted into the 2018 Plan. The 2018 Plan provides the issuance of stock awards to attract and retain employees, directors, consultants and advisors and to provide incentive for individuals to contribute to the growth of the Company. As of December 31, 2019, approximately 1,063 thousand common shares remain available for future awards under the 2018 Plan.

Stock Options

During 2019, the Company granted options to purchase 300 thousand shares of common stock to employees, consultants, and nonexecutive directors pursuant to the 2018 Plan. The stock options granted during 2019 vest over a period of 6 to 48 months with an exercise price between $0.34 and $2.56 per share. The Company uses the Black-Scholes option-pricing model to estimate the fair value of the stock options on the grant dates between $0.01 and $0.06 per share.

During 2018, the Company granted options to purchase 3,170 thousand shares of common stock to employees, consultants, and nonexecutive directors pursuant to the 2018 Plan. The stock options granted during 2018 vest over a period of 24 to 48 months with an exercise price of $2.56 per share. The Company uses the Black-Scholes option-pricing model to estimate the fair value of the stock options on the grant dates between $0.22 and $1.67 per share.

The following is a summary of the stock option award activity under the 2018 Plan during the years ended December 31, 2019 and 2018:

	Number of Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding at December 31, 2017	716,432	$ 2.29	9.05	$ 193
Granted	3,170,000	$ 2.56		
Exercised	—	$ —		
Forfeited	(7,500)	$ 2.56		
Expired	—	$ —		
Outstanding at December 31, 2018	3,878,932	$ 2.52	9.20	$ —
Granted	300,000	$ 0.90		
Exercised	—	$ —		
Forfeited	(391,875)	$ (2.55)		
Expired	(61,326)	$ (2.43)		
Outstanding at December 31, 2019	3,725,731	$ 2.38	8.12	$ —
Exercisable at December 31, 2019	2,201,286	$ 2.47	7.79	$ —
Options expected to vest at December 31, 2019	1,524,445	$ 1.98	8.09	$ —

At December 31, 2019, there was approximately $1,226 thousand of unrecognized stock-based compensation expense associated with the stock options, which is expected to be recognized over a weighted-average period of 2.26 years.

Common Stock Warrants

During 2019, the Company granted warrants to purchase approximately 10 thousand shares of the Company's common stock to a vendor. The common stock warrants granted during 2019 vested immediately with an exercise price of $2.56 per share. The Company uses the Black-Scholes option-pricing model to estimate the fair value of the awards on the grant date of $0.21 per share. During 2018, the Company granted warrants to purchase approximately 15,000 of the Company's common stock. The common stock warrants granted during 2018 vested immediately with an exercise price of $3.00. The Company uses the Black-Scholes option-pricing model to estimate the fair value of the common stock warrants on the grant date of $1.55 per share.

The following is a summary of the common stock warrant activity during the years ended December 31, 2019 and 2018:

	Number of Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding at December 31, 2017	3,591,340	$ 0.49	3.33	$ 7,579
Granted	15,000	$ 3.00		
Exercised	—	$ —		
Expired	—	$ —		
Outstanding at December 31, 2018	3,606,340	$ 0.50	2.34	$ 596
Granted	10,000	$ 2.56		
Exercised	(109,500)	$ (1.41)		
Expired	(750,500)	$ (1.64)		
Outstanding at December 31, 2019	2,756,340	$ 0.17	4.83	$ —
Exercisable at December 31, 2019	2,756,340	$ 0.17	4.83	$ —

As of December 31, 2019, there was no unrecognized stock-based compensation expense associated with the common stock warrants.

During 2019 and 2018, the Company utilized the Black-Scholes option-pricing model for estimating the fair value of the stock options and common stock warrants granted. The following table presents the assumptions and the Company's methodology for developing each of the assumptions used:

	2019	2018
Volatility	90.0%	72.5%–75.0%
Expected life (years)	0.5–10.0	6.0–10.0
Risk-free interest rate	1.4%–2.5%	2.2%–2.8%
Dividend rate	— %	— %

- Volatility—The Company estimates the expected volatility of its common stock at the date of grant based on the historical volatility of comparable public companies over the expected term.
- Expected life—The expected life is estimated as the contractual term.
- Risk-free interest rate—The risk-free rate for periods within the estimated life of the stock award is based on the U.S. Treasury yield curve in effect at the time of grant.
- Dividend rate—The assumed dividend yield is based upon the Company's expectation of not paying dividends in the foreseeable future.

Stock-based compensation expense was recorded in the following line items in the consolidated statements of operations for the years ended December 31, 2019 and 2018 (in thousands):

	2019	2018
Research and development	$ 588	$ 672
General and administrative	588	520
Total stock-based compensation	$1,176	$1,192

11. EMPLOYEE RETIREMENT PLAN

The Company maintains a defined contribution 401(k) profit-sharing plan (the "Plan") for all employees. Under the Plan, participants may make voluntary contributions up to the maximum amount allowable by law.

The Plan is based on employees' salary deferral, and the Company matches employees' contributions up to 4% of the employees' base salary. Employees are 100% vested in the Company's match contributions. During the years ended December 31, 2019 and 2018, the Company's matching contributions were approximately $102 thousand and $75 thousand, respectively.

12. RELATED-PARTY TRANSACTIONS

Debt

During 2019 and 2018, the Company entered debt arrangements with a principal owner of the Company. These arrangements relate to the 2019 Secured Notes and 2018 Bridge Notes disclosed in Note 5 of these financial statements.

Consulting Agreement

During 2018, the Company entered into a consulting agreement with the son of the Company's founder and prior chief scientific officer for services to the Company. Under the terms of the agreement, the Company paid $18 thousand for services performed in 2018. The agreement was terminated by mutual consent in 2018.

13. INCOME TAXES

Income tax expense consists of the following (in thousands):

	Year Ended December 31,	
	2019	2018
Current:		
Federal	$ —	$ —
State	—	—
Current tax provision	—	—
Deferred:		
Federal	(2,551)	(2,580)
State	(776)	(782)
Deferred tax benefit	(3,327)	(3,362)
Less change in valuation allowance	3,327	3,362
Total income tax provision	$ —	$ —

The effective income tax rate for the years ended December 31, 2019 and 2018 is different from the federal statutory income tax rate primarily due to the change in valuation allowance against deferred tax assets and permanent differences primarily related to non-deductible interest and embedded debt derivatives expense. The reconciliation of the federal statutory income tax rate to the Company's effective income tax rate is as follows:

	Year Ended December 31,	
	2019	2018
Federal statutory income tax rate	21.0%	21.0%
State income taxes, net of federal benefit	4.6	6.0
Non-deductible interest and embedded debt derivative expense	(5.4)	(0.6)
Other	(0.4)	(0.6)
Change in valuation allowance	(19.8)	(25.8)
Effective income tax rate	— %	— %

The Company's deferred tax assets consist primarily of its net operating loss and research and development tax credit carryforwards, along with other minor temporary differences. No amounts are being considered as an uncertain tax position or disclosed as an unrecognized tax benefit. The Company has provided a valuation allowance against its total net deferred tax assets because the Company's ability to generate sufficient future taxable income is uncertain.

Significant components of the Company's deferred tax assets and liabilities consist of the following (in thousands):

	December 31,	
	2019	2018
Net operating loss carryforwards	$ 18,338	$ 15,400
Equity-based compensation	2,384	2,137
Research and development tax credit carryforwards	1,364	1,364
Other accruals	142	—
Total deferred tax assets	22,228	18,901
Valuation allowance	(22,228)	(18,901)
Net deferred tax assets	$ —	$ —

The Company has incurred annual net operating losses in each year since inception. The Company believes it could be subject to certain limitations on the utilization of these net operating losses pursuant to Internal Revenue Code Section 382. Therefore, the Company has not reflected the benefit of any such net operating loss carryforwards in the financial statements. Due to the Company's history of losses, and lack of other positive evidence, the Company has determined that it is more likely than not that its net deferred tax assets will not be realized, and therefore, the net deferred tax assets are fully offset by a valuation allowance at December 31, 2019 and 2018.

As of December 31, 2019, the Company has net operating loss carryforwards for federal and state tax reporting purposes of $65,688 thousand, a portion of which expire beginning in 2020. Net operating loss carryforwards generated in 2019 and 2018 for federal tax reporting purposes of $10,702 thousand and $10,377 thousand, respectively, have an indefinite life. The remaining federal net operating losses are subject to a 20-year carryforward period. As of December 31, 2019, the Company has research and development tax credit carryforwards of approximately $1,364 thousand, which expire beginning in 2026.

The Company evaluates its uncertain tax positions under ASC 740-10, which requires that realization of an uncertain income tax position be recognized in the financial statements. The benefit to be recorded in the financial statements is the amount most likely to be realized assuming a review by tax authorities having all relevant information and applying current conventions. The Company concluded that there are no uncertain tax positions in any of the periods presented.

We are subject to taxation in federal and various state jurisdictions, which are generally subject to a three-year statute of limitations. The Company is not currently subject to any income tax examinations.

14. NET LOSS PER SHARE

Basic and diluted net loss per share attributable to common stockholders is calculated as follows (in thousands except share and per share amounts):

	Year Ended December 31,	
	2019	2018
Net loss	$ (16,740)	$ (13,039)
Cumulative dividends on convertible preferred stock	(3,804)	(3,804)
Net loss attributable to common stockholders	$ (20,544)	$ (16,843)
Net loss per share—basic and diluted	$ (1.16)	$ (0.96)
Weighted-average number of shares used in computing net loss per share—basic and diluted	17,636,028	17,628,909

The following outstanding potentially dilutive securities have been excluded from the calculation of diluted net loss per share, as their effect is anti-dilutive:

	December 31,	
	2019	2018
Convertible preferred stock	15,257,663	15,257,663
Stock options to purchase common stock	3,725,731	3,878,932
Warrants issued to employees and contractor to purchase common stock	2,756,340	3,606,340
Warrants issued related to convertible notes and other equity agreements	1,287,824	187,500

15. SUBSEQUENT EVENTS

The Company has evaluated subsequent events through November 12, 2020, which represents the date the consolidated financial statements were available for issuance, in order to ensure that these consolidated financial statements include appropriate recognition and/or disclosure of events. Since December 31, 2019, the following material subsequent events occurred:

Convertible preferred stock

In January 2020, the Company closed a series AA preferred stock financing and exchange round with new institutional investors whereby existing preferred stakeholders were invited to participate. Under the financing agreement the following events occurred:

(i) Certificate of incorporation was amended to increase the number of authorized shares of the Company's common stock to a total of 1,230,000,000 shares and authorize and designate 870,211,737 shares of the preferred stock as Series AA convertible preferred stock.

(ii) Current board members were revised by retiring three prior board members and adding one new board member bringing the total to five directors, including four nonemployee directors and one employee director.

(iii) The Company's 2018 Plan was amended to increase the number of shares of common stock reservedfor issuance under the Plan from 5,000,000 shares to 89,507,783 shares in the aggregate.

(iv) All outstanding Series A, B, C, D, E and F convertible preferred stock, which was a total of 15,257,663 shares, were converted into common stock on a 1:1 basis before consideration of participation by the holders in (viii) below.

(v) Accrued dividends on the Series A, B, C, D, E and F convertible preferred stock of approximately $38,247 thousand were converted into 14,882,769 shares of common stock before consideration of participation by the holders in (viii) below.

(vi) The Company received approximately $10,567 thousand in cash and issued 128,655,237 shares of Series AA convertible preferred stock at $0.082135 per share.

(vii) The Company converted approximately $15,456 thousand of debt including accrued interest and repayment premium into 188,173,050 shares of Series AA convertible preferred stock.

(viii) Existing preferred stockholders who participated in the Series AA convertible preferred stock financing were granted rights to exchange shares of common stock received upon conversion of preferred stock for additional shares of Series AA convertible preferred stock equal to a pro rata portion multiplied by the "Preferred Conversion Pool" exchanged shares. The Company issued an additional 206,976,317 of Series AA convertible preferred stock as exchange shares eligible stockholders forfeited 7,140,280 shares of common stock.

(ix) The Company issued warrants to purchase 30,437,694 shares of common stock with an exercise price of $0.00001 per common share. The warrants have a 30-day maturity date and expire on February 10, 2020. On January 30, 2020, all warrants under the agreement were exercised.

(x) In June 2020, the Company initiated a second financing round of the Series AA convertible preferred stock financing to raise proceeds to further advance its research programs. The Company received approximately $15,520 thousand and issued 188,593,000 Series AA convertible preferred stock at $0.082135 per share. The second financing round closed in October 2020.

Acquisition

In May 2020, the Company entered into a Stock Purchase Agreement to purchase 100% of the shares of Alvaxa Biosciences, Inc. ("Alvaxa"). The former majority shareholder of Alvaxa is the Company's current Chief Scientific Officer. Under the Stock Purchase Agreement, the Company paid $197 thousand and issued 14,610,093 shares of the Company's common stock to the shareholders of Alvaxa. The Company has evaluated the acquisition under ASC 805, Business Combinations, and concluded that the acquisition was an asset acquisition and not a business acquisition.

Coronavirus pandemic

On January 30, 2020, the World Health Organization ("WHO") announced a global health emergency because of a new strain of coronavirus originating in Wuhan, China (the "COVID-19 outbreak") and the risks to the international community as the virus spreads globally beyond its point of origin. In March 2020, the WHO classified the COVID- 19 outbreak as a pandemic, based on the rapid increase in exposure globally. The full impact of the COVID-19 outbreak continues to evolve as of the date of this report. As such, it is uncertain as to the full magnitude that the pandemic will have on the Company's financial condition, liquidity, and future results of operations. Management is actively monitoring the global situation on its financial condition, liquidity, operations, suppliers, industry, and workforce. Given the daily evolution of the COVID-19 outbreak and the global responses to curb its spread, the Company is not able to estimate the effects of the COVID-19 outbreak on its results of operations, financial condition, or liquidity for 2020. Although the Company cannot estimate the length or gravity of the impact of the COVID-19 outbreak at this time, if the pandemic continues, it may have a material adverse effect on the Company's results of future operations, financial position, and liquidity in 2021.

Debt

In March 2020, the Company consented to the exchange of the 2019 Special Note as further described in Note 5, *Debt* where the original holder of the 2019 Special Note sold it to a current equity owner of the Company. The detachable warrants issued in conjunction with the 2019 Special Note for 186,567 shares were not included in the exchange and were subsequently cancelled.

In May 2020, the Company received $567 thousand in loan funding from the Payroll Protection Program ("PPP") pursuant to the Coronavirus Aid, Relief, and Economic Security Act, as amended by the Flexibility Act, and administered by the Small Business Administration. The unsecured loan (the "PPP Loan") is with Silicon Valley Bank.

Under the terms of the PPP Loan, interest accrues on the outstanding principal at a rate of 1.0% per annum. The term of the PPP Loan is two years, though it may be payable sooner in connection with an event of default under the PPP Loan. To the extent the PPP Loan amount is not forgiven under the PPP, the Company is obligated to make equal monthly payments of principal and interest, beginning after determination of forgiveness by the lender. The Company may apply for forgiveness any time on or before the maturity date of the PPP Loan. If the Company does not apply for loan forgiveness within ten months after the last day of the covered period, the PPP Loan is no longer deferred, and the Company will be obligated to begin paying principal and interest.

Operating lease

In July 2020, the Company entered into a termination agreement with the sublandlord to terminate its corporate headquarters lease agreement. Under the terms of the agreement, the Company will vacate the property on or before December 31, 2020 and the sublandlord shall retain the $447 thousand security deposit previously remitted in 2018.

In October 2020, the Company entered into a new operating lease for its current corporate headquarters, with a term commencing on November 1, 2020 and continuing through February 2027. The Company's minimum commitment under the new lease is approximately $350 thousand dollars annually.

Stock-based compensation

Subsequent to December 31, 2019, the board of directors approved and granted options to purchase 75,322,000 shares of the common stock under the 2018 Plan. The awards vest over periods from six months to four years with an exercise price of $0.0255 per share.

SENSEI BIOTHERAPEUTICS, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS (UNAUDITED)
(In thousands, except share and per share data)

	September 30, 2020	December 31, 2019
Assets		
Current assets:		
Cash and cash equivalents	$ 3,733	$ 251
Prepaid expenses	696	251
Total current assets	4,429	502
Property and equipment, net	1,050	268
Deposits	36	447
Total assets	$ 5,515	$ 1,217
Liabilities, convertible preferred stock and stockholders' deficit		
Current liabilities:		
Accounts payable	$ 974	$ 3,451
Current portion of long-term debt, including $2,489 and $6,187 with related parties as of September 30, 2020 and December 31, 2019, respectively	2,489	16,055
Accrued interest, including $95 and $323 with related parties as of September 30, 2020 and December 31, 2019, respectively	96	1,398
Other current liabilities	1,156	810
Total current liabilities	4,715	21,714
Other non-current liabilities	126	620
Non-current portion of long-term debt	567	—
Total liabilities	5,408	22,334
Commitments and contingencies (Note 8)		
Convertible preferred stock (Series A-F), $0.0001 par value; no shares authorized, issued or outstanding at September 30, 2020; 20,000,000 shares authorized, 15,257,663 issued and outstanding at December 31, 2019	—	47,545
Convertible preferred stock (Series AA), $0.0001 par value; 870,211,737 shares authorized, 630,592,111 issued and outstanding at September 30, 2020; liquidation value of $51,794 thousand at September 30, 2020; no shares authorized, issued or outstanding at December 31, 2019	51,788	—
Stockholders' deficit:		
Common stock, $0.0001 par value; 1,230,000,000 shares authorized as of September 30, 2020, 85,786,348 shares and 17,738,409 shares issued and outstanding at September 30, 2020 and December 31, 2019, respectively	9	2
Additional paid-in capital	55,591	23,648
Accumulated deficit	(107,281)	(92,312)
Total stockholders' deficit	(51,681)	(68,662)
Total liabilities, convertible preferred stock and stockholders' deficit	$ 5,515	$ 1,217

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

SENSEI BIOTHERAPEUTICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (UNAUDITED)
(In thousands, except share and per share data)

	Nine Months Ended September 30,	
	2020	2019
Operating expenses:		
Research and development	$ 8,629	$ 5,925
General and administrative	5,007	3,103
Alvaxa IPR&D	738	—
Total operating expenses	14,374	9,028
Loss from operations	(14,374)	(9,028)
Other expense:		
Interest expense, including $645 and $208 with related parties in 2020 and 2019, respectively	(1,635)	(860)
Fair value adjustments on embedded debt derivatives, including $575 and $71 with related parties in 2020 and 2019, respectively	995	(71)
Gain/(loss) on debt extinguishment	45	(75)
Other (expense) income, net	—	(1)
Net loss	(14,969)	(10,035)
Cumulative dividends on convertible preferred stock	(104)	(2,853)
Net loss attributable to common stockholders	(15,073)	(12,888)
Net loss per common share, basic and diluted	$ (0.20)	$ (0.73)
Weighted-average number of shares used in computing net loss per common share, basic and diluted	73,681,618	17,628,909

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

SENSEI BIOTHERAPEUTICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK, COMMON STOCK AND STOCKHOLDERS' DEFICIT (UNAUDITED)
(In thousands, except share data)

	Convertible Preferred Stock (Series A-F)		Convertible Preferred Stock (Series AA)		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount	Shares	Amount			
Balance at January 1, 2019	15,257,663	$ 47,545	—	$ —	17,628,909	$ 2	$ 22,090	$ (75,572)	$ (53,480)
Stock-based compensation expense	—	—	—	—	—	—	785	—	785
Issuance of common stock warrants	—	—	—	—	—	—	228	—	228
Net loss	—	—	—	—	—	—	—	(10,035)	(10,035)
Balance at September 30, 2019	15,257,663	$ 47,545	—	$ —	17,628,909	$ 2	$ 23,103	$ (85,607)	$ (62,502)
Balance at January 1, 2020	15,257,663	$ 47,545	—	$ —	17,738,409	$ 2	$ 23,648	$ (92,312)	$ (68,662)
Stock-based compensation expense	—	—	—	—	—	—	1,138	—	1,138
Conversion of series A, B, C, D, E, F convertible preferred stock into common stock	(15,257,663)	(47,545)	—	—	30,140,432	3	47,542	—	47,545
Conversion of common stock into series AA convertible preferred stock	—	—	210,310,025	17,274	(7,140,280)	(1)	(17,273)	—	(17,274)
Series AA convertible preferred stock in exchange for debt redemption	—	—	188,173,050	15,456	—	—	—	—	—
Sale of series AA convertible preferred stock	—	—	232,109,036	19,058	—	—	—	—	—
Issuance of common stock	—	—	—	—	30,437,694	3	(3)	—	—
Issuance of common stock related to Alvaxa acquisition	—	—	—	—	14,610,093	2	539	—	541
Net loss	—	—	—	—	—	—	—	(14,969)	(14,969)
Balance at September 30, 2020	—	$ —	630,592,111	$ 51,788	85,786,348	$ 9	$ 55,591	$ (107,281)	$ (51,681)

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

SENSEI BIOTHERAPEUTICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)
(In thousands)

	Nine Months Ended September 30,	
	2020	2019
Operating activities		
Net loss	$ (14,969)	$ (10,035)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation expense	1,138	785
Depreciation and amortization	139	50
Accretion on debt	1,578	280
Fair value adjustments on embedded debt derivatives	(995)	71
Interest on capital lease	8	6
Issuance of common stock for Alvaxa acquisition	541	—
(Gain) loss on debt extinguishment	(45)	75
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(445)	254
Deposit	411	—
Accounts payable	(2,477)	718
Accrued interest	50	613
Other liabilities	41	263
Net cash used in operating activities	(15,025)	(6,920)
Investing activities		
Purchases of property and equipment	(890)	(9)
Purchase of Alvaxa IPR&D	(197)	—
Net cash used in investing activities	(1,087)	(9)
Financing activities		
Proceeds from the PPP loan	567	—
Capital lease payments	(31)	(19)
Proceeds on the issuance of series AA convertible preferred stock	19,058	—
Proceeds on the issuance of debt, including $3,250 with related parties in 2019	—	6,595
Net cash provided by financing activities	19,594	6,576
Net increase (decrease) in cash and cash equivalents	3,482	(353)
Cash and cash equivalents at beginning of period	251	653
Cash and cash equivalents at end of period	$ 3,733	$ 300
Supplemental disclosure of noncash financing information:		
Capital equipment	$ —	$ 166
Interest on financing	$ 8	$ 6
Conversion of series A, B, C, D, E, F convertible preferred stock into common stock	$ 47,545	$ —
Conversion of common stock into series AA convertible preferred stock	$ 17,274	$ —
Convertible preferred stock issued in exchange for note redemption	$ 15,456	$ —

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

SENSEI BIOTHERAPEUTICS, INC.

NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

1. ORGANIZATION AND OPERATIONS

Business

Sensei Biotherapeutics, Inc. (the "Company" or "Sensei") is a clinical-stage immunotherapy company that was incorporated in Delaware on December 1, 2017. The Company is engaged in the discovery and development of next generation therapies with an initial focus on treatments for cancer.

The total numbers of authorized common stock and preferred stock of Sensei are 1,230,000,000 and 870,211,737 respectively, with a par value of $0.0001 for each share. Panacea Pharmaceuticals, Inc. ("Panacea"), was incorporated in 1999 as a Maryland corporation. Panacea is a wholly owned subsidiary of Sensei and is currently doing business under the name Sensei Biotherapeutics, Inc.

On May 18, 2020, the Company acquired Alvaxa Biosciences, Inc. ("Alvaxa") in a cash and stock purchase ("Stock Purchase Agreement"). Under the terms of the Stock Purchase Agreement, the Company acquired Alvaxa's existing camelid nanobodies and other biomaterials ("Biomaterials"), expertise in nanobody discovery, as well as a license agreement with a research organization. The former majority shareholder of Alvaxa is the Company's current Chief Scientific Officer. Under the Stock Purchase Agreement, the Company paid $197 thousand to settle liabilities assumed from Alvaxa and issued 14,610,093 shares of the Company's common stock to the shareholders of Alvaxa. The Company has evaluated the acquisition under ASC 805, *Business Combinations* and determined this to be an asset acquisition.

The 14,610,093 shares of common stock was valued at $0.037 per share, or $541 thousand in total, based on a valuation determined with the assistance of a third party. The Company determined that substantially all the value acquired in the transaction related to the Biomaterials and represents in-process research and development ("IPR&D"). The liabilities of $197 thousand assumed were related to previously incurred employee costs as well as contractually required vendor payments. The consideration transferred in this transaction was recorded as an expense in the IPR&D line item within the Statement of Operations during the nine months ended September 30, 2020.

Going Concern

Since inception, the Company has incurred cumulative operating losses and negative cash flows from operations. These operating losses and negative cash flows have been financed principally from the issuance of debt and equity securities. The Company's ability to continue as a going concern is dependent upon the ability to raise additional debt or equity capital. There can be no assurance that such capital will be available in sufficient amounts or on terms acceptable to the Company. These factors raise substantial doubt about the Company's ability to continue as a going concern. Risks to which the Company is exposed include uncertainties related to the ability to achieve revenue-generating products; current and potential competitors with greater financial, technological, production, and marketing resources; dependence on key management personnel; and raising additional capital, as needed. Based upon the Company's current plans, management believes there currently is insufficient financial resources to fund the Company's operations for at least 12 months from the issuance date of the unaudited condensed consolidated financial statements as of September 30, 2020.

To address the Company's capital needs, including planned clinical trials, the Company must continue to actively pursue additional equity or debt financing. The Company has been in ongoing discussions with potential venture and institutional investors with respect to such financing. Adequate financing opportunities might not be available to the Company, when and if needed, on acceptable terms or at all. If the Company is unable to obtain additional financing in sufficient amounts or on acceptable terms under such circumstances, the Company's operating results and prospects will be adversely affected.

The accompanying unaudited condensed consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the ordinary course of business. The consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might result from the outcome of this uncertainty.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation and Principles of Consolidation

The Company has prepared the accompanying unaudited condensed consolidated financial statements in conformity with generally accepted accounting principles in the United States of America ("US GAAP") and in accordance with the rules of the Securities and Exchange Commission ("SEC") for interim reporting. The financial statements include adjustments of a normal recurring nature considered necessary by management for a fair presentation of the Company's unaudited condensed consolidated financial position, results of operations and cash flows. Any reference in these notes to appliable guidance is meant to refer to the authoritative U.S. GAAP as found in the Accounting Standards Codification ("ASC") and as amended by Accounting Standards Updates ("ASU") of the Financial Accounting Standards Board ("FASB").

The accompanying unaudited condensed consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements and the accompanying notes for the year ended December 31, 2019, which are included elsewhere in this prospectus. The unaudited condensed consolidated balance sheet data as of December 31, 2019 presented for comparative purposes was derived from the Company's audited consolidated financial statements but does not include all disclosures required by U.S. GAAP. The results for the nine months ended September 30, 2020 are not necessarily indicative of the operating results to be expected for the full year or for any other subsequent interim period.

The Company's significant accounting policies are disclosed in the audited consolidated financial statements for the year ended December 31, 2019, included elsewhere in this prospectus. Since the date of those financial statements, there have been no changes to its significant accounting policies except as noted below.

Deferred Offering Costs

The Company capitalizes as prepaid expenses certain legal, professional accounting and other third-party fees that are directly associated with preferred stock or common stock financings as deferred offering costs until such financings are consummated. After consummation of the equity financing, these costs are recorded as a reduction of additional paid-in capital generated as a result of the offering. Should a planned equity financing be abandoned, the deferred offering costs will be expensed immediately as a charge to operating expenses in the statements of operations. The Company had no deferred offering costs in prepaid expenses as of December 31, 2019 and September 30, 2020.

Recently Issued Accounting Pronouncements

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*, as amended, with guidance regarding the accounting for and disclosure of leases. The update requires lessees to recognize the liabilities related to all leases, including operating leases on the balance sheet. This update also requires lessees and lessors to disclose key information about their leasing transactions. This update is effective for entities other than public business entities, including emerging growth companies that elected to defer compliance with new or revised financial accounting standards until a company that is not an issuer is required to comply with such standards, for annual reporting periods beginning after December 15, 2021, and interim periods within annual periods beginning after December 15, 2022. Early adoption is permitted. The Company is currently assessing the impact of adopting ASU No. 2016-02 on the consolidated financial statements and related disclosures.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments-Credit Losses: Measurement of Credit Losses on Financial Instruments (Topic 326)*. ASU No. 2016-13 requires measurement and recognition of expected credit losses for financial assets. In April 2019, the FASB issued clarification to ASU No. 2016-13 within ASU No. 2019-04, Codification Improvements to Topic 326, Financial Instruments-Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments. This update is effective for entities other than public business entities, including emerging growth companies that elected to defer compliance with new or revised financial accounting standards until a company that is not an issuer is required to comply with such standards, for annual reporting periods beginning after December 15, 2021. The Company is currently evaluating the impact that ASU No. 2016-13 will have on the consolidated financial statements and related disclosures.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820)*, Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement. This update removed the following disclosure requirements: (1) the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy; (2) the policy for timing of transfers between levels; and (3) the valuation processes for Level 3 fair value measurements. Additionally, this update added the following disclosure requirements: (1) the changes in unrealized gains and losses for the period included in other comprehensive income and loss for recurring Level 3 fair value measurements held at the end of the reporting period; (2) the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements. For certain unobservable inputs, an entity may disclose other quantitative information (such as the median or arithmetic average) in lieu of the weighted average if the entity determines that other quantitative information would be a more reasonable and rational method to reflect the distribution of unobservable inputs used to develop Level 3 fair value measurements. ASU No. 2018-13 will be effective for fiscal years beginning after December 15, 2019 with early adoption permitted. As of December 31, 2019, the Company has not elected to early adopt this update but does not expect that the adoption of this update will have a material effect on the consolidated financial statements and related disclosures.

In December 2019, the FASB issued ASU No. 2019-12, *Simplifying the Accounting for Income Taxes*. ASU No. 2019-12 eliminates certain exceptions related to the approach for intra-period tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. It also clarifies and simplifies other aspects of the accounting for income taxes. This update is effective for entities other than public business entities, including emerging growth companies that elected to defer compliance with new or revised financial accounting standards until a company that is not an issuer is required to comply with such standards, for annual reporting periods beginning after December 15, 2021, and interim periods within annual periods beginning after December 15, 2022. The Company is currently evaluating the impact that ASU No. 2019-12 will have on the consolidated financial statements and related disclosures.

In August 2020, the FASB issued ASU No. 2020-06, *Debt – Debt with Conversion and Other (Subtopic 470-20) and Derivatives and Hedging – Contracts in Entity's Own Equity (Subtopic 815-40)*. This update simplifies the accounting for convertible debt instruments by removing certain accounting separation models as well as the accounting for debt instruments with embedded conversion features that are not required to be accounted for as derivative instruments. The update also updates and improves the consistency of earnings per share calculations for convertible instruments. The amendments in this ASU are effective for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years. The Company is currently evaluating the impact that the implementation of this update will have on the Company's consolidated financial statements and related disclosures.

3. PREPAID EXPENSES

Prepaid expenses consist of the following (in thousands):

	September 30, 2020	December 31, 2019
Prepaid research	$ 274	$ 151
Prepaid rent	324	—
Other	98	100
Total prepaid expenses	$ 696	$ 251

4. PROPERTY AND EQUIPMENT, NET

Property and equipment, net consist of the following (in thousands):

	September 30, 2020	December 31, 2019
Office equipment and furniture	$ 39	$ 14
Research equipment	1,537	641
Total property and equipment	1,576	655
Less accumulated depreciation and amortization	(526)	(387)
Property and equipment, net	$ 1,050	$ 268

Depreciation and amortization expense for the nine months ended September 30, 2020 and 2019 was $139 thousand, and $50 thousand, respectively.

5. OTHER CURRENT LIABILITIES

Other current liabilities consist of the following (in thousands):

	September 30, 2020	December 31, 2019
Compensation and benefits	$ 885	$ 685
Other	271	125
Total other current liabilities	$ 1,156	$ 810

6. DEBT

Debt consists of the following (in thousands):

	September 30, 2020	December 31, 2019
PPP Loan	$ 567	$ —
2019 Notes	—	2,345
2019 Secured Notes (related party)	—	3,854
2019 Bridge Note	—	1,000
2019 Special Note (related party in 2020)	2,489	2,570
2018 Bridge Notes (related party)	—	3,000
2017 Notes	—	4,050
Discounts	—	(764)
Total debt	3,056	16,055
Less current portion	(2,489)	(16,055)
Noncurrent debt	$ 567	$ —

Debt Redemption

The 2019 notes ("2019 Notes"), 2019 secured notes ("2019 Secured Notes"), 2019 bridge note ("2019 Notes"), 2018 bridge notes ("2018 Bridge Notes") and 2017 notes ("2017 Notes") were redeemed for shares of the Company's preferred stock series AA ("Series AA convertible preferred stock") on January 10, 2020. The details of this transaction are further discussed in Note 9 of these unaudited condensed consolidated financial statements.

2019 Special Note

On March 27, 2020, the Company consented to the sale of the 2019 special note ("2019 Special Note") by the original holder to a purchaser, where the purchaser is a principal owner related party to the Company. The detachable warrant issued in conjunction with the 2019 Special Note for 186,657 common stock was canceled as part of the sale. The fair value of the detachable warrant on the date of the sale was insignificant.

The 2019 Special Note matured in April 2020 and stopped accruing interest at that time. Management determined the fair value of the conversion features within the 2019 Special Note was zero as of September 30, 2020 since it had matured, and the conversion features provided no incremental value to the holder beyond the contractually obligated amount. In November 2020, the 2019 Special Note, repayment premium and accrued interest was redeemed into 31,591,824 shares of Series AA convertible preferred stock. The delay from maturity in April 2020 to redemption in November 2020 was administrative in nature, as the holder is a principle owner related party.

PPP Loan

In May 2020, the Company received $567 thousand in unsecured loan funding from the Payroll Protection Program ("PPP") pursuant to the Coronavirus Aid, Relief, and Economic Security Act of 2020, as amended by the Payroll Protection Flexibility Act of 2020, and administered by the Small Business Administration. The unsecured loan (the "PPP Loan") is with Silicon Valley Bank.

Under the terms of the PPP Loan, interest accrues on the outstanding principal at a rate of 1.0% per annum. The term of the PPP Loan is two years, though it may be payable sooner in connection with an event of default under the PPP Loan. To the extent the PPP Loan is not forgiven under the PPP, the Company is obligated to make equal monthly payments of principal and interest, beginning after determination of forgiveness by the lender. The Company may apply for forgiveness any time on or before the maturity date of the PPP Loan. If the Company does not apply for loan forgiveness by October 2021, principal and interest payment will be required on a monthly basis for a period of 24 months.

The Company elected to account for the PPP Loan as debt and will derecognize the liability when the loan is forgiven and the Company is relieved of its obligation under the PPP Loan or is legally released from being the primary obligor.

7. FAIR VALUE MEASUREMENTS

The following table presents information about the Company's financial liabilities measured at fair value on a recurring basis and indicate the level of the fair value hierarchy utilized to determine such fair values (in thousands):

	Fair Value Measurements as of September 30, 2020			
	Level 1	Level 2	Level 3	Total
Current liabilities				
Embedded debt derivatives	$ —	$ —	$ —	$—
Total liabilities measured at fair value	$ —	$ —	$ —	$—

	Fair Value Measurements as of December 31, 2019			
	Level 1	Level 2	Level 3	Total
Current liabilities				
Embedded debt derivatives	$ —	$ —	$3,920	$3,920
Total liabilities measured at fair value	$ —	$ —	$3,920	$3,920

The Company's embedded debt derivatives are measured at fair value using a probability-weighted discounted cash flow valuation methodology. The determination of the fair value of embedded debt derivatives includes inputs not observable in the market and as such, represents a Level 3 measurement. The methodology utilized requires inputs based on certain subjective assumptions, including probabilities of debt settlement scenarios and a discount rate. This approach results in the classification of these embedded debt derivatives as Level 3 of the fair value hierarchy. The assumptions utilized to value the embedded debt derivatives at September 30, 2019 were the probability of (a) 3% probability of settlement at the contractual maturity date; (b) 5% probability of settlement on a change of control or upon a qualified initial public offering prior to the contractual maturity date; and (c) 92% probability of settlement on a qualified financing prior to the contractual maturity date, respectively. For the nine months ended September 30, 2019 and 2020, the Company recognized $71 thousand and ($995) thousand expense/(income), respectively, in the statement of operations as other expense—fair value adjustments on embedded debt derivatives.

The following table provides a reconciliation of embedded debt derivatives measured at fair value on a recurring basis using significant unobservable inputs (Level 3) (in thousands):

	Amount
Balance at January 1, 2019	$ —
Additions	663
Change in fair value	71
Balance at September 30, 2019	$ 734
Balance at January 1, 2020	$ 3,920
Change in fair value	(995)
Settlement	(2,925)
Balance at September 30, 2020	$ —

There were no transfers among Level 1, Level 2 or Level 3 categories in the nine months ended September 30, 2020 and 2019.

8. COMMITMENTS AND CONTINGENCIES

Operating Lease

The Company leases office facility and other equipment under various operating leases. In July 2020, the Company entered into an agreement with the sublandlord to terminate its corporate headquarters lease agreement, effective as of August 12, 2020. Under the terms of the agreement, the Company is obligated for its original lease payments through December 31, 2020 and the sublandlord will retain the Company's $0.4 million security deposit previously remitted in 2018. Subsequent to the termination, minimum lease payments under the Company's operating leases as of September 30, 2020 were insignificant. Lease expense for the nine months ended September 30, 2019 and 2020 was $759 thousand and $955 thousand, respectively. The 2020 lease expense is inclusive of the corporate headquarters termination costs.

Capital Lease

The Company leases research equipment under a capital finance lease. The capital lease asset is classified within property and equipment, net within the Company's consolidated balance sheets.

License Agreements

In the normal course of business, the Company enters into licensing agreements with various parties to obtain the right to make, use, and sell licensed products currently in development.

Litigation

The Company records estimated losses from loss contingencies (such as a loss arising from a litigation) when it determines that it is probable a liability has been incurred and the amount of loss can be reasonably estimated. Litigation is subject to many factors that are difficult to predict so that there can be no assurance, in the event of a material unfavorable result in one or more claims, the Company will not incur material costs.

During 2017, the Company became actively involved in a matter pending in the Ontario (Canada) Superior Court of Justice which names, among multiple other defendants, the Company and two former officers of the Company. The claims pending in this matter allege breach of contract by the Company and seek declaratory and other relief, including monetary damages from the Company, and the individual defendants, including the Company's former officers. The claims by such plaintiffs were originally made in a lawsuit filed in Ontario in October 2011, but was not pursued by such plaintiffs in any material manner until 2017. The Company believes that there is no merit to the claims alleged against the Company and its former officers, including no alleged breach of contract by the Company and intends to vigorously defend against the claims pertaining to the Company and its former officers. At the present stage of the suit, management believes the outcome in this matter is not likely to have any material impact on the Company's results, cash flows, or financial position.

Coronavirus pandemic

On January 30, 2020, the World Health Organization ("WHO") announced a global health emergency because of a new strain of coronavirus originating in Wuhan, China (the "COVID-19 outbreak") and the risks to the international community as the virus spreads globally beyond its point of origin. In March 2020, the WHO classified the COVID- 19 outbreak as a pandemic, based on the rapid increase in exposure globally. The full impact of the COVID-19 outbreak continues to evolve as of the date of this report. As such, it is uncertain as to the full magnitude that the pandemic will have on the Company's financial condition, liquidity, and future results of operations. Management is actively monitoring the global situation on its financial condition, liquidity, operations, suppliers, industry, and workforce. Given the daily evolution of the COVID-19 outbreak and the global responses to curb its spread, the Company is not able to estimate the effects of the COVID-19 outbreak on its results of operations, financial condition, or liquidity for 2020. Although the Company cannot estimate the length or gravity of the impact of the COVID-19 outbreak at this time, if the pandemic continues, it may have a material adverse effect on the Company's results of future operations, financial position, and liquidity in 2021.

9. EQUITY

January Recapitalization

In January 2020, the Company entered into an agreement with a third party, who is the holder of the 2019 Bridge Note, and the majority of the Company's convertible preferred stock series A through F holders ("Majority Legacy Preferred Stockholders") that provided a new source of capital and restructured the Company's existing capital structure (the "Recapitalization"). The third party invested $4 million in exchange for 48,700,311 shares of Series AA convertible preferred stock and a warrant to purchase 30,437,694 shares of the Company's common stock at an exercise price of $0.00001 per share. The warrant was subsequently exercised in January 2020. Additionally, the agreement with the Majority Legacy Preferred Stockholders caused all other holders of convertible preferred stock series A through F holders ("Minority Legacy Preferred Stockholders") and the Majority Legacy Preferred Stockholders to receive 30,140,432 shares of the Company's common stock ("Newly Issued Common Stock") in exchange for their holdings of the Company's convertible preferred stock series A through F, including cumulative and unpaid dividends, as part of the Recapitalization.

The Majority Legacy Preferred Stockholders agreed to invest additional capital into the Company in exchange for Series AA convertible preferred stock. Minority Legacy Preferred Stockholders were provided the opportunity to invest additional capital into the Company in exchange for Series AA convertible preferred stock. All Majority and Minority Legacy Preferred Stockholders who invested additional capital into the Company during January 2020 were allowed to convert their Newly Issued Common Stock into Series AA convertible preferred stock at a conversion rate based upon their incremental and historical investment into the Company. The Majority and Minority Legacy Preferred Stockholders invested $6.6 million in exchange for 79,954,952 shares of Series AA convertible preferred stock. The Majority and Minority Legacy Preferred Stockholders also exchanged 7,140,280 shares of Newly Issued Common Stock for 210,310,025 shares of Series AA convertible preferred stock under the Recapitalization agreement.

The Company's issuance of Series AA convertible preferred stock triggered the redemption of the 2019 Notes, 2019 Secured Notes, 2019 Bridge Note, 2018 Bridge Notes, and 2017 Notes, as well as accrued and unpaid interest and repayment premium on the 2019 Secured Notes, into shares of Series AA convertible preferred stock. These debt instruments were redeemed for 188,173,050 shares of the Series AA convertible preferred stock, which resulted in a gain on debt extinguishment of $45 thousand.

The Company amended and restated its certificate of incorporation as part of the Recapitalization authorizing a total number of common stock and preferred stock of 1,230,000,000 and 870,211,737 respectively, with a par value of $0.0001 for each share.

Secondary Series AA Convertible Preferred Stock Issuance

From July to September 2020, the Company issued and sold 103,453,773 shares of Series AA convertible preferred stock at $0.082135 per share in exchange for $8.5 million in gross proceeds.

Series AA Convertible Preferred Stock Terms

A summary of the more significant rights and preferences of the Series AA convertible preferred stock are as follows:

Dividend Rights

The Company shall not declare, pay, or set aside any dividends on shares of any other class or series of capital stock unless the holders of the Series AA convertible preferred stock then outstanding shall first receive a dividend at the rate of 8% of the Series AA original issue price ("Series AA Original Issue Price"); provided that the Company declares, pays, and sets aside a dividend on the shares of common stock.

The Company has not declared or paid any dividends or authorized or made any distribution upon or with respect to any class or series of its capital stock.

Unpaid dividends will convert into shares of common stock when the underlying convertible preferred stock is converted to common stock. The conversion rates for the unpaid dividends are the same as those for the underlying convertible preferred stock.

Liquidation Rights

In the event of any voluntary or involuntary liquidation, the holders of the shares of Series AA convertible preferred stock then outstanding shall be entitled to be paid out of the assets of the Company available for distribution to its stockholders before any payment shall be made to holders of common stock, an amount per share equal to the Series AA Original Issue Price, plus any dividends declared but unpaid ("Series AA Liquidation Amount").

After payment in full of all Series AA Liquidation Amount and payments made to holders of common stock, the remaining assets of the Company available for distribution to its stockholders, shall be distributed among the holders of the shares of Series AA convertible preferred stock and common stock, pro rata based on the number of shares held by each holder, treating for this purpose all such securities as if they had been converted to common stock prior to liquidation.

A merger or consolidation of substantially all or a significant portion of assets of the Company shall be considered a "Deemed Liquidation Event" unless the holders of at least two-thirds of the outstanding shares of Series AA convertible preferred stock elect otherwise by written notice sent to the Company at least 10 days prior to the effective date of the any such event.

Voting Rights

Holders of outstanding shares of Series AA convertible preferred stock shall be entitled to cast the number of votes equal to the number of whole shares of common stock into which the shares of Series AA convertible preferred stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law or by the other provisions, holders of Series AA convertible preferred stock shall vote together with the holders of common stock as a single class and on an as-converted to common stock basis.

Conversion Rights

Each share of Series AA convertible preferred stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of common stock as is determined by dividing the Series AA Original Issue Price by the Series AA conversion price ("Series AA Conversion Price") in effect at the time of conversion. The Series AA Conversion Price shall initially be equal to $0.082135. Such initial Series AA Conversion Price, and the rate at which shares of Series AA convertible preferred stock may be converted into shares of common stock, shall be subject to adjustment should specified dilutive events occur. All shares of the Series AA convertible preferred stock automatically convert into shares of the Company's common stock upon the earlier of (i) an underwritten firm commitment public offering resulting in aggregate net cash proceeds of $40.0 million at a per share price equal to or greater than $8.00 or (ii) the execution of a definitive agreement for the purchase of common stock of the Company sufficient to effect a change of control, merger, or reorganization at a per share price in excess of $4.00.

Common Stock

During 2020, the certificate of incorporation was amended to increase the number of authorized shares of the Company's common stock to a total of 1,230,000,000 shares. Common stockholders are entitled to one vote

for each share of common stock held at all meetings of stockholders and written actions in lieu of meetings. Common stockholders are entitled to receive dividends, if any, when declared by the board of directors. No dividends have been declared or paid by the Company through September 30, 2020.

Common Stock Warrants

The following is a summary of the common stock warrant activity related to common stock warrants issued in conjunction with the issuance of convertible promissory notes or other financial instruments during the nine months ended September 30, 2020:

	Number of Shares	Weighted-Average Exercise Price
Outstanding at December 31, 2019	1,287,824	$ 2.14
Granted	49,125,299	$ 0.03
Exercised	(30,437,694)	$ —
Expired	(186,567)	$ —
Outstanding at September 30, 2020	19,788,862	$ 0.20
Exercisable at September 30, 2020	19,788,862	$ 0.20

10. STOCK-BASED COMPENSATION

In 2018, the board of directors approved the Company's 2018 Stock Incentive Plan (the "2018 Plan")—which supersedes and replaces previous incentive stock plans—and reserved 5.0 million common shares for issuance under the 2018 Plan. All previously issued and outstanding stock-based awards issued under predecessor incentive plans were adopted into the 2018 Plan. The 2018 Plan provides the issuance of stock awards to attract and retain employees, directors, consultants and advisors and to provide incentive for individuals to contribute to the growth of the Company.

In January 2020, the Company's 2018 Plan was amended to increase the number of shares of common stock reserved for issuance under the Plan from 5.0 million shares to 89.5 million shares in the aggregate. As of September 30, 2020, approximately 9.8 million common shares remain available for future awards under the 2018 Plan.

Stock Options

During the nine mounts ended September 30, 2020, the Company granted options to purchase 75,997 thousand shares of common stock to employees, consultants, and nonexecutive directors pursuant to the 2018 Plan. The stock options granted during the nine mounts ended September 30, 2020 vest over a period of 6 to 48 months with an exercise price of $0.03 per share. The Company uses the Black-Scholes option-pricing model to estimate the fair value of the stock options on the grant dates between $0.04 and $0.05 per share.

The following is a summary of the stock option award activity under the 2018 Plan during the nine months ended September 30, 2020:

	Number of Shares	Weighted-Average Exercise Price
Outstanding at December 31, 2019	3,725,731	$ 2.38
Granted	75,997,000	$ 0.03
Exercised	—	$ —
Forfeited	—	$ —
Expired	—	$ —
Outstanding at September 30, 2020	79,722,731	$ 0.14
Exercisable at September 30, 2020	5,650,328	$ 1.27
Options expected to vest at September 30, 2020	74,072,403	$ 0.05

At September 30, 2020, there was approximately $4,047 thousand of unrecognized stock-based compensation expense associated with the stock options, which is expected to be recognized over a weighted-average period of 1.66 years.

The following is a summary of the common stock warrant activity under the 2018 Plan during the nine months ended September 30, 2020:

	Number of Shares	Weighted-Average Exercise Price
Outstanding at December 31, 2019	2,756,340	$ 0.17
Granted	—	
Exercised	—	
Expired	—	
Outstanding at September 30, 2020	2,756,340	$ 0.17
Exercisable at September 30, 2020	2,756,340	$ 0.17

As of September 30, 2020, there was no unrecognized stock-based compensation expense associated with the common stock warrants.

During the nine months ended September 30, 2019 and 2020, the Company utilized the Black-Scholes option-pricing model for estimating the fair value of the stock options and common stock warrants granted. The following table presents the assumptions and the Company's methodology for developing each of the assumptions used:

	Nine Months Ended September 30,	
	2020	2019
Volatility	90.0%	90%
Expected life (years)	0.5–4.0	0.05–10.0
Risk-free interest rate	.11%–.18%	1.4%–2.5%
Dividend rate	— %	— %

- Volatility—The Company estimates the expected volatility of its common stock at the date of grant based on the historical volatility of comparable public companies over the expected term.
- Expected life—The expected life is estimated as the contractual term.

- Risk-free interest rate—The risk-free rate for periods within the estimated life of the stock award is based on the U.S. Treasury yield curve in effect at the time of grant.
- Dividend rate—The assumed dividend yield is based upon the Company's expectation of not paying dividends in the foreseeable future.

Stock-based compensation expense was recorded in the following line items in the consolidated statements of operations for the nine months ended September 30, 2019 and 2020 (in thousands):

	Nine Months Ended September 30,	
	2020	2019
Research and development	$ 441	$ 345
General and administrative	697	440
Total stock-based compensation	$ 1,138	$ 785

11. RELATED-PARTY TRANSACTIONS

Debt

In January 2020, principal owner related parties holding the Company 2019 Secured Notes and 2018 Bridge Notes redeemed these instruments into shares of Series AA convertible preferred stock. Additionally, in March 2020, a principal owner related party purchased the 2019 Special Note from the originally holder and subsequently redeemed it into shares of Series AA convertible preferred stock in November 2020.

Acquisition

In May 2020, the Company acquired Alvaxa as described in Note 1 to these unaudited condensed consolidated financial statements. The Company's Chief Scientific Offer and spouse together held a majority of the shares of Alvaxa.

12. INCOME TAXES

The Company estimates an annual effective tax rate of 0% for the year ending December 31, 2020 as the Company incurred losses for the nine months ended September 30, 2020 and is forecasting additional losses through the remainder of fiscal year ending December 31, 2020, resulting in an estimated net loss for both financial statement and tax purposes for the year ending December 31, 2020. Therefore, no federal or state income taxes are expected and none have been recorded at this time. Income taxes have been accounted for using the liability method.

Due to the Company's history of losses since inception, there is not enough evidence at this time to support that the Company will generate future income of a sufficient amount and nature to utilize the benefits of its net deferred tax assets. Accordingly, the deferred tax assets have been reduced by a full valuation allowance, since the Company does not currently believe that realization of its deferred tax assets is more likely than not.

As of September 30, 2020, the Company had no unrecognized income tax benefits that would reduce the Company's effective tax rate if recognized.

13. NET LOSS PER SHARE

Basic and diluted net loss per share attributable to common stockholders is calculated as follows (in thousands except share and per share amounts):

	Nine Months Ended September 30,	
	2020	2019
Net loss	$ (14,969)	$ (10,035)
Cumulative dividends on convertible preferred stock	(104)	(2,853)
Net loss attributable to common stockholders	$ (15,073)	$ (12,888)
Net loss per share—basic and diluted	$ (0.20)	$ (0.73)
Weighted-average number of shares used in computing net loss per share—basic and diluted	73,681,618	17,628,909

The following outstanding potentially dilutive securities have been excluded from the calculation of diluted net loss per share, as their effect is anti-dilutive:

	September 30,	
	2020	2019
Convertible preferred stock	630,592,111	15,257,663
Stock options to purchase common stock	79,722,731	4,021,356
Warrants issued to employees and contractor to purchase common stock	2,756,340	2,756,340
Warrants issued related to convertible notes and other equity agreements	19,788,862	1,287,824

14. SUBSEQUENT EVENTS

The Company has evaluated subsequent events as of December 22, 2020, which represents the date the consolidated financial statements were available for issuance, in order to ensure that these consolidated financial statements include appropriate recognition and/or disclosure of events. Since September 30, 2020, the following material subsequent events occurred:

Operating lease

In October 2020, the Company entered into a new operating lease for its current corporate headquarters, with a term commencing on November 1, 2020 and continuing through February 2027. The Company's minimum commitment under the new lease is approximately $350 thousand dollars annually.

Series AA convertible preferred stock

In October 2020, the Company issued and sold 85,499,239 shares of Series AA convertible preferred stock at $0.082135 per share in exchange for $7.0 million in gross proceeds.

The Company identified the following material subsequent events after the original issuance of these consolidated financial statements on December 22, 2020 requiring disclosure:

Operating leases

In January 2021, the Company entered into a new operating lease for general office purposes including laboratory use in Boston, Massachusetts, with a term commencing on April 1, 2021 and continuing through December 2026. The amount of square feet of office space is 10,082 square feet and the Company's minimum commitment under the new lease is approximately $880 thousand dollars annually.

Common stock warrants

In January 2021, the Company issued warrants as a result of the Series AA and Series BB raises to an existing principal owner to purchase 79,138,004 shares of common stock with an exercise price of $0.00001 per common share. The warrants had a maturity date of 30 days and was exercised in January 2021.

Stock-based compensation

In December 2020, the Company's 2018 Plan was amended to increase the number of shares of common stock reserved for issuance under the Plan from 89.5 million shares to 122.5 million shares in the aggregate.

In December 2020, the board of directors approved and granted options to purchase 15,180,000 shares of the common stock under the 2018 Plan. The awards vest over four years with a fair value of $0.09 per share.

In January 2021, the board of directors approved and granted options to purchase 3,500,000 shares of the common stock under the 2018 Plan. The awards vest over four years with a fair value of $0.14 per share.

Series BB convertible preferred stock

On December 29, 2020, the Company entered into a Series BB Preferred Stock Purchase Agreement (the "Series BB Agreement"), that provided for the sale of up to 168,769,860 shares of Series BB convertible preferred stock at a purchase price of $0.207383 per share. The Company notes the Series BB convertible preferred stock has comparable terms and rights to the Series AA convertible preferred stock.

In December 2020, the Company issued and sold 52,680,306 shares of Series BB convertible preferred stock at $0.207383 per share in exchange for $10.9 million in gross proceeds.

In January 2021, the Company issued and sold 113,275,902 shares of Series BB convertible preferred stock at $0.207383 per share in exchange for $23.5 million in gross proceeds.

Shares

Common Stock

PRELIMINARY PROSPECTUS

, 2021

Citigroup **Piper Sandler** **Berenberg**

Oppenheimer & Co.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table indicates the expenses to be incurred in connection with the offering described in this registration statement, other than underwriting discounts and commissions, all of which will be paid by us. All amounts are estimated except the Securities and Exchange Commission registration fee, the Financial Industry Regulatory Authority, Inc., or FINRA, filing fee and the exchange listing fee.

	Amount
Securities and Exchange Commission registration fee	$10,910
FINRA filing fee	15,500
NASDAQ listing fee	*
Accountants' fees and expenses	*
Legal fees and expenses	*
Transfer Agent's fees and expenses	*
Printing and engraving expenses	*
Miscellaneous	*
Total expenses	$ *

* To be provided by amendment.

Item 14. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities, including reimbursement for expenses incurred, arising under the Securities Act. Our amended and restated certificate of incorporation that will be in effect on the completion of this offering permits indemnification of our directors, officers, employees and other agents to the maximum extent permitted by the Delaware General Corporation Law, and our amended and restated bylaws that will be in effect on the completion of this offering provide that we will indemnify our directors and officers and permit us to indemnify our employees and other agents, in each case to the maximum extent permitted by the Delaware General Corporation Law.

We have entered into indemnification agreements with our directors and officers, whereby we have agreed to indemnify our directors and officers to the fullest extent permitted by law, including indemnification against expenses and liabilities incurred in legal proceedings to which the director or officer was, or is threatened to be made, a party by reason of the fact that such director or officer is or was a director, officer, employee or agent, provided that such director or officer acted in good faith and in a manner that the director or officer reasonably believed to be in, or not opposed to, our best interest. At present, there is no pending litigation or proceeding involving a director or officer regarding which indemnification is sought, nor is the registrant aware of any threatened litigation that may result in claims for indemnification.

We maintain insurance policies that indemnify our directors and officers against various liabilities arising under the Securities Act and the Securities Exchange Act of 1934, as amended, that might be incurred by any director or officer in his capacity as such.

Item 15. Recent Sales of Unregistered Securities.

The following sets forth information regarding all unregistered securities sold since January 1, 2018.

Sale of Series BB Convertible Preferred Stock

From December 2020 through the date of this prospectus, we sold an aggregate of 165,956,208 shares of Series BB convertible preferred stock to a total of 43 accredited investors at a purchase price per share of $0.207383 per share for an aggregate gross proceeds of $34.4 million.

Sale of Series AA Convertible Preferred Stock

From January 2020 through the date of this prospectus, we issued an aggregate of 747,683,172 shares of our Series AA convertible preferred stock to a total of 128 accredited investors at a price per share of $0.082135 per share. We received aggregate gross proceeds of $26.1 million for the sale of 317,608,273 shares of Series AA convertible preferred stock. The redemption of convertible notes resulted in the issuance of 219,764,874 shares of Series AA convertible preferred stock. In exchange for our convertible preferred stock series A through F, including cumulative and unpaid dividends, we issued 210,310,025 shares of Series AA convertible preferred stock as part of the Recapitalization.

Warrants to Purchase Common Stock

From January 1, 2018 through the date of this prospectus, we issued warrants to purchase to shares of common stock to accredited investors, at exercise prices ranging from $ to $ per share.

Option and Common Stock Issuances

From January 1, 2018 through the date of this prospectus, we granted to certain employees, consultants and directors options to purchase an aggregate of shares of common stock under our 2018 Plan, at exercise prices ranging from $ to $ per share. Of these, options to purchase an aggregate of shares have been cancelled without being exercised and shares have been issued upon the exercise of stock options, at a weighted average exercise price of $ per share, for aggregate proceeds of approximately $.

None of the foregoing transactions involved any underwriters, underwriting discounts or commissions, or any public offering. Unless otherwise specified above, we believe these transactions were exempt from registration under the Securities Act in reliance on Section 4(a)(2) of the Securities Act (and Regulation D or Regulation S promulgated thereunder) or Rule 701 promulgated under Section 3(b) of the Securities Act as transactions by an issuer not involving any public offering or under benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed on the share certificates issued in these transactions. All recipients had adequate access, through their relationships with us, to information about us. The sales of these securities were made without any general solicitation or advertising.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits.

Exhibit Index

Exhibit Number	Description of Exhibit
1.1*	Form of Underwriting Agreement.
2.1+^	Stock Purchase Agreement, by and among Sensei Biotherapeutics, Inc. and the stockholders of Alvaxa Biosciences, Inc., dated as of May 18, 2020.
3.1	Amended and Restated Certificate of Incorporation, as currently in effect.
3.2	Bylaws, as currently in effect.
3.3*	Form of Amended and Restated Certificate of Incorporation, to be effective immediately prior to the closing of this offering.
3.4*	Form of Amended and Restated Bylaws, to be effective immediately prior to the closing of this offering.
4.1*	Specimen stock certificate evidencing the shares of common stock.
4.2	Investors' Rights Agreement, dated as of January 10, 2020, by and among the Registrant and certain of its stockholders.
4.3*	Forms of warrant to purchase common stock.
5.1*	Opinion of Cooley LLP.
10.1#	Sensei Biotherapeutics, Inc. 2018 Equity Incentive Plan, as amended, and forms of agreements thereunder.
10.2#*	Sensei Biotherapeutics, Inc. 2021 Equity Incentive Plan and forms of agreements thereunder.
10.3+	Non-exclusive License Agreement, by and between Alvaxa Biosciences, Incorporated and Fred Hutch Cancer Research Center, dated as of January 3, 2020.
10.4#	Form of Indemnification Agreement entered into by and between Sensei Biotherapeutics, Inc. and each director and executive officer.
10.5	Amended and Restated Employment Agreement, by and between Sensei Biotherapeutics, Inc. and John Celebi, dated as of January 1, 2021.
10.6	Amended and Restated Employment Agreement, by and between Sensei Biotherapeutics, Inc. and Marie-Louise Fjaellskog, dated as of December 4, 2020.
10.7	Employment Agreement, by and between Sensei Biotherapeutics, Inc. and Robert H Pierce, dated as of February 9, 2020.
10.8	Independent Contractor and Strategic Advisory Services Agreement entered into by and between Sensei Biotherapeutics, Inc. and Samuel Broder M.D., dated as of May 8, 2018, as amended on April 5, 2020.
10.9	Lease Agreement, by and between Sensei Biotherapeutics, Inc. and Are-Maryland No. 8 Corp., dated as of October 22, 2020.
10.10*	Sensei Biotherapeutics, Inc. 2021 Employee Stock Purchase Plan

Exhibit Number	Description of Exhibit
10.11	Employment Agreement, by and between Sensei Biotherapeutics, Inc. and Anupama Hoey, dated as of October 13, 2020.
21.1	Subsidiaries of the Registrant.
23.1	Consent of Deloitte & Touche LLP, independent registered public accounting firm.
23.2*	Consent of Cooley LLP (included in Exhibit 5.1).
24.1	Power of Attorney (included on signature page).

+ Portions of this exhibit (indicated by asterisks) have been omitted as the Registrant has determined that (i) the omitted information is not material and (ii) the omitted information would likely cause competitive harm if publicly disclosed.
# Indicates management contract or compensatory plan.
* To be filed by amendment.
^ Pursuant to Item 601(b)(2) of Regulation S-K, the schedules and exhibits to this agreement are omitted, but will be furnished to the Securities and Exchange Commission upon request.

(b) Financial Statement Schedules.

All financial statement schedules are omitted because the information required to be set forth therein is not applicable or is shown in the consolidated financial statements or the notes thereto.

Item 17. Undertakings.

The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant under the foregoing provisions or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance on Rule 430A and contained in a form of prospectus filed by the registrant under Rule 424(b)(1) or (4) or 497(h) under the Securities Act will be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus will be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time will be deemed to be the initial bona fide offering thereof.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in City of Rockville, State of Maryland, on January 15, 2021.

SENSEI BIOTHERAPEUTICS, INC.

By: /s/ John Celebi
John Celebi
President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints John Celebi and Erin Colgan, and each one of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in their name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and to sign any registration statement for the same offering covered by this registration statement that is to be effective on filing pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and all post-effective amendments thereto, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ John Celebi John Celebi	President, Chief Executive Officer and Director *(Principal Executive Officer)*	January 15, 2021
/s/ Erin Colgan Erin Colgan	Senior Vice President of Finance *(Principal Financial and Accounting Officer)*	January 15, 2021
/s/ Bob Holmen Bob Holmen	Director	January 15, 2021
/s/ James Peyer, Ph.D. James Peyer, Ph.D.	Director	January 15, 2021
/s/ Samuel Broder, M.D. Samuel Broder, M.D.	Director	January 15, 2021
/s/ Thomas Ricks Thomas Ricks	Director	January 15, 2021

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS NOT MATERIAL AND WOULD LIKELY CAUSE COMPETITIVE HARM TO THE COMPANY IF PUBLICLY DISCLOSED.

STOCK PURCHASE AGREEMENT

BY AND AMONG

SENSEI BIOTHERAPEUTICS, INC.,

AND

STOCKHOLDERS OF ALVAXA BIOSCIENCES, INC.

Dated as of May 18, 2020

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THIS STOCK PURCHASE AGREEMENT (the "**Agreement**") is made and entered into as of May 18, 2020 by and among Sensei Biotherapeutics, Inc., a Delaware corporation ("**Buyer**"), Alvaxa Biosciences, Inc., a Delaware corporation (the "**Company**") and the undersigned stockholders of the Company (collectively, the "**Sellers**").

RECITALS

A. The Sellers are the record and beneficial owners of all of the issued and outstanding shares of common stock of the Company (the "**Shares**").

B. Buyer desires to purchase from the Sellers, and the Sellers desire to sell to Buyer, all of the Shares upon the terms and subject to the conditions hereinafter set forth.

C. The Board of Directors of each of Buyer and the Company and has approved this Agreement and the transactions contemplated hereby.

D. Buyer, on the one hand, and the Company and the Sellers, on the other hand, desire to make certain representations, warranties, covenants and other agreements in connection with the Stock Sale.

E. Contemporaneously with the execution and delivery of this Agreement, as a material inducement to Buyer to enter into this Agreement, each Seller who is an individual is entering into a Non-Competition and Non-Solicitation Agreement, in substantially the form attached hereto as **Exhibit A** (the "**Non-Competition and Non-Solicitation Agreements**"), with Buyer, pursuant to which such Seller has agreed, for a period of time after the Closing, not to compete with the business of the Company and not to solicit customers or the employees of the Company (and following the Closing, Buyer) for employment. For purposes of clarity, Fred Hutchinson Cancer Research and Gordon Roble as Sellers are not and will not be required to enter into a non-Competition and Non-Solicitation Agreement as a condition of entering into this Agreement.

NOW, THEREFORE, in consideration of the mutual agreements, covenants and other promises set forth herein, the mutual benefits to be gained by the performance thereof, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged and accepted, the parties hereby agree as follows:

Article 1

THE STOCK PURCHASE AND SALE

1.1 ***Sale and Purchase***. On the terms and subject to the terms and conditions set forth in this Agreement, at the Closing, Buyer shall purchase from the Sellers, and the Sellers shall sell, transfer, assign, convey and deliver to Buyer, all right, title and interest in and to the Shares, free and clear of all Liens other than restrictions on transfer imposed under applicable securities laws (the "**Stock Sale**"). As a result of the Stock Sale and the other transactions contemplated hereby, at the Closing, Buyer will own all of the Shares and the Company will be a wholly owned subsidiary of Buyer.

1.2 ***Purchase Price*****. The purchase price for the Shares shall be the Total Consideration and shall be payable in accordance with Section 1.3.**

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1.3 ***Payment of Closing Payment***. At the Closing, Buyer shall make the following payments (the "**Closing Payment**"):

(a) that amount, if any, up to the Maximum Liabilities Amount, necessary to be paid to applicable recipients of Company Liabilities shall be paid by Buyer on behalf of the Company to such recipients in accordance with, and in the amounts provided by the Company and to the applicable accounts provided by the Company and set forth on the Statement of Liabilities (as defined below) by wire transfer of immediately available funds (the "**Company Liabilities Payment**"); and

(b) that number of shares of Buyer Common Stock equivalent to such Seller's Pro Rata Portion of the Stock Consideration to such Sellers, as set forth on the Allocation Schedule (as defined below).

1.4 ***Closing***. The closing of the transactions contemplated by this Agreement (the "**Closing**") will take place as promptly as practicable following the execution and delivery hereof by the parties hereto, conditioned upon the satisfaction or waiver of the closing deliverables set forth in **Article 7** hereof, remotely via the electronic exchange of documents and signatures, unless another time or place is mutually agreed upon in writing by Buyer and the Sellers. The date upon which the Closing actually occurs shall be referred to herein as the "**Closing Date**."

1.5 ***Definitions and Effect of the Stock Sale***.

(a) ***Definitions***. For all purposes of this Agreement, the following terms shall have the following respective meanings:

(i) "***Accounts Receivable***" shall mean accounts receivable, notes receivable and other receivables generated in connection with the business of the Company.

(ii) "***Affiliate***" of a Person means any other Person that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such Person. The term "control" (including the terms "controlled by" and "under common control with") means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

(iii) "***Affiliated Group***" means any affiliated group within the meaning of Section 1504(a) of the Code or any similar consolidated, combined or unitary group defined under a similar provision of any applicable law.

(iv) "***Anti-Corruption and Anti-Bribery Laws***" shall mean the Foreign Corrupt Practices Act of 1977, as amended, any rules or regulations thereunder, or any other applicable United States or foreign anti-corruption or anti-bribery laws or regulations.

(v) ***"Business Day(s)***" shall mean each day that is not a Saturday, Sunday or holiday on which banking institutions located in New York, New York are authorized or obligated by Law or executive order to close.

(vi) "***Code***" means the Internal Revenue Code of 1986, as amended.

(vii) "***Company Cash***" shall mean the amount of the Company's consolidated unrestricted cash and cash equivalents as of 12:01 a.m. New York City Time on the Closing Date, net of any outstanding checks, wire transfers, or bank overdrafts, calculated in accordance with GAAP in a manner consistent with the calculation of the Company's unrestricted cash and cash equivalents in the Current Balance Sheet. For the avoidance of doubt, Company Cash may be a negative number.

(viii) "***Company Common Stock***" shall mean shares of common stock, $0.00001 par value per share, of the Company.

(ix) "***Company Formation Date***" shall mean December 14, 2018.

(x) "***Company Liability***" or "***Company Liabilities***" shall mean any liability or liabilities of the Company.

(xi) "***Company Material Adverse Effect***" shall mean any change, event or effect that is or is reasonably likely to be materially adverse to the business, prospects, assets (whether tangible or intangible), liabilities, condition (financial or otherwise), operations or capitalization of the Company, taken as a whole with materially meaning a dollar impact of not less than $250,000; *provided, however*, that any effect to the extent resulting or arising from any of the following shall not be considered when determining whether a Company Material Adverse Effect shall have occurred: (A) any change or development in general economic conditions in the industries or markets in which the Company operates, (B) any change in financing, banking or securities markets generally or (C) any act of war, armed hostilities or terrorism, change in political environment or any worsening thereof or actions taken in response thereto; *provided*, in each case, that such effects do not, individually or in the aggregate, have a materially disproportionate adverse impact on the Company, taken as a whole, relative to other Persons in the industries or markets in which the Company operates.

(xii) "***Company Products***" shall mean all products, services and Technology offerings of the Company (whether previously or currently distributed or supported, or currently under development).

(xiii) "***Contract***" shall mean any written or oral agreement, contract, subcontract, lease, binding understanding, instrument, note, bond, mortgage, indenture, option, warranty, purchase order, license, sublicense, benefit plan, obligation, commitment or undertaking of any nature.

(xiv) "***Covered Personal Information***" shall mean the following information the Company collects, uses or discloses from or about an individual: (A) a natural person's name, street address, telephone number, e-mail address, photograph, social security number or tax identification number, driver's license number or state identification number, passport number, credit or debit card number, insurance policy number, financial information, or customer or account number, health information, consumer report information, device identifiers, transaction identifier, IP addresses, physiological and behavioral biometric identifiers or any other piece of information that alone or in combination with other information directly or indirectly collected, held or otherwise managed by or for the Company allows the identification of or contact with a natural person or a particular computing system or device, or with respect to which there is a reasonable basis to believe it can be used to identify a natural person (and which, for greater certainty, includes all such information with respect to employees), and (B) any information that is associated, directly or indirectly (by, for example, records linked via unique keys), to any of the foregoing.

(xv) "***Environmental Laws***" shall mean all Laws relating to pollution or protection of the environment, exposure of any individual to Hazardous Materials, and Laws which prohibit, regulate or control any Hazardous Material, including Laws relating to emissions, discharges, releases or threatened releases of Hazardous Materials, or otherwise relating to the manufacture, processing, registration, distribution, labeling, sale, or the exposure of others to, recycling, use, treatment, storage, disposal, transport, or handling of Hazardous Materials or any product containing any Hazardous Material, and including related electronic waste, product content or product take-back requirements, including the United States Comprehensive Environmental Response, Compensation, and Liability Act of 1980, the United States Resource Recovery and Conservation Act of 1976, the United States Federal Water Pollution Control Act, the United States Clean Air Act, the United States Hazardous Materials Transportation Act, the United States Clean Water Act, the European Union Directive 2002/96/EC on Waste Electrical and Electronic Equipment and European Union Directives 2002/95/EC and 2011/65/EU on the Restriction on the Use of Hazardous Substance, all as amended or replaced at any time.

(xvi) "***Export and Import Approvals***" shall mean all export licenses, license exceptions, consents, notices, waivers, approvals, orders, authorizations, registrations, declarations and filings, from or with any Governmental Authority, that are required for compliance with Export and Import Control Laws.

(xvii) "***Export and Import Control Laws***" shall mean any U.S. or applicable non-U.S. Law governing (A) imports, exports, reexports, or transfers of products, services, software, or technologies from or to the United States or another country; (B) any release of technology or software in any foreign country or to any foreign Person (anyone other than a citizen or lawful permanent resident of the United States, or a protected individual as defined by 8 U.S.C. § 1324b(a)(3)) located in the United States or abroad; (C) economic sanctions or embargoes; or (D) compliance with unsanctioned foreign boycotts.

(xviii) "***GAAP***" shall mean United States generally accepted accounting principles consistently applied.

(xix) "***Hazardous Materials***" shall mean any material, emission, or substance that has been designated by a Governmental Authority to be a pollutant, contaminant, hazardous, toxic, radioactive or biological waste, or otherwise a danger to health, reproduction or the environment, including asbestos-containing materials (ACM), mold, and petroleum and petroleum products or any fraction thereof.

(xx) "***Indebtedness***" shall mean all Liabilities, including any applicable principal, fees, penalties (including with respect to any prepayment thereof), interest, premiums and any other costs and expenses, (A) for borrowed money, (B) evidenced by notes, bonds, debentures or similar obligations, (C) for the deferred purchase price of goods or services (other than trade payables or accruals incurred in the ordinary course of business), (D) under capital leases, (E) in respect of declared but unpaid dividends owed to Stockholders, (F) in respect of distributions payable or loans or right of advances payable to any Affiliates, Stockholders or partners or (G) in the nature of guarantees of the obligations described in the preceding clauses (A)–(F).

(xxi) "***Knowledge***" or "***Known***" shall mean, with respect to the Company, the actual knowledge of any Seller.

(xxii) "***Law***" shall mean any foreign, federal, state or local law, statute, regulation, constitution, ordinance, code, edict, rule, order, injunction, judgment, doctrine, decree, directive, ruling, writ, requirement, assessment, award or arbitration award of a Governmental Authority, settlement, Contract or governmental requirement enacted, promulgated, entered into, or imposed by, any Governmental Authority (including, for the sake of clarity, common law).

(xxiii) "***Lien***" shall mean any lien, pledge, charge, claim, mortgage, security interest or other encumbrance of any sort.

(xxiv) "***Majority Seller***" shall mean Mai H. Le.

(xxv) "***Maximum Liabilities Amount***" shall mean $197,000.

(xxvi) "***Ordinary Commercial Agreement***" shall mean an agreement entered into in the ordinary course of business that does not relate primarily to Taxes.

(xxvii) "***Person***" shall mean any individual, company, corporation, limited liability company, general or limited partnership, trust, proprietorship, joint venture, or other business entity, unincorporated association, organization or enterprise, or any Governmental Authority.

(xxviii) "***Pre-Closing Tax Period***" shall mean taxable years 2018 and 2019 as applicable.

(xxix) "***Pre-Closing Taxes***" shall mean (i) any Taxes of the Company relating or attributable to any Pre-Closing Tax Period (including (a) any such Taxes with respect to deferred revenues arising in any Pre-Closing Tax Period, regardless of when recognized for income tax purposes and (b) any such Taxes that are not yet due and payable), (ii) any and all Taxes of any member of an Affiliated Group (or any predecessor thereof) is or was a member on or prior to the Closing Date, including pursuant to Section 1.1502-6 of the Treasury Regulations or any analogous or similar state, local, or foreign law or regulation, (iii) any and all Taxes of any Person (other than the Company) imposed on the Company as a transferee or successor, by Contract or pursuant to any Law, which Taxes relate to an event or transaction occurring before the Closing, (iv) any Transfer Taxes and Transaction Payroll Taxes (except to the extent included in Third Party Expenses that are reflected on the Statement of Expenses and deducted from the Stock Consideration pursuant to **Section 1.5(a)(xxxiii))**, and (v) any Taxes attributable to or arising from the transactions contemplated by this Agreement.

(xxx) "***Pro Rata Portion***" shall mean, with respect to each Seller, an amount, rounded to the nearest one one-hundredth of one percent with 0.005% rounded up, equal to the quotient (expressed as a percentage) obtained by dividing (A) the total amount of Stock Consideration due to such Seller pursuant to **Section 1.3(b)**, by (B) the total amount of Stock Consideration due to all Sellers pursuant to **Section 1.3(b)**.

(xxxi) "***Prohibited Party Lists***" shall mean any list of designated or prohibited parties maintained by the U.S. Government including the List of Specially Designated Nationals and Blocked Persons, the Foreign Sanctions Evaders List, or the Sectoral Sanctions Identifications List, which are maintained by the Office of Foreign Assets Control of the U.S. Treasury Department, or the Entity List, Denied Persons List, or Unverified List, which are maintained by the Bureau of Industry and Security of the U.S. Commerce Department.

(xxxii) "***Related Agreements***" shall mean the Non-Competition and Non-Solicitation Agreements.

(xxxiii) "***Stock Consideration***" shall mean 14,610,093 shares of Buyer Common Stock.

(xxxiv) "***Stockholder***" shall mean any holder of any Company Common Stock that is issued and outstanding immediately prior to the Closing.

(xxxv) "***Total Consideration***" shall mean the Stock Consideration plus the Company Liabilities Payment.

(xxxvi) "***Transaction Payroll Taxes***" shall mean the employer portion of any payroll or employment Taxes incurred with respect to any bonuses, option exercises and cash-outs, and other compensatory payments made in connection with the transactions contemplated by this Agreement.

(b) ***Withholding***. Notwithstanding any other provision in this Agreement, Buyer and Company and Sellers agree that no withholding is required in regards to any of the consideration to be paid hereunder and no amounts shall be withheld.

(c) ***Certain Transfer Taxes and Fees***. All transfer, documentary, sales, use, stamp, value added, goods and services, excise, registration and other similar Taxes, and all conveyance fees, recording charges and other fees and charges (including any penalties and interest) incurred in connection with consummation of the transactions contemplated by this Agreement (such Taxes, "**Transfer Taxes**") shall be paid by the Sellers when due, and the Sellers will, at the expense of the Sellers, file all necessary Returns and other documentation with respect to all such Transfer Taxes, and if required by applicable Law, Buyer will and will cause its Affiliates to, join in the execution of any such Returns and other documentation.

1.6 ***Buyer's Obligations Fulfilled***. Notwithstanding anything herein to the contrary, before Buyer shall make or cause to be made any distributions of Buyer Common Stock hereunder to the Sellers, the Sellers shall deliver to Buyer a schedule set forth as **Exhibit B** (an "**Allocation Schedule**") setting forth (i) the name and mailing address of each Seller entitled to distribution of a portion of the Stock Consideration at such time, (ii) the number of shares of Company Common Stock held by each Seller as of immediately prior to the Closing and the certificate number or numbers corresponding to such share, (iii) each such Seller's Pro Rata Portion, (iv) the aggregate number of shares of Buyer Common Stock to which each Seller is then entitled and (v) the cost basis and date of issuance of such shares or securities. The Sellers shall be responsible for instructing Buyer as to the distribution of such amounts then distributed. Buyer may rely on the instructions of the Sellers for distributions and shall have no responsibility or liability with respect thereto*; provided*, that the distribution instructions of the Sellers are followed. Upon Buyer making each aggregate payment of Buyer Common Stock required of it under this Agreement to the Sellers as provided herein, Buyer shall have fulfilled its obligations with respect to such payment. No fraction of a share of Buyer Common Stock will be issued in connection with the Stock Sale. For purposes of calculating the number of shares of Buyer Common Stock to be issued to each Seller, all Buyer Common Stock payable to such Seller (without rounding) shall be aggregated and after such aggregation, such number of shares of Buyer Common Stock shall be rounded down to the nearest whole share of Buyer Common Stock and each Seller that would otherwise be entitled to receive a fraction of a share of Buyer Common Stock shall be canceled for no consideration.

1.7 ***Taking of Necessary Action; Further Action***. If at any time after the Closing, any further action is necessary or desirable to carry out the purposes of this Agreement and to vest Buyer with full right, title and possession to all assets, property, rights, privileges, powers and franchises of the Company, Buyer and the officers and directors of the Company, Buyer is fully authorized in the name of its respective corporations or otherwise to take, and will take, all such lawful and necessary action.

Article 2

COMPANY LIABILITIES ADJUSTMENT

2.1 ***Company Liabilities Adjustment***. Not later than three (3) Business Days prior to the Closing Date, the Company shall deliver to Buyer a good faith estimate of the Company Liabilities (such estimate, the "**Estimated Company Liabilities**") and a consolidated balance sheet of the Company, estimated as of as of 12:01 a.m. New York City Time on the Closing Date, from which such estimate was calculated. Sellers and Company shall demonstrate that the Estimated Company Liabilities are not in excess of the Maximum Liability Amount.

Article 3

REPRESENTATIONS AND WARRANTIES OF THE COMPANY

The Company hereby represents and warrants to Buyer, subject to such exceptions as are specifically disclosed in the disclosure schedule (referencing the appropriate section and paragraph numbers) supplied by the Company to Buyer on the date hereof (the "**Disclosure Schedule**") as follows:

3.1 ***Organization of the Company***. The Company is a corporation duly organized, validly existing and in good standing under the Laws of the State of Delaware. The Company has the corporate power to own its properties and to carry on its business as currently conducted. The Company is duly qualified or licensed to do business and in good standing as a foreign corporation in each jurisdiction in which such qualification or licensure is required by Law, except for those jurisdictions where the failure to be so qualified or licensed and in good standing would not reasonably be expected to have, individually, or in the aggregate, a Company Material Adverse Effect. The Company has made available a true and correct copy of its certificate of incorporation and bylaws or comparable governing documents, each as amended to date and in full force and effect on the date hereof (collectively, the "**Charter Documents**"), to Buyer. **Section 3.1** of the Disclosure Schedule lists the directors and officers of the Company as of the date hereof. The operations now being conducted by the Company are not now and have never been conducted by the Company under any other name. **Section 3.1** of the Disclosure Schedule also lists (a) each jurisdiction in which the Company is qualified or licensed to do business, and (b) every state or foreign jurisdiction in which the Company has employees or facilities.

3.2 ***Company Capital Structure.***

(a) **Section 3.2(a)** of the Disclosure Schedule sets forth the capitalization of the Company as of the date hereof, including the name and domicile address of and number of shares held by each such holder thereof and including the vesting schedule or such shares, if applicable. The authorized capital stock of the Company consists of [***] shares of Company Common Stock, of which [***] shares are issued and outstanding on the date hereof. All outstanding shares of Company Common Stock are duly authorized, validly issued, fully paid and non-assessable and are not subject to preemptive rights created by statute, the Charter Documents of the Company, or any agreement to which the Company is a party or by which it is bound, and have been issued in compliance with all applicable Laws, including federal and state

securities Laws. The Company has not, and will not have, suffered or incurred any liability (contingent or otherwise) or claim, loss, damage, deficiency, cost or expense relating to or arising out of the issuance or repurchase of any Company Common Stock or options or warrants to purchase Company Common Stock, or out of any agreements or arrangements relating thereto (including any amendment of the terms of any such agreement or arrangement). There are no declared or accrued but unpaid dividends with respect to any shares of Company Common Stock. The Company has no capital stock other than the Company Common Stock authorized, issued or outstanding. The Company has no Company Common Stock that is unvested. All shares of Company Common Stock are uncertificated.

(b) The Company has reserved [***]shares of Company Common Stock for issuance to officers, directors, employees and consultants of the Company pursuant to its 2019 Stock Incentive Plan duly adopted by the Board of Directors of the Company and approved by the Company stockholders (the "**Stock Plan**"). Of such reserved shares of Company Common Stock, [***] shares have been issued pursuant to an option exercise agreement. There are no remaining options to purchase shares granted and currently outstanding. There are no other options, warrants, calls, rights, convertible securities, commitments or agreements of any character, whether written or oral, to which the Company is a party or by which the Company is bound obligating the Company to issue, deliver, sell, repurchase or redeem, or cause to be issued, delivered, sold, repurchased or redeemed, any shares of the Company Common Stock or obligating the Company to grant, extend, accelerate the vesting of, change the price of, otherwise amend or enter into any such option, warrant, call, right, commitment or agreement. There are no outstanding or authorized stock appreciation, phantom stock, profit participation, or other rights, rights of any type, the value of which is determined by reference in whole or in part to the value of Company Common Stock or any other securities of the Company (whether payable in cash, property or otherwise) with respect to the Company. Except for the Stockholders Agreement by and among the Company and the other parties thereto, dated as of February 16, 2019, there are no voting trusts, proxies, or other agreements or understandings with respect to the voting securities of the Company. Except as set forth in **Section 3.2(b)** of the Disclosure Schedule, there are no agreements to which the Company is a party relating to the registration, sale or transfer (including agreements relating to rights of first refusal, co-sale rights or "drag-along" rights) of any Company Common Stock. The Allocation Schedule is complete and correct.

3.3 ***Subsidiaries***. The Company does not have, and has never had, any subsidiaries. The Company has not agreed, is not obligated to make, and is not bound by any Contract under which it may become obligated to make any future investment in, or capital contribution to, any other Person. The Company does not directly or indirectly own any equity or similar interest in or any interest convertible, exchangeable or exercisable for, any equity or similar interest in, any Person.

3.4 ***Authority***. The Company has all requisite power and authority to enter into this Agreement and any Related Agreements to which it is a party and to consummate the transactions contemplated hereby and thereby. The execution and delivery of this Agreement and any Related Agreements to which the Company is a party and the consummation of the transactions contemplated hereby and thereby have been duly authorized by all necessary corporate action on the part of the Company and no further action is required on the part of the Company to authorize the Agreement and any Related Agreements to which it is a party and the transactions contemplated hereby and thereby, subject only to the approval of this Agreement by Stockholders entitled to vote thereon. This Agreement and the Stock Sale have been unanimously approved by the Board of Directors of the Company. This Agreement and each of the Related Agreements to which the Company is a party has been duly executed and delivered by the Company and assuming the due authorization, execution and delivery by the other parties hereto and thereto, constitute the valid and binding obligations of the Company enforceable against it in accordance with their respective terms, except as such enforceability may be subject to the Laws of general application relating to bankruptcy, insolvency, and the relief of debtors and rules of Law governing specific performance, injunctive relief, or other equitable remedies.

3.5 ***No Conflict.***

(a) The execution and delivery by the Company of this Agreement and any Related Agreement to which the Company is a party, and the consummation of the transactions contemplated hereby and thereby, will not conflict with or result in any violation of or default under (with or without notice or lapse of time, or both) or give rise to a right of termination, cancellation, modification or acceleration of any obligation or loss of any benefit under (i) any provision of the Charter Documents, (ii) any Contract to which the Company is a party, or (iii) any judgment, order, decree, statute, Law, ordinance, rule or regulation applicable to the Company or any of its properties (whether tangible or intangible) or assets. The Company is in compliance with and has not breached, violated or defaulted under, or received notice that it has breached, violated or defaulted under, any of the terms or conditions of any Contract, nor does the Company have Knowledge of any event that would constitute such a breach, violation or default with the lapse of time, giving of notice or both. To the Knowledge of the Company, no party obligated to the Company pursuant to any Contract is in default thereunder.

(b) **Section 3.5(b)** of the Disclosure Schedule identifies all necessary consents, waivers and approvals of parties to any Contract to which the Company is a party, in form and substance reasonably acceptable to Buyer, as are required thereunder in connection with the Stock Sale, or for any such Contract to remain in full force and effect without limitation, modification or alteration after the Closing so as to preserve all rights of, and benefits to, the Company under such Contracts from and after the Closing. Following the Closing, the Company will be permitted to exercise all of its rights under such Contracts without the payment of any additional amounts or consideration other than ongoing fees, royalties or payments which the Company would otherwise be required to pay pursuant to the terms of such Contracts had the transactions contemplated by this Agreement not occurred.

3.6 ***Governmental Consents***. No consent, notice, waiver, approval, order or authorization of, or registration, declaration or filing with any court, administrative agency or commission or other federal, state, county, local or other foreign governmental or regulatory authority, instrumentality, agency or commission (each, a "**Governmental Authority**"), is required by, or with respect to, the Company in connection with the execution and delivery of this Agreement and any Related Agreement to which the Company is a party or the consummation of the transactions contemplated hereby and thereby.

3.7 ***Company Financial Statements.***

(a) **Section 3.7(a)** of the Disclosure Schedule sets forth the Company's (i) unaudited balance sheets as December 31, 2019 and December 31, 2018, and the audited consolidated statements of income, cash flow and stockholders' equity for the twelve (12) month periods then ended ("**Year-End Financials**") and (ii) the unaudited balance sheet as of May __ 2020 (the "**Balance Sheet Date**"), and the related unaudited statements of income and cash flow for the two (2) month period then ended (the "**Interim Financials**"). The Year-End Financials and the Interim Financials are collectively referred to as the "**Financials**". The Financials are true and correct in all material respects and have been prepared in accordance with GAAP applied on a consistent basis throughout the periods indicated and consistent with each other (except that the Financials do not contain footnotes and other presentation items that may be required by GAAP). The Financials present fairly the Company's financial condition, operating results and cash flows as of the dates and during the periods indicated therein, subject in the case of the Interim Financials to normal year-end adjustments, which are not material in amount or significant in any individual case or in the aggregate. The Company's unaudited consolidated balance sheet as of the Balance Sheet Date is referred to hereinafter as the "**Current Balance Sheet**."

3.8 ***No Undisclosed Liabilities***. The Company has no liability, indebtedness, obligation, expense, claim, deficiency, guaranty or endorsement of any type, whether accrued, absolute, contingent, matured, unmatured or other (whether or not required to be reflected in financial statements in accordance with GAAP) ("**Liabilities**"), which individually or in the aggregate (a) has not been reflected in the Current Balance Sheet, or (b) has not arisen in the ordinary course of business, consistent with past practices, since the Balance Sheet Date in an amount that does not exceed $10,000 in any one case or $25,000 in the aggregate. The aggregate amount of Company Liabilities outstanding on the date hereof is $197,000.

3.9 ***No Changes***. Since the Balance Sheet Date, there has not been, occurred or arisen any:

(a) transaction by the Company except in the ordinary course of business, consistent with past practices, as conducted on that date and consistent with past practices;

(b) amendments or changes to the Charter Documents of the Company other than as contemplated by this Agreement;

(c) capital expenditure or commitment by the Company exceeding $10,000 individually or $25,000 in the aggregate;

(d) payment, discharge or satisfaction of any claim, liability or obligation (absolute, accrued, asserted or unasserted, contingent or otherwise of the Company), other than payments, discharges or satisfactions in the ordinary course of business, consistent with past practices, of Liabilities reflected or reserved against in the Current Balance Sheet or arising in the ordinary course of business, consistent with past practices, since the Balance Sheet Date;

(e) destruction of, damage to, or loss of any material assets (whether tangible or intangible), material business or material customer of the Company (whether or not covered by insurance);

(f) employment dispute, including claims or matters raised by any individuals or any workers' representative organization, bargaining unit or union regarding labor trouble or claim of wrongful discharge or other unlawful employment or labor practice or action with respect to the Company;

(g) change in accounting methods or practices (including any change in depreciation or amortization policies or rates) by the Company other than as required by GAAP;

(h) adoption of or change in any Tax election or any Tax accounting method, change in any Tax period, entering into any closing agreement with respect to Taxes, settlement or compromise of any Tax claim or assessment, extension or waiver of the limitation period applicable to any Tax claim or assessment or filing of any amended Tax Return;

(i) revaluation by the Company of any of its assets (whether tangible or intangible), including writing down the value of inventory or writing off notes or Accounts Receivable;

(j) declaration, setting aside or payment of a dividend or other distribution (whether in cash, stock or property) in respect of any Company Common Stock, or any split, combination or reclassification in respect of any shares of Company Common Stock, or any issuance or authorization of any issuance of any other securities in respect of, in lieu of or in substitution for shares of Company Common Stock, or any direct or indirect repurchase, redemption, or other acquisition by the Company of any shares of Company Common Stock (or options, warrants or other rights convertible into, exercisable or exchangeable therefor);

(k) hiring or termination of any employee or consultant of the Company, promotion, demotion or other change to the employment status or title of any officer of the Company or resignation or removal of any director of the Company;

(l) increase in or other change to the salary, employment status, title or other compensation (including equity based compensation whether payable in cash, securities or otherwise) payable or to become payable by the Company to any of its respective officers, directors, employees, consultants or advisors, or the declaration, adoption, agreement, contract, payment or commitment or obligation of any kind for the payment (whether in cash or equity) by the Company of a severance payment, termination payment, bonus or other additional salary or compensation to any such Person;

(m) agreement, contract, covenant, instrument, lease, license or commitment to which the Company is a party or by which it or any of its assets (whether tangible or intangible) are bound or any termination, extension, amendment or modification of the terms of any agreement, contract, covenant, instrument, lease, license or commitment to which the Company is a party or by which it or any of its assets are bound, other than agreements, contracts, covenants, instruments, leases, licenses or commitments entered into in the ordinary course of business, consistent with past practice;

(n) sale, lease, license or other disposition of any of the assets (whether tangible or intangible) or properties of the Company outside of the ordinary course of business, consistent with past practices, including the sale of any Accounts Receivable, or any creation of any security interest in such assets or properties;

(o) loan by the Company to any Person, or purchase by the Company of any debt securities of any Person, except for advances to employees for travel and business expenses in the ordinary course of business, consistent with past practices;

(p) incurrence by the Company of any Indebtedness, amendment of the terms of any outstanding loan agreement, guaranteeing by the Company of any Indebtedness, issuance or sale of any debt securities of the Company or guaranteeing of any debt securities of others, except for advances to employees for travel and business expenses in the ordinary course of business, consistent with past practices;

(q) waiver or release of any right or claim of the Company, including any write-off or other compromise of any Accounts Receivable;

(r) commencement or settlement of any lawsuit by the Company, the commencement, settlement, notice or, to the Knowledge of the Company, threat of any lawsuit or proceeding or other investigation against the Company, its affairs, or relating to any of its businesses, properties or assets, or any reasonable basis for any of the foregoing;

(s) claims or matters raised by any individual, Governmental Authority, or workers' representative organization, bargaining unit or union, regarding, claiming or alleging labor trouble, wrongful discharge or any other unlawful employment or labor practice or action with respect to the Company;

(t) notice of any claim or potential claim of ownership, interest or right by any Person other than the Company of the Company Intellectual Property (as defined in **Section 3.13** hereof) or of infringement or misappropriation by the Company of any other Person's Intellectual Property Rights (as defined in **Section 3.13** hereof);

(u) issuance or sale, or contract or agreement to issue or sell, by the Company of any shares of Company Common Stock or any securities convertible into, or exercisable or exchangeable for, shares of Company Common Stock or any securities, warrants, options or rights to purchase any of the foregoing;

(v) (i) except standard end user licenses and software-as-a-service agreements entered into in the ordinary course of business, consistent with past practices, any sale, lease, license or transfer to any Person of any Company Intellectual Property or execution, modification or amendment of any agreement with respect to the Company Intellectual Property with any Person or with respect to the Intellectual Property Rights of any Person, (ii) purchase or license of any Intellectual Property Rights or execution, modification or amendment of any agreement with respect to the Intellectual Property Rights of any Person, (iii) agreement or modification or amendment of an existing agreement with respect to the development of any Technology or Intellectual Property Rights with a third party, or (iv) change in pricing or royalties set or charged by the Company to its customers or licensees or in pricing or royalties set or charged by Persons who have licensed Technology or Intellectual Property Rights to the Company;

(w) agreement or modification to any agreement pursuant to which any other party was granted marketing, distribution, development, manufacturing or similar rights of any type or scope with respect to any Company Product;

(x) event or condition of any character that has had or would reasonably be expected to have a Company Material Adverse Effect;

(y) lease, license, sublease or other occupancy of any Leased Real Property (as defined in **Section 3.12** hereof) by the Company; or

(z) agreement by the Company, or any officer or employees on behalf of the Company, to do any of the things described in the preceding clauses (a) through (y) of this **Section 3.9** (other than negotiations with Buyer and its representatives regarding the transactions contemplated by this Agreement and the Related Agreements).

3.10 ***Tax Matters.***

(a) ***Definition of Taxes***. For purposes of this Agreement, the term "**Tax**" or, collectively, "**Taxes**" shall mean (i) any and all U.S. federal, state, local and non-U.S. taxes, assessments and other governmental charges, duties, impositions and liabilities, including taxes based upon or measured by gross receipts, income, profits, environmental, sales, use and occupation, and value added, ad valorem, transfer, franchise, withholding, estimated, payroll, recapture, escheat, employment, excise and property taxes as well as public imposts, fees and social security charges (including health, unemployment and pension insurance), together with all interest, penalties and additions imposed with respect to such amounts, (ii) any liability for the payment of any amounts of the type described in clause (i) of this **Section 3.10(a)** as a result of being or having been a member of an affiliated, consolidated, combined, unitary or similar group for any period (including any arrangement for group or consortium relief or similar arrangement), and (iii) any liability for the payment of any amounts of the type described in clauses (i) or (ii) of this **Section 3.10(a)** as a result of any express or implied obligation to indemnify any other Person or as a result of any agreement or arrangement with respect to such amounts and including any liability for taxes of a predecessor or transferor or otherwise by operation of Law.

(b) ***Tax Returns and Audits.***

(i) The Company has (a) prepared and timely filed all required U.S. federal, state, local and non-U.S. returns, forms, estimates, information statements and reports, including any attachments, elections, supporting information or schedules thereto and amendments thereof ("**Returns**") required to be filed by the Company pursuant to applicable Law and such Returns are true, correct and complete and have been completed in compliance with applicable Law and (b) timely paid all Taxes due and payable by the Company (whether or not shown as due on such Returns).

(ii) The Company has timely paid or withheld with respect to amounts paid to their Employees and other third parties, all Taxes required to be withheld, and has timely paid over any such withheld Taxes to the appropriate Governmental Authority, and all Returns (including Forms W-2 and 1099) required with respect thereto have been properly completed and timely filed.

(iii) The Company has not been delinquent in the payment of any Tax, nor is there any Tax deficiency outstanding, assessed or proposed against the Company, nor has the Company executed any waiver of any statute of limitations on or extending the period for the assessment or collection of any Tax.

(iv) No audit examination or other administrative or court proceeding relating to Taxes or any Return of the Company is presently in progress, nor has the Company been notified of any request for such an audit, examination or other proceeding. No adjustment relating to any Return filed by the Company has been proposed by any Tax authority to the Company or any representative thereof. No claim has ever been made by a Tax authority in a jurisdiction where the Company does not file a Return that the Company is or may be subject to Tax in such jurisdiction.

(v) Any unpaid Taxes of the Company (i) as of the Balance Sheet Date, did not exceed the reserve for Tax liability (rather than any reserve for deferred Taxes established to reflect timing differences between book and Tax income) set forth on the Current Balance Sheet (rather than in any notes thereto) and (ii) will not exceed that reserve as adjusted for the passage of time through the Closing Date in accordance with the past custom and practice of the Company in filing its Returns. The Company has identified all uncertain tax positions contained in all Returns filed by the Company and has established adequate reserves and made any appropriate disclosures in the Financials in accordance with the requirements of ASC 740-10 (formerly Financial Interpretation No. 48 of FASB Statement No. 109, Accounting for Uncertain Tax Positions).

(vi) The Company has made available to Buyer true, correct and complete copies of all Returns for the Company filed for all periods for which the applicable statute of limitations period has not expired, as well as all examination reports and statements of deficiencies assessed against or agreed to by or on behalf of the Company for such periods.

(vii) There are (and immediately following the Closing there will be) no Liens on the assets of the Company relating to or attributable to Taxes, other than Liens for Taxes not yet due and payable. The Company has no Knowledge of any basis for the assertion of any claim relating or attributable to Taxes which, if adversely determined, would result in any Lien on the assets of the Company.

(viii) The Company has (a) never been a member of an Affiliated Group filing a consolidated federal income Tax Return (other than a group the common parent of which was the Company), (b) no liability for the Taxes of any Person under Treasury Regulation § 1.1502-6 (or any similar provision of state, local or non-U.S. Law (including any arrangement for group or consortium relief or similar arrangement)), as a transferee or successor, by operation of Law, by Contract, or otherwise and (c) never been a party to any joint venture, partnership or other arrangement that could be treated as a partnership for Tax purposes. The Company is not a party to, or bound by, any Tax sharing, indemnification, allocation or similar agreement or arrangement.

(ix) The Company is not, and has not been, a "United States Real Property Holding Corporation" within the meaning of Section 897(c)(2) of the Code during the applicable period specified in Section 897(c)(1)(A)(ii) of the Code.

(x) The Company has not constituted either a "distributing corporation" or a "controlled corporation" in a distribution of stock intended to qualify for tax-free treatment under Section 355 of the Code within the three years preceding the Stock Sale or in a distribution that could otherwise constitute part of a "plan" or "series of related transactions" (within the meaning of Section 355(e) of the Code) in conjunction with the transactions contemplated by this Agreement.

(xi) The Company has not engaged in a reportable transaction under Treasury Regulation § 1.6011-4(b), including a transaction that is the same as or substantially similar to one of the types of transactions that the Internal Revenue Service has determined to be a tax avoidance transaction and identified by notice, regulation, or other form of published guidance as a listed transaction, as set forth in Treasury Regulation § 1.6011-4(b)(2). The Company has not been a party to any transaction or series of transactions which is or forms part of a scheme for the illicit avoidance of Tax or which can reasonably be considered as such.

(xii) The Company has disclosed on its U.S. federal income Tax Returns all positions taken therein which could give rise to a substantial understatement of Tax within the meaning of Section 6662 of the Code.

(xiii) The Company will not be required to include any income or gain or exclude any deduction or loss from Taxable income for any taxable period or portion thereof beginning after the Closing Date as a result of any (a) change in method of accounting or use of an improper method of accounting for a Tax period ending on or prior to the Closing Date under Section 481 of the Code (or any corresponding or similar provision of state, local or non-U.S. Law), (b) closing agreement under Section 7121 of the Code (or any similar provision of applicable Law) executed prior to the Closing, (c) deferred intercompany gain or excess loss account under Treasury Regulations under Section 1502 of the Code (or any similar provision of applicable Law) in connection with a transaction consummated on or prior to the Closing Date, (d) installment sale or open transaction disposition consummated on or prior to the Closing Date, (e) prepaid amount or deferred revenue received on or prior to Closing Date or (f) election under Section 108(i) of the Code (or under any similar provision of applicable Law).

(xiv) The Company uses the accrual method of accounting for tax purposes.

(xv) The Company is not subject to Tax in any jurisdiction other than its country of incorporation or formation by virtue of having a permanent establishment, place of business or source of income in that country.

(xvi) The Company has not entered into any arrangement (including "rulings") with any Tax authority or is subject to a special regime with regard to the payment of Taxes. No power of attorney currently in force has been granted by the Company relating to Taxes.

(xvii) The Company is in compliance in all material respects with all terms and conditions of any Tax exemption, Tax holiday or other Tax reduction agreement or order ("**Tax Incentive**"), and the consummation of the transactions contemplated by this Agreement will not have any adverse effect on the continued validity and effectiveness of any such Tax Incentive. No property of the Company is (i) "tax exempt use property" within the meaning of Section 168(h) of the Code; (ii) Tax-exempt bond financed property under Section 168(g) of the Code; or (iii) treated as owned by any Person other than the Company under Section 168 of the Code.

(xviii) The Company is in compliance in all material respects with all applicable transfer pricing Laws, including the execution and maintenance of contemporaneous documentation substantiating the transfer pricing practices and methodology of the Company. The prices for any property or services (or for the use of any property) provided by or to the Company are arm's length prices for purposes of the applicable transfer pricing Laws, including Treasury Regulations promulgated under Section 482 of the Code. No election has been made pursuant to Section 965 of the Code with respect to the payment of tax attributable to amounts required to be included in income thereunder.

(xix) No Person holds shares of Company Common Stock that are subject to a substantial risk of forfeiture within the meaning of Section 83 of the Code with respect to which a valid election under Section 83(b) of the Code has not been made.

(xx) The Company made a valid and timely election to be classified as an S corporation under Section 1361 and Section 1362 of the Code (and under similar provisions of applicable state or local Law), such election has been effective as of the date of the Company's incorporation, such election has not been revoked or otherwise terminated, and the Company has satisfied all the requirements for continued classification as an S corporation at all times since the date of its incorporation and will be a valid S corporation up to and including the Closing Date. The Company has not, within the past seven years: (i) acquired assets from another corporation in a transaction in which the Company's Tax basis for the acquired assets was determined, in whole or in part, by reference to the Tax basis of the acquired assets (or any other property) in the hands of the transferor or (ii) acquired the stock of any corporation which is a qualified subchapter S subsidiary. Except for the transactions contemplated by this Agreement, the Company has not taken nor will take (prior to the Closing) any action that would cause Company to lose its status as an S corporation as defined in Sections 1361 and 1362 of the Code (and under similar provisions of applicable state or local Law). The Company has no potential liability for any Tax under Section 1374 of the Code (or similar provisions of state, local or foreign Law).

(xxi) **Section 3.10(b)(xxi)** of the Disclosure Schedule sets forth each jurisdiction where the Company will be required to file a Tax Return following the Closing with respect to any Pre-Closing Tax Period, including the type of Return and the type of Tax required to be paid.

(xxii) **Section 3.10(b)(xxii)** of the Disclosure Schedule sets forth the following information with respect to the Company: (a) the Tax basis of the Company in its assets; (b) the amount of any net operating loss, net capital loss, unused investment, foreign, or other Tax credit and the amount of any limitation upon any of the foregoing; and (c) the amount of any deferred gain or loss allocable to the Company arising out of any deferred intercompany transaction as defined in Treasury Regulation § 1.1502-13 or any similar provision of applicable Law.

(c) ***Executive Compensation Tax***. There is no contract, agreement, plan or arrangement to which the Company is a party, including the provisions of this Agreement, covering any Employee of the Company, which, individually or collectively, could give rise to the payment of any amount that would not be deductible pursuant to Sections 280G or 404 of the Code.

(d) ***Section 409A***. Each nonqualified deferred compensation plan (as defined in Section 409A(d)(1) of the Code) has been maintained and operated since the Company's incorporation in compliance with Section 409A of the Code and all applicable IRS guidance issued with respect thereto. No compensation shall be includable in the gross income of any Employee as a result of the operation of Section 409A of the Code with respect to any arrangements or agreements in effect prior to the Closing. Each option to purchase Company Common Stock, stock appreciation right, or other similar right to acquire Company Common Stock or other equity of the Company, granted to or held by an individual or entity who is or may be subject to United States taxation, (i) has an exercise price that that is not less than the fair market value of the underlying equity as of the date such option to purchase Company Common Stock, stock appreciation right or other similar right was granted, (ii) has no feature for the deferral of compensation other than the deferral of recognition of income until the later of exercise or disposition of such Company Option, stock appreciation right or other similar right, (iii) to the extent it was granted after December 31, 2004, was granted with respect to a class of stock of the Company that is "service recipient stock" (within the meaning of Section 409A and the proposed or final regulations or other IRS guidance issued with respect thereto), and (iv) has been properly accounted for in accordance with GAAP in the Financials.

(e) ***Section 280G***. There is no agreement, plan, arrangement or other contract covering any Employee that, considered individually or considered collectively with any other such agreements, plans, arrangements or other contracts, will, or could reasonably be expected to, give rise directly or indirectly to the payment of any amount that would be characterized as a "parachute payment," within the meaning of Section 280G(b)(2) of the Code as a result of the transactions contemplated by this Agreement. There is no contract, agreement, plan or arrangement to which the Company or any ERISA Affiliate is a party or by which it is bound to compensate any Employee for excise taxes paid pursuant to Section 4999 of the Code.

(f) Except as set forth on **Section 3.10(f)** of the Disclosure Schedule, the Company has not issued any shares of Company Common Stock or any other security that would be deemed a "covered security" under Treasury Regulation § 1.6045-1(a)(15) to Stockholders on or after January 1, 2011. **Section 3.10(f)** of the Disclosure Schedule sets forth, for each Person that acquired such a covered security from the Company on or after January 1, 2011, the name of such Person, the certificate numbers for any such shares, the total adjusted basis and the original acquisition date.

3.11 ***Restrictions on Business Activities***. There is no Contract, agreement (non-competition or otherwise), commitment, judgment, injunction, order or decree to which the Company is a party or otherwise binding upon the Company which has or may reasonably be expected to have the effect of prohibiting or impairing any business practice of the Company, any acquisition of property (tangible or intangible) by the Company, the conduct of business by the Company, or otherwise limiting the freedom of the Company to engage in any line of business or to compete with any Person. Without limiting the generality of the foregoing, the Company has not entered into any agreement under which the Company is restricted from selling, licensing, manufacturing or otherwise distributing or providing any Company Products to customers or potential customers or any class of customers, in any geographic area, during any period of time, or in any segment of the market, or from hiring or soliciting potential employees, consultants or independent contractors.

3.12 ***Title to Properties; Absence of Liens and Encumbrances.***

(a) The Company does not own any real property, nor has the Company ever owned any real property. **Section 3.12(a)** of the Disclosure Schedule sets forth a list of all real property currently leased, subleased or licensed by or from the Company or otherwise used or occupied by the Company (the "**Leased Real Property**"), the name of the lessor, licensor, sublessor, master lessor and/or lessee, the date and term of the lease, license, sublease or other occupancy right and each amendment thereto, the size of premises and the aggregate annual rental payable thereunder. The Company has provided Buyer with true, correct and complete copies of all leases, lease guaranties, licenses, subleases, agreements for the leasing, use or occupancy of, or otherwise granting a right in or relating to the Leased Real Property, including all amendments, terminations and modifications thereof ("**Lease Agreements**"). All such Lease Agreements are in full force and effect and are valid and enforceable in accordance with their respective terms. There is not, under any Lease Agreements, any existing default or event of default (or event which with notice or lapse of time, or both, would constitute a default) of the Company, or to the Company's Knowledge, any other party thereto. The Company currently occupies all of the Leased Real Property for the operation of its business, and there are no other parties occupying, or with a right to occupy, the Leased Real Property.

(b) All Leased Real Property is in good operating condition and repair and is suitable for the conduct of the Company's business as presently conducted therein. Neither the operation of the Company on the Leased Real Property nor, to the Company's Knowledge, such Leased Real Property, violates any Law relating to such property or operations thereon. The Company could not be required to expend more than $10,000 in causing any Leased Real Property to comply with the surrender conditions set forth in the applicable Lease Agreement. The Company has performed all of its obligations under any termination agreements pursuant to which it has terminated any leases of real property that are no longer in effect and has no continuing liability with respect to such terminated real property leases. The Company is not a party to any agreement or subject to any claim that could require the payment of any real estate brokerage commissions, and no such commission is owed with respect to any of the Leased Real Property. The Company does not owe any brokerage commissions or finders fees with respect to any Leased Real Property and would not owe any such fees if any existing Lease Agreement were renewed pursuant to any renewal options contained in such Lease Agreements.

(c) The Company has good and valid title to, or, in the case of leased properties and assets, valid leasehold interests in, all of its tangible properties and assets, real, personal and mixed, used or held for use in its business, free and clear of any Liens, except (i) as reflected in the Current Balance Sheet, (ii) Liens for Taxes not yet due and payable, and (iii) such imperfections of title and encumbrances, if any, which do not detract from the value or interfere with the present use of the property subject thereto or affected thereby.

(d) All equipment owned or leased by the Company currently in use and held for future use is (i) adequate for the conduct of the business of the Company as currently conducted and as currently contemplated to be conducted, and (ii) in good operating condition, regularly and properly maintained, subject to normal wear and tear.

3.13 ***Intellectual Property.***

(a) ***Definitions***. For all purposes of this Agreement, the following terms shall have the following respective meanings:

(i) "***Technology***" shall mean any or all of the following: (A) works of authorship (including computer programs, source code, and executable code, whether embodied in software, firmware or otherwise, architecture, documentation, designs, files, records, databases, and data), (B) inventions (whether or not patentable), discoveries, improvements, and technology, (C) proprietary and confidential information, trade secrets and know how, (D) databases, data compilations and collections and technical data, (E) domain names, web addresses and sites, (F) tools, methods and processes, and (G) any and all instantiations or embodiments of the foregoing in any form and embodied in any media.

(ii) "***Intellectual Property Rights***" shall mean worldwide common law and statutory rights associated with (A) patents and patent applications of any kind, (B) copyrights, copyright registrations and copyright applications, "moral", "economic" rights and mask work rights, (C) the protection of trade and industrial secrets and confidential information, (D) logos, trademarks, trade names and service marks, and (E) any other proprietary rights relating to Technology, including any analogous rights to those set forth above.

(iii) "***Company Intellectual Property***" shall mean any and all Technology and Intellectual Property Rights that are or are purported to be owned by or exclusively licensed to the Company.

(iv) "***Registered Intellectual Property Rights***" shall mean any and all Intellectual Property Rights that have been registered, applied for, filed, certified or otherwise perfected, issued, or recorded with or by any state, government or other public or quasi-public legal authority.

(v) "***Open Source***" shall mean all software and other material that is distributed as "freeware," "free software," "open source software" or under a similar licensing or distribution model. Open Source includes any software and other material that is distributed under any license listed (or that is substantially similar to any license listed) at http://www.opensource.org/licenses.

(b) **Section 3.13(b)** of the Disclosure Schedule lists all Registered Intellectual Property Rights owned by, or filed in the name of, the Company (the "**Company Registered Intellectual Property Rights**") (all of which are Company Intellectual Property); and any material proceedings or actions before any court, tribunal (including the United States Patent and Trademark Office (the "**PTO**")) or equivalent authority anywhere in the world) related to any of the Company Registered Intellectual Property Rights or Company Intellectual Property.

(c) Each item of Company Registered Intellectual Property Rights is enforceable, valid and subsisting. All necessary registration, maintenance and renewal fees in connection with such Company Registered Intellectual Property Rights have been paid and all necessary documents and certificates in connection with such Company Registered Intellectual Property Rights have been filed with

the relevant patent, copyright, trademark or other authorities in the United States or foreign jurisdictions, as the case may be, for the purposes of maintaining such Company Registered Intellectual Property Rights. There are no actions that must be taken by the Company within one hundred days following the date of this Agreement, including the payment of any registration, maintenance or renewal fees or the filing of any documents, applications or certificates for the purposes of maintaining, perfecting or preserving or renewing any Company Registered Intellectual Property Rights. In each case in which the Company has acquired any such Registered Intellectual Property Rights from any Person, the Company has obtained a valid and enforceable assignment sufficient to irrevocably transfer all rights in Registered Intellectual Property Rights (including the right to seek past and future damages with respect thereto) to the Company, and, to the maximum extent provided for by, and in accordance with, applicable Laws, the Company has recorded each such assignment with the relevant Governmental Authorities, including the PTO, the U.S. Copyright Office, or their respective equivalents in any relevant foreign jurisdiction, as the case may be.

(d) All Company Intellectual Property is fully transferable and licensable by the Company, and following the Closing will be fully transferable and licensable by the Company and/or Buyer, without restriction and without payment of any kind to any third party.

(e) Each item of Company Intellectual Property, including all Company Registered Intellectual Property Rights listed in **Section 3.13(b)** of the Disclosure Schedule, and all Technology and Intellectual Property Rights licensed to the Company, are free and clear of any Liens other than those set forth on **Section 3.13(e)** of the Disclosure Schedule. The Company is the exclusive owner or exclusive licensee of all Company Intellectual Property. Except for the out-bound licenses listed in **Section 3.14(a)(xv)** of the Disclosure Schedule, the Company has neither granted any license to any Company Intellectual Property nor made available any Company product to any Person.

(f) To the extent that any Technology has been developed or created independently or jointly by any Person other than the Company for which the Company has, directly or indirectly, provided consideration for such development or creation, the Company has a written agreement with such Person with respect thereto, and the Company thereby has obtained ownership of, and is the exclusive owner of, all such Technology and associated Intellectual Property Rights by operation of law or by valid assignment, and has required the waiver of all non-assignable rights.

(g) The Company has not (i) transferred ownership of, or granted any exclusive license of or exclusive right to use, or authorized the retention of any exclusive rights to use or joint ownership of, any Technology or Intellectual Property Rights that are or were Company Intellectual Property, to any other Person or (ii) permitted the Company's rights in any Company Intellectual Property to enter into the public domain.

(h) Except for the Technology licensed to the Company pursuant to the in-bound licenses listed in **Section 3.13(v)** and **Section 3.14(a)(xv)** of the Disclosure Schedule, all Technology used in or necessary to the conduct of Company's business as presently conducted or currently contemplated to be conducted by the Company was written and created solely by either (i) employees of the Company acting within the scope of their employment who have validly and irrevocably assigned all of their rights, including all Intellectual Property Rights therein, to the Company or (ii) by third parties who have validly and irrevocably assigned all of their rights, including all Intellectual Property Rights therein, to the Company, and no third party owns or has any rights to any of the Company Intellectual Property.

(i) The Company Intellectual Property, together with Technology and Intellectual Property Rights nonexclusively licensed to the Company pursuant to the non-exclusive in-bound licenses listed in **Section 3.13(v)** and **Section 3.14(a)(xv)** of the Disclosure Schedule, constitutes all of the Technology and Intellectual Property Rights used in, necessary to or that otherwise would be infringed by the conduct of the business of the Company as it currently is conducted or planned by the Company to be conducted, including the design, development, marketing, manufacture, use, import and sale of any Company Product. Except as set forth in **Section 3.13(i)** of the Disclosure Schedule, the Company will own or possess sufficient rights to all Technology and Intellectual Property Rights immediately following the Closing Date that are used in or necessary to the operation of the business of the Company as it currently is conducted or planned by the Company to be conducted.

(j) None of the contracts, licenses and agreements pursuant to which the Company licenses any Technology or Intellectual Property Rights will terminate, or may be terminated by a third party, solely by the passage of time or at the election of a third party within 120 days after the Closing Date.

(k) No third party that has licensed Technology or Intellectual Property Rights to the Company has ownership rights or license rights to improvements or derivative works made by the Company in such Technology or Intellectual Property Rights that have been licensed to the Company.

(l) There are no contracts, licenses or agreements between the Company and any other Person with respect to Company Intellectual Property or other Technology or Intellectual Property Rights used in and/or necessary to the conduct of the business as it is currently conducted or planned by the Company to be conducted under which there is any dispute regarding the scope of such agreement, or performance under such agreement including with respect to any payments to be made or received by the Company thereunder.

(m) The operation of the business of the Company as it has been conducted, is currently conducted and is currently contemplated by the Company to be conducted, including the design, development, use, import, branding, advertising, promotion, marketing, distribution, manufacture and sale of any Company Product has not infringed or misappropriated, does not infringe or misappropriate, and will not infringe or misappropriate when conducted by Buyer and/or the Company following the Closing in the manner currently planned to be conducted, any Intellectual Property Rights of any Person, violate any right of any Person (including any right to privacy or publicity), or constitute unfair competition or trade practices under the Laws of any jurisdiction. The Company has not received notice from any Person claiming that such operation, or any act, Company Product or Technology of the Company, infringes or misappropriates any Intellectual Property Rights of any Person or constitutes unfair competition or trade practices under the Laws of any jurisdiction (nor does the Company have Knowledge of any basis therefor).

(n) Neither this Agreement nor the transactions contemplated by this Agreement, including the assignment to Buyer by operation of law or otherwise of any contracts or agreements to which the Company is a party, will result in: (i) Buyer, the Company or any of their subsidiaries granting to any third party any right to or with respect to any Intellectual Property Rights owned by, or licensed to Buyer, the Company or any of their subsidiaries, (ii) Buyer, the Company or any of their subsidiaries, being bound by or subject to, any exclusivity obligations, non-compete or other restriction on the operation or scope of their respective businesses, or (iii) Buyer, the Company or any of their subsidiaries being obligated to pay any royalties or other material amounts to any third party in excess of those payable by any of them, respectively, in the absence of this Agreement or the transactions contemplated hereby.

(o) To the Knowledge of the Company, no Person has infringed or misappropriated or is infringing or misappropriating any Company Intellectual Property.

(p) The Company has taken all reasonable steps that are required or necessary to protect the Company's rights in confidential information and trade secrets of the Company or provided by any other Person to the Company. Without limiting the foregoing, the Company has, and enforces, a policy requiring each employee, consultant, and contractor to execute proprietary information, confidentiality and assignment agreements substantially in the Company's standard forms, and all current and former employees, consultants and contractors of the Company have executed such an agreement in substantially the Company's standard form. No trade secret of the Company has been publicly disclosed.

(q) No Company Intellectual Property or Company Product is subject to any proceeding or outstanding decree, order, judgment or settlement agreement or stipulation that restricts in any manner the use, transfer or licensing thereof by the Company or may affect the validity, use or enforceability of such Company Intellectual Property.

(r) No (i) Company Product or publication of the Company, (ii) material published or distributed by the Company, or (iii) conduct or statement of the Company constitutes obscene material, a defamatory statement or material, false advertising or otherwise violates any Law.

(s) No government funding, facilities or resources of a university, college, other educational institution or research center or funding from third parties was used in the development of the Company Intellectual Property and no Governmental Authority, university, college, other educational institution or research center has any claim or right in or to the Company Intellectual Property. No rights have been granted to any Governmental Authority with respect to any Company Product, or under any Company Intellectual Property, other than the same standard commercial rights as are granted by the Company to commercial end users of the Company services in the ordinary course of business, consistent with past practices. Except as set forth on **Section 3.13(s)** of the Disclosure Schedule, no current or former employee, consultant or independent contractor of the Company who was involved in, or who contributed to, the creation or development of any Company Intellectual Property, has performed services for the government, a university, college or other educational institution, or a research center, during a period of time during which such employee, consultant or independent contractor was also performing services for the Company.

(t) The Company has not collected any Covered Personal Information from any third parties except as described in **Section 3.13(t)** of the Disclosure Schedule. The Company does not process or maintain Protected Health Information, as such term is defined in HIPAA. The Company has complied with all applicable Laws, privacy rights of third parties, contractual obligations and privacy policies relating to the privacy of users of Company Products and Web sites and/or to the collection, storage, and transfer of any Covered Personal Information collected by or on behalf of the Company, including the Privacy, Data Protection and Information Security Requirements (collectively, "**Privacy Obligations**"). "**Privacy, Data Protection and Information Security Requirements**" shall mean all applicable laws, rules, regulations, directives and governmental requirements relating in any way to the privacy, confidentiality, security, and protection of Personal Data, including, without limitation, (a) the EU Data Protection Directive 95/46/EC, the EU General Data Protection Regulation 2016/679, the EU e-Privacy Directive 2002/58/EC as amended by Directive 2009/136/EC or further amended or replaced from time to time, and any relevant national implementing legislation, and any substantially similar local legislation, including the recommendations and deliberations of the relevant privacy commissioners and other privacy, personal information protection, and data protection authorities, (b) those regarding unsolicited email communications, (c) those regarding information security requirements, (d) those regarding the secure disposal of records containing certain Personal Data, (e) those regarding banking secrecy and outsourcing requirements, (f) those regarding international data transfers and/or on-soil requirements, (g) those regarding incident reporting and data breach notification requirements, including guidelines and recommendations from the competent regulators, (h) to the extent applicable, the Payment Card Industry Data Security Standards, and (i) all applicable provisions of any Company privacy policy. The execution, delivery and performance of this

Agreement complies with all applicable Privacy Obligations. True and correct copies of all privacy policies, including customer or other third-party privacy policies with which the Company is obligated to comply, are attached to **Section 3.13(t)** of the Disclosure Schedule. The Company has at all times made all disclosures to users or customers required by applicable Laws, and none of such disclosures made or contained in any such privacy policy or in any such materials has been inaccurate, misleading or deceptive or in violation of any applicable Laws. The Company has reasonable and appropriate security measures in place to protect any Covered Personal Information it receives from illegal or unauthorized access, use, or disclosure including without limitation a written information security program that includes appropriate controls that have been regularly tested and reviewed. No person has gained unauthorized access to any Covered Personal Information held by the Company, or otherwise held or processed on their behalf. The consummation of the contemplated transactions, including any transfer of Covered Personal Information resulting from such transactions will not violate any Privacy Obligation as it currently exists or as it existed at any time during which any of such Covered Personal Information was collected or obtained. The Company has not been notified of and is not the subject of, any regulatory investigation or proceeding related to data security or privacy. No person (including any Governmental Authority) has made any claim or commenced any proceeding with respect to loss, damage, or unauthorized access, use, modification, or other misuse of any such information by the Company (or any of its employees, contractors, or subcontractors).

(u) Neither the Company nor any Person acting on the Company's behalf has disclosed, delivered or licensed to any Person, agreed to disclose, deliver or license to any Person, or permitted the disclosure or delivery to any escrow agent or other Person of any source code owned by the Company or used in its business ("**Company Source Code**"). No event has occurred, and no circumstance or condition exists, that (with or without notice or lapse of time or both) will, or would reasonably be expected to, result in the disclosure or delivery by or on behalf of the Company of any Company Source Code. Company Source Code means any software source code or related proprietary or confidential information or algorithms of any Company Intellectual Property.

(v) There is no Open Source that is incorporated into, linked with, or distributed (including on a hosted-service or software-as-a-service basis) in conjunction with any Company Products.

(w) **Section 3.13(w)** of the Disclosure Schedule lists all industry standards bodies and similar organizations of which the Company is a member, to which it has been a contributor or in which it has been a participant. The Company is not and never was a member in, a contributor to, or participant in any industry standards body or similar organization that could require or obligate the Company to grant or offer to any other Person any license or right to any Technology or Intellectual Property Rights.

3.14 ***Agreements, Contracts and Commitments.***

(a) Except as set forth in **Section 3.14** of the Disclosure Schedule (specifying the appropriate subparagraph), the Company is not a party to, nor is it bound by any of the following (each, a "**Material Contract**") to the extent currently in effect:

(i) any (A) employment, contractor or consulting Contract with an employee, individual consultant or contractor, or (B) consulting Contract with a firm or organization (excluding any agreement or offer letter that is terminable at-will and does not provide for severance or termination payments);

(ii) any agreement or plan, including any stock option plan, stock appreciation rights plan or stock purchase plan, any of the benefits of which will be increased, or the vesting of benefits of which will be accelerated, by the occurrence of any of the transactions contemplated by this Agreement (either alone or upon the occurrence of any additional subsequent events) or the value of any of the benefits of which will be calculated on the basis of any of the transactions contemplated by this Agreement;

(iii) any fidelity or surety bond or completion bond;

(iv) any lease of personal property or equipment having a value in excess of $10,000 individually or $25,000 in the aggregate;

(v) any agreement of indemnification or guaranty, but excluding agreements of indemnification or guaranty with respect to the infringement by the Company Products of the Intellectual Property Rights of third parties that are contained in the Company's written agreements with its customers that have been entered into in the ordinary course of business, consistent with past practices, substantially in the Company's standard form of customer agreement;

(vi) any agreement, contract or commitment relating to capital expenditures and involving future payments in excess of $10,000 individually or $25,000 in the aggregate;

(vii) any agreement, contract or commitment relating to the disposition or acquisition of assets or any interest in any business enterprise outside the ordinary course of the Company's business, consistent with past practices;

(viii) any mortgages, indentures, guarantees, loans or credit agreements, security agreements or other agreements or instruments relating to the borrowing of money or extension of credit;

(ix) any purchase order, contract or other commitment obligating the Company to purchase materials or services at a cost in excess of $10,000 individually or $25,000 in the aggregate;

(x) any agreement containing covenants or other obligations granting or containing any current or future commitments regarding exclusive rights, non-competition, "most favored nations," restriction on the operation or scope of its businesses or operations, or similar terms;

(xi) any agreement providing a customer with refund rights;

(xii) any agreement for the use, distribution or integration of the Company Products other than by the consumer end-user, including dealer, distribution, marketing, development, sales representative, original equipment manufacturer, manufacturing, supply, value added, remarketer, reseller, vendor, business partner, service provider and joint venture agreements;

(xiii) any agreement pursuant to which the Company has received revenue or other payments in excess of $10,000 individually or $25,000 in the aggregate;

(xiv) any terms of use or terms of service, including those posted or implemented as "browsewrap" or "clickwrap" agreements, for third-party Web sites and other publicly accessible on-line sources from which the Company or a person acting on the Company's behalf has extracted or collected information through the use of any "scrapers," "spiders," "bots" or other automated software programs or processes;

(xv) any contracts, licenses and agreements to which the Company is a party with respect to any Technology or Intellectual Property Rights, including any in-bound licenses, out-bound licenses, and cross-licenses; or

(xvi) any other agreement, contract or commitment that involves $10,000 individually or $25,000 in the aggregate or more and is not cancelable by the Company without penalty within thirty (30) days.

(b) The Company is in compliance with and has not breached, violated or defaulted under, or received notice that it has breached, violated or defaulted under, any of the terms or conditions of any Material Contract, nor does the Company have Knowledge of any event that would constitute such a breach, violation or default with the lapse of time, giving of notice or both. Each Material Contract is in full force and effect, and the Company is not subject to any default thereunder, nor to the Knowledge of the Company is any party obligated to the Company pursuant to any such Material Contract subject to any default thereunder. Except as set forth in **Section 3.14(b)** of the Disclosure Schedule, no Material Contract will terminate, or may be terminated by either party, solely by the passage of time or at the election of either party within 120 days after the Closing. To the Knowledge of the Company, no party to a Material Contract has any intention of terminating such Material Contract with the Company or reducing the volume of business such party conducts with the Company, whether as a result of the Stock Sale or otherwise.

3.15 ***Interested Party Transactions***. No officer, director or stockholder of the Company (nor any ancestor, sibling, descendant or spouse of any of such persons, or any trust, partnership or corporation in which any of such persons has or has had an interest), has or has had, directly or indirectly, (i) an interest in any entity which furnished or sold or licensed, or furnishes or sells or licenses, Company Products or Intellectual Property Rights that the Company furnishes or sells, or proposes to furnish or sell, or (ii) any interest in any entity that purchases from or sells or furnishes to the Company, any goods or services, or (iii) a beneficial interest in any Material Contract to which the Company is a party (other than in such person's capacity as a stockholder, director, officer or employee of the Company); *provided, however*, that ownership of no more than one percent (1%) of the outstanding voting stock of a publicly traded corporation shall not be deemed to be an "interest in any entity" for purposes of this **Section 3.15**. No Stockholder has any loans outstanding from the Company except for business travel expenses in the ordinary course of business, consistent with past practices, to employees of the Company.

3.16 ***Authorization***. Each consent, license, permit, grant or other authorization (i) pursuant to which the Company currently operates or holds any interest in any of its properties, or (ii) which is required for the operation of the Company's business as currently conducted or currently contemplated to be conducted or the holding of any such interest (collectively, "**Company Authorizations**") has been issued or granted to the Company, as the case may be. The Company Authorizations are in full force and effect and constitute all Company Authorizations required to permit the Company to operate or conduct its business or hold any interest in its properties or assets.

3.17 ***Litigation***. There is no action, suit, claim or proceeding of any nature pending, or to the Knowledge of the Company, threatened, against the Company, its properties (tangible or intangible) or any of its officers or directors, nor to the Knowledge of the Company is there any reasonable basis therefor.

There is no investigation, audit, or other proceeding pending or, to the Knowledge of the Company, threatened, against the Company, any of its properties (tangible or intangible) or any of its officers or directors by or before any Governmental Authority, nor to the Knowledge of the Company is there any reasonable basis therefor. No Governmental Authority has at any time challenged or questioned the legal right of the Company to conduct its operations as presently or previously conducted or as presently contemplated to be conducted. There is no action, suit, claim or proceeding of any nature pending or, to the Knowledge of the Company, threatened, against any individual or entity who has a contractual right or a right pursuant to applicable Law or other statute to indemnification from the Company related to facts and circumstances existing prior to the Closing, nor are there, to the Knowledge of the Company, any facts or circumstances that would give rise to such an action, suit, claim or proceeding.

3.18 ***Minute Books***. The minutes of the Company made available to counsel for Buyer contain complete and accurate records of all actions taken, and summaries of all meetings held, by the stockholders, the Board of Directors of the Company (and any committees thereof) since the time of incorporation of the Company, as the case may be.

3.19 ***Environmental Matters***. The Company (i) has complied in all material respects with all Environmental Laws; (ii) has not received any written notice of any alleged claim, complaint, violation of, or Liability under any Environmental Law (including any claim or complaint from any employee alleging exposure to Hazardous Materials); (iii) has not disposed of, emitted, discharged, handled, stored, transported, used or released any Hazardous Materials, arranged for the disposal, discharge, storage or release of any Hazardous Materials; (iv) has not entered into any agreement that may require it to guarantee, reimburse, pledge, defend, hold harmless or indemnify any other party with respect to Liabilities arising out of Environmental Laws or the Hazardous Materials related activities of the Company; and (v) has delivered to Buyer or made available for inspection by Buyer and its agents, representatives and employees all records in the Company's possession or control concerning the Hazardous Materials activities of the Company and all environmental audits and environmental assessments of any facility owned, leased or used at any time by the Company conducted at the request of, or otherwise in the possession or control of the Company. There are no Hazardous Materials in, on, or under any properties owned, leased or used at any time by the Company such as could give rise to any material Liability or corrective or remedial obligation of the Company under any Environmental Laws.

3.20 ***Brokers' and Finders' Fees***. The Company has not incurred, nor will it incur, directly or indirectly, any liability for brokerage or finders' fees or agents' commissions, fees related to investment banking or similar advisory services or any similar charges in connection with the Agreement or any transaction contemplated hereby.

3.21 ***Employee Benefit Plans and Compensation***.

(a) ***Definitions***. For all purposes of this Agreement, the following terms shall have the following respective meanings:

"***COBRA***" shall mean the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended.

"***Company Employee Plan***" shall mean any plan, program, policy, practice, contract, agreement or other arrangement providing for compensation, severance, termination pay, deferred compensation, retirement benefits, performance awards, stock or stock-related awards, fringe benefits or other employee benefits or remuneration of any kind, whether written, unwritten or otherwise, funded or unfunded, including each "employee benefit plan," within the meaning of Section 3(3) of ERISA which is or has been maintained, contributed to, or required to be contributed to, by the Company or any ERISA Affiliate for the benefit of any Employee, or with respect to which the Company or any ERISA Affiliate has or may have any liability or obligation.

"***DOL***" shall mean the United States Department of Labor.

"***Employee***" shall mean any current or former employee, consultant, independent contractor or director of the Company, or any ERISA Affiliate.

"***Employee Agreement***" shall mean each management, employment, severance, separation, settlement, consulting, contractor, relocation, change of control, retention, bonus, repatriation, expatriation, loan, visa, work permit or other agreement, contract or understanding between the Company or any ERISA Affiliate and any Employee, and which the Company or any ERISA Affiliate has or may have any liability or obligation.

"***ERISA***" shall mean the Employee Retirement Income Security Act of 1974, as amended.

"***ERISA Affiliate***" shall mean each Person under common control with the Company within the meaning of Section 414(b), (c), (m) or (o) of the Code, and the regulations issued thereunder.

"***FMLA***" shall mean the Family Medical Leave Act of 1993, as amended.

"***HIPAA***" shall mean the Health Insurance Portability and Accountability Act of 1996, as amended.

"***PBGC***" shall mean the United States Pension Benefit Guaranty Corporation.

"***Pension Plan***" shall mean each Company Employee Plan that is an "employee pension benefit plan," within the meaning of Section 3(2) of ERISA.

(b) ***Schedule***. **Section 3.21(b)(1)** of the Disclosure Schedule contains an accurate and complete list of each Company Employee Plan and each Employee Agreement. The Company has not made any plan or commitment to establish any new Company Employee Plan or Employee Agreement, to modify any Company Employee Plan or Employee Agreement (except to the extent required by Law or to conform any such Company Employee Plan or Employee Agreement to the requirements of any applicable Law, in each case as previously disclosed to Buyer in writing, or as required by this Agreement), or to enter into any Company Employee Plan or Employee Agreement. **Section 3.21(b)(2)** of the Disclosure Schedule sets forth a table setting forth the name, hiring date, annual salary, commissions, bonus, accrued but unpaid vacation balances, average amount of overtime payment over the past 12 months, accrued but unpaid sick leave, accrued severance pay and any other benefit of each employee of the Company as of the date hereof. To the Knowledge of the Company, no employee listed on **Section 3.21(b)(2)** of the Disclosure Schedule intends to terminate his or her employment for any reason. **Section 3.21(b)(3)** of the Disclosure Schedule contains an accurate and complete list of all Persons that have a consulting or advisory relationship with the Company.

(c) ***Documents***. The Company has provided to Buyer (i) correct and complete copies of all documents embodying each Company Employee Plan and each Employee Agreement including all amendments thereto and all related trust documents, (ii) the three (3) most recent annual reports (Form Series 5500 and all schedules and financial statements attached thereto), if any, required under ERISA or the Code in connection with each Company Employee Plan, (iii) if the Company Employee Plan is funded, the most recent annual and periodic accounting of Company Employee Plan assets, (iv) the most recent summary plan description together with the summary(ies) of material modifications thereto, if any, required under ERISA with respect to each Company Employee Plan, (v) all material written agreements and contracts relating to each Company Employee Plan, including administrative service agreements and group insurance contracts, (vi) all communications material to any Employee or Employees relating to any Company Employee Plan and any proposed Company Employee Plans, in each case, relating to any amendments, terminations, establishments, increases or decreases in benefits, acceleration of payments or vesting schedules or other events which would result in any material liability to the Company, (vii) all correspondence to or from any governmental agency relating to any Company Employee Plan, (viii) all model COBRA forms and related notices, (ix) all policies pertaining to fiduciary liability insurance covering the fiduciaries for each Company Employee Plan, (x) all discrimination tests for each Company Employee Plan for the three (3) most recent plan years, and (xi) the most recent IRS determination or opinion letter issued with respect to each Company Employee Plan.

(d) ***Employee Plan Compliance***. The Company and each ERISA Affiliate has performed all obligations required to be performed by it under each Company Employee Plan, are not in default or violation of, and have no Knowledge of any default or violation by any other party to each Company Employee Plan, and each Company Employee Plan has been established and maintained in accordance with its terms and in compliance with all applicable Laws, statutes, orders, rules and regulations, including ERISA or the Code. Any Company Employee Plan intended to be qualified under Section 401(a) of the Code (each, a "**401(k) Plan**") is so qualified and has obtained a favorable determination letter (or opinion letter valid as to the Company, if applicable) with respect to its qualified status under the Code and nothing has occurred since the issuance of each such letter that could reasonably be expected to cause the loss of such qualified status. Each 401(k) Plan has been terminated pursuant to resolution of the Board of Directors of the Company or the ERISA Affiliate, as the case may be, (the form and substance of which shall have been subject to review and approval of Buyer), effective as of no later than the day immediately preceding the Closing Date. No "prohibited transaction," within the meaning of Section 4975 of the Code or Sections 406 and 407 of ERISA, and not otherwise exempt under Section 4975 of the Code or Section 408 of ERISA, has occurred with respect to any Company Employee Plan. There are no actions, suits or claims pending or, to the Knowledge of the Company, threatened or reasonably anticipated (other than routine claims for benefits) against any Company Employee Plan or against the assets of any Company Employee Plan. Each Company Employee Plan can be amended, terminated or otherwise discontinued after the Closing in accordance with its terms, without liability to Buyer, the Company or any ERISA Affiliate (other than ordinary administration expenses). There are no audits, inquiries or proceedings pending or to the Knowledge of the Company or any ERISA Affiliates, threatened by the IRS, DOL, or any other Governmental Authority with respect to any Company Employee Plan. Neither the Company nor any ERISA Affiliate is subject to any penalty or tax with respect to any Company Employee Plan under Section 502(i) of ERISA or Sections 4975 through 4980 of the Code. The Company has timely made all contributions and other payments required by and due under the terms of each Company Employee Plan.

(e) ***Compensation Plan Compliance***. The Company is in compliance with all of its bonus, commission and other compensation plans and has paid any and all amounts required to be paid under such plans, including any and all bonuses and commissions (or pro rata portion thereof) that may have accrued or been earned through the calendar quarter preceding the Closing, and is not liable for any payments, taxes or penalties for failure to comply with any of the terms or conditions of such plans or the laws governing such plans.

(f) ***No Pension Plans***. Neither the Company nor any current or past ERISA Affiliate has ever maintained, established, sponsored, participated in, or contributed to, any Pension Plans subject to Title IV of ERISA or Section 412 of the Code.

(g) ***No Self-Insured Plans***. Neither the Company nor any ERISA Affiliate has ever maintained, established sponsored, participated in or contributed to any self-insured plan that provides benefits to employees (including any such plan pursuant to which a stop-loss policy or contract applies).

(h) ***Collectively Bargained, Multiemployer and Multiple-Employer Plans***. At no time has the Company or any current or past ERISA Affiliate contributed to or been obligated to contribute to any Pension Plan which is a "**Multiemployer Plan**," as defined in Section 3(37) of ERISA. Neither the Company nor any ERISA Affiliate has at any time ever maintained, established, sponsored, participated in or contributed to any multiple employer plan or to any plan described in Section 413 of the Code.

(i) ***No Post-Employment Obligations***. No Company Employee Plan or Employee Agreement provides, or reflects or represents any liability to provide, retiree life insurance, retiree health or other retiree employee welfare benefits to any person for any reason, except as may be required by COBRA or other applicable statute, and the Company has never represented, promised or contracted (whether in oral or written form) to any Employee (either individually or to Employees as a group) or any other person that such Employee(s) or other person would be provided with retiree life insurance, retiree health or other retiree employee welfare benefits, except to the extent required by statute.

(j) ***COBRA; FMLA; CRFA; HIPAA***. The Company and each ERISA Affiliate has, prior to the Closing, complied with COBRA, FMLA, HIPAA, the Women's Health and Cancer Rights Act of 1998, the Newborns' and Mother's Health Protection Act of 1996, and any similar provisions of state Law applicable to its Employees. To the extent required under HIPAA and the regulations promulgated thereunder, the Company has, prior to the Closing, performed all obligations under the medical privacy rules of HIPAA (45 C.F.R. Parts 160 and 164), the electronic data interchange requirements of HIPAA (45 C.F.R. Parts 160 and 162), and the security requirements of HIPAA (45 C.F.R. Part 142). The Company does not have unsatisfied obligations to any Employees or qualified beneficiaries pursuant to COBRA, HIPAA or any state Law governing health care coverage or extension.

(k) ***Effect of Transaction***. Neither the execution of this Agreement nor the consummation of the transactions contemplated hereby will (either alone or upon the occurrence of any additional or subsequent events) or any termination of employment or service in connection therewith will (i) result in any payment (including severance, golden parachute, bonus or otherwise) becoming due to any Employee, (ii) result in any forgiveness of indebtedness, (iii) materially increase any benefits otherwise payable by the Company or (iv) result in the acceleration of the time of payment or vesting of any such benefits except as required under Section 411(d)(3) of the Code.

(l) ***Employment Matters***. The Company is in compliance with all applicable foreign, federal, state and local Laws, rules, regulations, and ordinances respecting employment, employment practices, terms and conditions of employment, worker classification, tax withholding, prohibited discrimination, equal employment, fair employment practices, meal and rest periods, immigration status, employee safety and health, wages (including overtime wages), compensation, and hours of work, and in each case, with respect to Employees: (i) has withheld and reported all amounts required by Law or by agreement to be withheld and reported with respect to wages, salaries and other payments to Employees, (ii) is not liable for any arrears of wages, bonuses, benefits, severance pay or any Taxes or any penalty for failure to comply with any of the foregoing, and (iii) is not liable for any payment to any trust or other fund governed by or maintained by or on behalf of any Governmental Authority, with respect to unemployment

compensation benefits, social security or other benefits or obligations for Employees (other than routine payments to be made in the normal course of business and consistent with past practice). There are no actions, suits, claims, audits, investigations, or administrative matters pending, threatened or reasonably anticipated against the Company or any of its Employees relating to any Employee, Employee Agreement or Company Employee Plan. There are no pending or threatened or reasonably anticipated claims or actions against the Company or any Company trustee under any worker's compensation policy or long-term disability policy. The Company is not party to a conciliation agreement, consent decree, or other agreement or order with any Governmental Authority with respect to employment practices. The services provided by the Company's and its ERISA Affiliates' Employees is terminable at the will of the Company and its ERISA Affiliates and any such termination would result in no liability to the Company or any ERISA Affiliate. **Section 3.21(l)** of the Disclosure Schedule lists all liabilities of the Company to any Employee, that result from the termination by the Company, Buyer or any of its subsidiaries of such Employee's employment or provision of services, a change of control of the Company, or a combination thereof. The Company does not have any material liability with respect to any misclassification of: (a) any person as an independent contractor rather than as an employee, (b) any employee leased from another employer, or (c) any employee currently or formerly classified as exempt from overtime wages.

(m) ***Labor***. No strike, labor dispute, slowdown, concerted refusal to work overtime, or work stoppage against the Company is pending, or to the Knowledge of the Company, threatened, or reasonably anticipated. The Company has no Knowledge of any activities or proceedings of any labor union to organize any Employees. There are no actions, suits, claims, audits, investigations, administrative matters, labor disputes or grievances pending or threatened or reasonably anticipated relating to any labor matters, wages, benefits, medical or family leave, classification, safety or discrimination matters involving any Employee, including claims of wage and/or hour violations, charges of unfair business practices, unfair labor practices, discrimination, harassment or wrongful termination complaints. Neither the Company nor any ERISA Affiliate is party to a current conciliation agreement, consent decree, or other agreement or order with any Governmental Authority with respect to employment practices. The Company has not engaged in any unfair labor practices within the meaning of the National Labor Relations Act. The Company is not presently, nor has it been in the past, been a party to, or bound by, any collective bargaining agreement or union contract with respect to Employees and no collective bargaining agreement is being negotiated by the Company.

(n) ***WARN Act***. The Company and any ERISA Affiliate have complied with the Workers Adjustment and Retraining Notification Act of 1988, as amended ("**WARN Act**") and all similar state or local Laws. The Company has not taken any action which would constitute a "plant closing" or "mass layoff" within the meaning of the WARN Act or similar state or local Law, issued any notification of a plant closing or mass layoff required by the WARN Act or similar state or local Law, or incurred any liability or obligation under WARN or any similar state or local Law that remains unsatisfied. No terminations prior to the Closing would trigger any notice or other obligations under the WARN Act or similar state or local Law. All liabilities and obligations relating to the employment, termination or employee benefits of any former Employees previously terminated by the Company or an ERISA Affiliate including all termination pay, severance pay or other amounts in connection with the WARN Act and all similar state Laws, have been paid and no terminations prior to the Closing Date shall result in unsatisfied liability or obligation under WARN or any similar state or local Law.

(o) ***No Interference or Conflict***. To the Knowledge of the Company, no Stockholder director, officer, Employee or consultant of the Company is obligated under any contract or agreement, subject to any judgment, decree, or order of any court or administrative agency that would interfere with such person's efforts to promote the interests of the Company or that would interfere with the Company's business. Neither the execution nor delivery of this Agreement, nor the carrying on of the Company's

business as presently conducted or proposed to be conducted nor any activity of such directors, officers, Employees or consultants in connection with the carrying on of the Company's business as presently conducted or currently proposed to be conducted will, to the Knowledge of the Company, conflict with or result in a breach of the terms, conditions, or provisions of, or constitute a default under, any contract or agreement under which any of such directors, officers, Employees or consultants is now bound.

3.22 ***Insurance***. **Section 3.22** of the Disclosure Schedule lists all insurance policies and fidelity bonds covering the assets, business, equipment, properties, operations, employees, officers and directors of the Company, including the type of coverage, the carrier, the amount of coverage, the term and the annual premiums of such policies. There is no claim by the Company pending under any of such policies or bonds as to which coverage has been questioned, denied or disputed or that the Company has a reason to believe will be denied or disputed by the underwriters of such policies or bonds. In addition, there is no pending claim of which its total value (inclusive of defense expenses) will exceed the policy limits. All premiums due and payable under all such policies and bonds have been paid (or if installment payments are due, will be paid if incurred prior to the Closing Date) and the Company is otherwise in material compliance with the terms of such policies and bonds. Such policies and bonds (or other policies and bonds providing substantially similar coverage) are in full force and effect. The Company has no Knowledge or reasonable belief of threatened termination of, or premium increase with respect to, any of such policies. The Company has never maintained, established, sponsored, participated in or contributed to any self-insurance plan.

3.23 ***Compliance with Laws***.

(a) The Company has complied with, is not in violation of, and has not received any notices of any suspected, potential or actual violation with respect to, any foreign, federal, state or local Law.

(b) The Company has at all times been, and is currently, fully in compliance with all applicable Anti-Corruption and Anti-Bribery Laws in any jurisdiction. The Company (including any of its officers, directors, agents, employees or other Person associated with or acting on its behalf) has not, directly or indirectly, used any funds for unlawful contributions, gifts, services of value, entertainment or other unlawful expenses, made, offered or promised to make any unlawful payment or gave or promised to give, anything of value to any Person or to any foreign or domestic government officials or employees or made, or promised to make any contribution, bribe, rebate, gift, payoff, influence payment, kickback or other similar unlawful payment or other advantage, or taken any action which would cause it to be in violation of any Anti-Corruption or Anti-Bribery Laws. The Company (including any of its officers, directors, agents, employees or other Person associated with or acting on its behalf) has not, directly or indirectly, requested or agreed to receive or accepted any unlawful contributions, gifts, services of value, advantage, entertainment or other unlawful expenses, contribution, bribe, rebate, gift, payoff, influence payment, kickback or other similar unlawful payment, or similar incentive which would cause it to be in violation of any Anti-Corruption or Anti-Bribery Laws. Neither the Company, nor any director, officer, employee or agent of the Company acting on behalf of the Company has offered, nor made, nor promised to make, nor authorized the making of any gift or payment of money or anything of value either directly or indirectly to any Person, or to any officer or employee of a Governmental Authority, public international organization, or state-owned or controlled entity, or to any Person acting in an official capacity for or on behalf of any such Governmental Authority, public international organization, or state-owned or controlled entity, or to any political party or candidate for political office (all of the foregoing individuals being individually and collectively referred to herein as "**Officials**") for purposes of (i) influencing any act or decision of any Person, or such Official in his or her official capacity, or (ii) inducing any Person or such Official to do or omit to do any act in violation of the lawful duty of such Person or Official, or (iii) inducing such Person or Official to use his or her influence improperly including with a Governmental Authority to

affect or influence any act or decision of such Governmental Authority in order to obtain, retain or direct or assist in obtaining, retaining or directing business to the Company. No officer, director, employee or holder of any financial interest in the Company or any Affiliate thereof, is currently an Official. There are no pending or, to the Company's Knowledge, threatened claims, charges, investigations, violations, settlements, civil or criminal enforcement actions, lawsuits, or other court actions against the Company with respect to any Anti-Corruption and Anti-Bribery Laws. There are no actions, conditions or circumstances pertaining to the Company's activities that could reasonably be expected to give rise to any future claims, charges, investigations, violations, settlements, civil or criminal actions, lawsuits, or other court actions under any Anti-Corruption and Anti-Bribery Laws. The Company has established and maintains a compliance program and reasonable internal controls and procedures appropriate to the requirements of Anti-Corruption and Anti-Bribery Laws.

(c) No officer or director of the Company has been: (i) convicted in a criminal proceeding or named as a subject of a pending criminal proceeding (excluding traffic violations and other minor offenses); (ii) subject to any order, judgment, or decree (not subsequently reversed, suspended or vacated) of any court of competent jurisdiction permanently or temporarily enjoining him/her from, or otherwise imposing limits or conditions on his or her engaging in any securities, investment advisory, banking, insurance or other type of business or acting as an officer or director of a public company; (iii) found by a court of competent jurisdiction in a civil action or by the US Securities and Exchange Commission (the "**SEC**") or the Commodity Futures Trading Commission to have violated any federal or state commodities, securities or unfair trade practices law, which such judgment or finding has not been subsequently reversed, suspended, or vacated; or (iv) involved in any other type of legal proceeding that would require the officer or director to disclose such involvement under Item 401(f) of SEC Regulation S-K if the officer or director were subject to such Regulation.

3.24 ***Export and Import Control Laws.***

(a) The Company has, at all times, conducted its export and import transactions in accordance with all applicable Export and Import Control Laws. Without limiting the foregoing: (i) the Company has obtained all export licenses, registrations and other approvals required for its exports of products, software, technical data, and technologies under applicable Export and Import Control Laws; (ii) the Company is in compliance with the terms of all applicable Export and Import Approvals; (iii) Company has not received any communication alleging that it is not or may not be in compliance with, or has, or may have any, liability under any such applicable export licenses, registrations or other approvals, or otherwise in respect of Export and Import Control Laws; (iv) there are no pending or threatened claims, charges, investigations, violations, settlements, civil or criminal enforcement actions, lawsuits, or other court actions against the Company with respect to any Export and Import Control Laws; and (v) there are no actions, conditions or circumstances pertaining to the Company's export or import transactions that may give rise to any future claims, charges, investigations, violations, settlements, civil or criminal actions, lawsuits, or other court actions under the Export and Import Control Laws.

(b) The Company has not exported, reexported or transferred any products to, or engaged in any business or transactions with, (i) any country or territory that is subject to an embargo or designated as a state sponsor of terrorism by the U.S. Government (collectively, the "**Embargoed Countries**"); (ii) any instrumentality, agent, entity, or individual that is located in, or acting on behalf of or directly or indirectly owned or controlled by any governmental entity of, any Embargoed Country; or (iii) engaged in any transactions or dealings with any organization, entity, or individual identified on any Prohibited Party Lists.

(c) The Company has not made any voluntary disclosure to the Directorate of Defense Trade Controls, U.S. Department of State, or voluntary self-disclosure to the Bureau of Industry and Security, U.S. Department of Commerce, or to any other U.S. or foreign Governmental Authority with respect to possible violations of Export and Import Control Laws, and there is no circumstance or event that requires such a voluntary disclosure or voluntary self-disclosure to be made;

(d) No approvals from a Governmental Authority are required for the Company to retain any Export and Import Approvals following the consummation of the Stock Sale.

(e) The Company has established and maintains a compliance program and reasonable internal controls and procedures appropriate to comply with the requirements of Export and Import Control Laws.

3.25 ***Bank Accounts, Letters of Credit and Powers of Attorney***. **Section 3.25** of the Disclosure Schedule lists (a) all bank accounts, lock boxes and safe deposit boxes relating to the business and operations of the Company (including the name of the bank or other institution where such account or box is located and the name of each authorized signatory thereto), (b) all outstanding letters of credit issued by financial institutions for the account of the Company (setting forth, in each case, the financial institution issuing such letter of credit, the maximum amount available under such letter of credit, the terms (including the expiration date) of such letter of credit and the party or parties in whose favor such letter of credit was issued), and (c) the name and address of each person who has a power of attorney to act on behalf of the Company. The Company has heretofore delivered to Buyer true, correct and complete copies of each letter of credit and each power of attorney described in **Section 3.25** of the Disclosure Schedule.

3.26 ***Customers and Suppliers***.

(a) **Section 3.26(a)** of the Disclosure Schedule sets forth each customer of the Company who accounted for more than 5% of the revenues of the Company for the fiscal year ended December 31, 2019, and who is expected to account for more than 5% of the revenues of the Company for the fiscal year ended December 31, 2019 (collectively, the "***Customers***"). The Company's relationships with its Customers are good commercial working relationships. No Customer of the Company has canceled or otherwise terminated its relationship with the Company, or has during the last twelve (12) months decreased materially its usage or purchases of the Company Products. No Customer has, to the Company's Knowledge, any plan or intention to terminate, to cancel or otherwise materially and adversely modify its relationship with the Company or to decrease materially its usage, purchase or distribution of the Company Products.

(b) **Section 3.26(b)** of the Disclosure Schedule sets forth a list of all suppliers to whom the Company made payments aggregating $25,000 or more since the Company Formation Date, showing, with respect to each, the name, address and dollar volume involved. Since December 31, 2019, no supplier has terminated or reduced its business with the Company or materially and adversely modified its relationship therewith.

3.27 ***Warranties to Customers*****. Section 3.27** of the Disclosure Schedule includes a copy of the standard terms and conditions of sale, lease or license by the Company (including applicable warranty and indemnity provisions). Except as disclosed in **Section 3.27** of the Disclosure Schedule, no Company Product is subject to any guaranty, warranty, or other indemnity that extends beyond, in any material respect, the applicable standard terms and conditions of sale, lease or license. There is no claim, action, suit, investigation or proceeding pending against the Company, or to the Company's Knowledge, threatened, relating to alleged defects in the Company Products, or the failure of any such Company Product to meet agreed upon specifications and, to the Company's Knowledge, there is no basis for any of the foregoing.

3.28 ***Complete Copies of Materials***. The Company has delivered or made available true and complete copies of each document that has been requested by Buyer or its counsel.

3.29 ***Representations Complete***. None of the representations or warranties made by the Company (as modified by the Disclosure Schedule) in this Agreement, and none of the statements made in any exhibit, schedule or certificate furnished by the Company pursuant to this Agreement contains, or will contain at the Closing, any untrue statement of a material fact, or omits or will omit at the Closing to state any material fact necessary in order to make the statements contained herein or therein, in the light of the circumstances under which made, not misleading.

Article 4

REPRESENTATIONS AND WARRANTIES OF THE SELLERS

Each Seller hereby represents and warrants to Buyer as follows:

4.1 ***Authority; Ownership***. Each Seller has all requisite authority and capacity to enter into this Agreement and any other Related Agreements to which such Seller is a party and to consummate the transactions contemplated hereby and thereby. This Agreement and any Related Agreements to which any Seller is a party have been duly executed and delivered by such Seller and constitute the valid and binding obligations of such Seller, enforceable against such Seller in accordance with their terms, except as such enforceability may be limited by principles of public policy and subject to the laws of general application relating to bankruptcy, insolvency and the relief of debtors and rules of law governing specific performance, injunctive relief or other equitable remedies. Each Seller owns, beneficially and of record, and has good and valid title to the Company Common Stock held by such Seller on the books and records of the Company, free and clear of all Liens.

4.2 ***Consents***. No consent, waiver, approval, order or authorization of, or registration, declaration or filing with, any Governmental Authority, is required by or with respect to any Seller in connection with the execution and delivery of this Agreement and any Related Agreements to which any Seller is a party or the consummation of the transactions contemplated hereby and thereby, except for such consents, waivers, approvals, orders, authorizations, registrations, declarations and filings which, if not obtained or made, would otherwise (a) prevent, hinder or materially delay any of transactions contemplated under this Agreement or (b) materially impair the ability of such Seller to perform its obligations under this Agreement or any Related Agreements to which such Seller is party.

4.3 ***No Conflict***. The execution and delivery by each Seller of this Agreement and any Related Agreement to which such Seller is a party, and the consummation of the transactions contemplated hereby and thereby, will not conflict with or result in any violation of or default (with or without notice of lapse of time, or both) under any material Laws applicable to each of the Sellers or any of its respective properties or assets (whether tangible or intangible).

4.4 ***Purchase Entirely for Own Account.*** This Agreement is made with the each Seller in reliance upon the Seller's representation to the Buyer, which by the Seller's execution of this Agreement, the Seller hereby confirms, that the Buyer Common Stock to be acquired by the Seller will be acquired for investment for the Seller's own account, not as a nominee or agent, and not with a view to the resale or distribution of any part thereof, and that the Seller has no present intention of selling, granting any

participation in, or otherwise distributing the same. By executing this Agreement, the Seller further represents that the Seller does not presently have any contract, undertaking, agreement or arrangement with any Person to sell, transfer or grant participations to such Person or to any third Person, with respect to any of the Buyer Common Stock. The Seller has not been formed for the specific purpose of acquiring the Buyer Common Stock.

4.5 ***Disclosure of Information.*** The Seller has had an opportunity to discuss Buyer's business, management, financial affairs and the terms and conditions of the offering of the Buyer Common Stock with Buyer's management and has had an opportunity to review Buyer's facilities.

4.6 ***Restricted Securities.*** The Seller understands that the Buyer Common Stock has not been, and will not be, registered under the Securities Act, by reason of a specific exemption from the registration provisions of the Securities Act which depends upon, among other things, the bona fide nature of the investment intent and the accuracy of the Seller's representations as expressed herein. The Seller understands that the shares of Buyer Common Stock are "restricted securities" under applicable U.S. federal and state securities laws and that, pursuant to these laws, the Seller must hold the Buyer Common Stock indefinitely unless they are registered with the Securities and Exchange Commission and qualified by state authorities, or an exemption from such registration and qualification requirements is available. The Seller acknowledges that Buyer has no obligation to register or qualify the Buyer Common Stock for resale. The Seller further acknowledges that if an exemption from registration or qualification is available, it may be conditioned on various requirements including, but not limited to, the time and manner of sale, the holding period for the Buyer Common Stock, and on requirements relating to Buyer which are outside of the Seller's control, and which Buyer is under no obligation and may not be able to satisfy.

4.7 ***No Public Market.*** The Seller understands that no public market now exists for the Buyer Common Stock, and that the Company has made no assurances that a public market will ever exist for the Buyer Common Stock.

4.8 ***Legends.*** The Seller understands that the Buyer Common Stock and any securities issued in respect of or exchange for the Buyer Common Stock, may be notated with one or all of the following legends:

"THE SHARES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AND HAVE BEEN ACQUIRED FOR INVESTMENT AND NOT WITH A VIEW TO, OR IN CONNECTION WITH, THE SALE OR DISTRIBUTION THEREOF. NO SUCH TRANSFER MAY BE EFFECTED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN OPINION OF COUNSEL IN A FORM SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT OF 1933."

(a) Any legend set forth in, or required by, the other Related Agreements.

(b) Any legend required by the securities laws of any state to the extent such laws are applicable to the Buyer Common Stock represented by the certificate, instrument, or book entry so legended.

4.9 ***Accredited Investor.*** The Seller is an accredited investor as defined in Rule 501(a) of Regulation D promulgated under the Securities Act.

4.10 ***Foreign Investors.*** If the Seller is not a United States person (as defined by Section 7701(a)(30) of the Code), the Seller hereby represents that it has satisfied itself as to the full observance of the laws of its jurisdiction in connection with any invitation to subscribe for the Buyer Common Stock or any use of this Agreement, including (i) the legal requirements within its jurisdiction for the purchase of the Buyer Common Stock, (ii) any foreign exchange restrictions applicable to such purchase, (iii) any governmental or other consents that may need to be obtained, and (iv) the income tax and other tax consequences, if any, that may be relevant to the purchase, holding, redemption, sale, or transfer of the Buyer Common Stock. The Seller's subscription and payment for and continued beneficial ownership of the Buyer Common Stock will not violate any applicable securities or other laws of the Seller's jurisdiction.

Article 5

REPRESENTATIONS AND WARRANTIES OF BUYER

Buyer hereby represents and warrants to the Company as follows:

5.1 ***Organization, Standing and Power***. Buyer is a corporation duly organized, validly existing and in good standing under the Laws of the State of Delaware. Buyer has the corporate power to own its properties and to carry on its business as now being conducted and is duly qualified or licensed to do business and is in good standing in each jurisdiction in which the failure to be so qualified or licensed would prevent, hinder or materially delay the consummation of transactions contemplated by this Agreement.

5.2 ***Buyer Capital Structure***.

(a) **Schedule 5.2(a)** sets forth the capitalization of Buyer as of the date hereof, including the number of shares held by each such holder thereof and including the vesting schedule or such shares, if applicable. The authorized capital stock of Buyer consists of [***] shares of common stock, $0.0001 par value per share (the "***Buyer Common Stock***"), of which [***] shares are issued and outstanding on the date hereof and [***] shares of preferred stock, $0.0001 par value per share (the "***Buyer Preferred Stock***" and together with the Buyer Common Stock, the "***Buyer Capital Stock***"), of which [***] shares are issued and outstanding on the date hereof. Buyer has not, and will not have, suffered or incurred any liability (contingent or otherwise) or claim, loss, damage, deficiency, cost or expense relating to or arising out of the issuance or repurchase of any Buyer Capital Stock or options or warrants to purchase Buyer Capital Stock, or out of any agreements or arrangements relating thereto (including any amendment of the terms of any such agreement or arrangement). There are no declared or accrued but unpaid dividends with respect to any shares of Buyer Capital Stock. Buyer has no capital stock other than the Buyer Capital Stock authorized, issued or outstanding.

(b) Buyer has reserved [***] shares of Buyer Common Stock for issuance to officers, directors, employees and consultants of the Company pursuant to its 2018 Stock Incentive Plan duly adopted by the Board of Directors of the Company and approved by the Company stockholders (the "Buyer **Stock Plan**"). Of such reserved shares of Buyer Common Stock, [***] shares have been issued pursuant to restricted stock purchase agreements, options to purchase [***] shares have been granted and are currently outstanding, and [***]shares of Buyer Common Stock remain available for issuance to officers, directors, employees and consultants pursuant to the Buyer Stock Plan. There are no other options, warrants, calls, rights, convertible securities, commitments or agreements of any character, whether written or oral, to which Buyer is a party or by which Buyer is bound obligating Buyer to issue, deliver, sell, repurchase or redeem, or cause to be issued, delivered, sold, repurchased or redeemed, any shares of the Buyer Common

Stock or obligating Buyer to grant, extend, accelerate the vesting of, change the price of, otherwise amend or enter into any such option, warrant, call, right, commitment or agreement. There are no outstanding or authorized stock appreciation, phantom stock, profit participation, or other rights, rights of any type, the value of which is determined by reference in whole or in part to the value of Buyer Common Stock or any other securities of Buyer (whether payable in cash, property or otherwise) with respect to Buyer.

5.3 ***Authority***. Buyer has all requisite corporate power and authority to enter into this Agreement and any Related Agreements to which it is a party and to consummate the transactions contemplated hereby and thereby. The execution and delivery of this Agreement and any Related Agreements to which it is a party and the consummation of the transactions contemplated hereby and thereby have been duly authorized by all necessary corporate action on the part of Buyer. This Agreement and any Related Agreements to which Buyer is a party have been duly executed and delivered by Buyer and constitute the valid and binding obligations of Buyer, enforceable against Buyer in accordance with their terms, except as such enforceability may be limited by principles of public policy and subject to the laws of general application relating to bankruptcy, insolvency and the relief of debtors and rules of law governing specific performance, injunctive relief or other equitable remedies.

5.4 ***Consents***. No consent, waiver, approval, order or authorization of, or registration, declaration or filing with, any Governmental Authority, is required by or with respect to Buyer in connection with the execution and delivery of this Agreement and any Related Agreements to which Buyer is a party or the consummation of the transactions contemplated hereby and thereby, except for such consents, waivers, approvals, orders, authorizations, registrations, declarations and filings which, if not obtained or made, would prevent, hinder or materially delay the consummation of transactions contemplated by this Agreement.

5.5 ***No Conflict***. The execution and delivery by Buyer of this Agreement and any Related Agreement to which Buyer is a party, and the consummation of the transactions contemplated hereby and thereby, will not conflict with or result in any violation of or default (with or without notice of lapse of time, or both) under (a) the certificate of incorporation, bylaws or similar organizational documents of Buyer, each as amended to date and in full force and effect on the date hereof, or (b) assuming compliance with the matters referred to in **Section 5.4** hereof, any material Laws applicable to Buyer or any of its respective properties or assets (whether tangible or intangible).

Article 6

ADDITIONAL AGREEMENTS

6.1 ***Confidentiality***. Each of the parties hereto hereby agrees that the information obtained in any investigation pursuant to the negotiation and execution of this Agreement or the effectuation of the transactions contemplated hereby, shall be governed by the terms of that certain Confidentiality Agreement by and between Buyer and the Company, dated as of August 2, 2019 (the "**Confidential Disclosure Agreement**").

6.2 ***Expenses***. All fees and expenses incurred in connection with the Stock Sale including all legal, accounting, financial advisory, consulting, and all other fees and expenses of third parties (including any costs incurred to obtain consents, waivers or approvals as a result of the compliance with **Section 8.4** hereof) incurred by a party in connection with the negotiation and effectuation of the terms and conditions of this Agreement and the transactions contemplated hereby, including, in the case of the Company, any bonuses or other change of control payments paid or to be paid to employees or consultants of the Company and any Transaction Payroll Taxes (whether payable by Buyer or the Company) ("**Third Party Expenses**"),

shall be the obligation of the respective party incurring such fees and expenses. Prior to Closing, the Company has provided to Buyer a statement of estimated Third Party Expenses, if any, incurred by the Company in a form reasonably satisfactory to Buyer (the "**Statement of Expenses**"), accompanied by invoices from the Company's legal, accounting, financial and other advisors providing services in connection with the negotiation and effectuation of the terms and conditions of this Agreement and the transactions contemplated hereby reflecting such advisors' final billable Third Party Expenses. The amount of any Third Party Expenses of the Company that are not reflected on the Statement of Expenses shall be subject to the indemnification provision of **Section 8.2** hereof. Prior to the Closing, the Company has provided Buyer with a duly and validly executed IRS Form W-9 (or appropriate IRS Form W-8, in the case of non-U.S. Persons) from each recipient of payment of Third Party Expenses or Company Liabilities.

6.3 ***Company Liabilities***. Prior to the Closing Date, the Company has provided to Buyer: (a) a complete and correct list of the obligees of all Company Liabilities, (b) the amount of all such Company Liabilities owed to each such obligee as of immediately prior to the Closing, specifying the principal, penalties, interest and premiums necessary to satisfy and discharge all obligations in respect thereof on the Closing Date, and (c) wire instructions for each such obligee (the "**Statement of Liabilities**"). At the Closing, Buyer shall pay the Company Liabilities set forth on the Statement of Liabilities on behalf of the Company, but only to the extent that such Company Liabilities has been included as Company Liabilities in the calculation of the Total Consideration.

6.4 ***Public Disclosure***. Except as may be required to comply with any applicable Law, neither the Company nor any of the Sellers nor its or their respective agents, representatives or advisors shall issue any press release or other public announcement relating to the subject matter of this Agreement or the transactions contemplated hereby without the prior approval (which approval will not be unreasonably withheld or delayed) of Buyer.

6.5 ***Tax Matters***.

(a) ***Preparation of Returns for Pre-Closing Tax Periods***.

(i) The Sellers shall cause to be prepared and timely filed all federal and state income tax Returns of the Company that are required to be filed after the Closing Date for any Pre-Closing Tax Period (such Returns, "***Sellers' Tax Returns***"), which Returns shall be prepared in a manner consistent with prior tax accounting practices and methods used by the Company, or, if past practice is inconsistent with applicable Law, consistent with applicable Law. The Sellers shall be solely responsible for the cost of preparing and filing the Sellers' Tax Returns. The Sellers shall deliver to Buyer the Sellers' Tax Returns for review no less than 30 days before the applicable due date of such Returns. The Sellers shall incorporate all of Buyer's reasonable comments to the Sellers' Tax Returns that are more-likely-than-not to be upheld under applicable Law.

(ii) Buyer shall prepare and file, or cause to be prepared and filed, all Returns for the Company required to be filed other than the Pre-Closing Tax Period filings (other than Sellers' Tax Returns), and shall remit, or cause to be remitted, to the appropriate Governmental Authority all Taxes reflected on such Returns, subject to Buyer's right to indemnification pursuant to **Section 8.2**. To the extent such Returns include any Pre-Closing Tax Period, such Returns shall be prepared in accordance with applicable Law and consistent with the past practices of the Company in all material respects, except to the extent necessary in Buyer's reasonable judgment to avoid the imposition of penalties.

(b) ***No Amended Returns***. Unless necessary in Buyer's reasonable judgment to avoid the imposition of penalties, Buyer shall not, and shall not cause or permit the Company to, amend any previously filed Return of the Company for any Pre-Closing Tax Period, which amendment would reasonably be expected to result in an indemnification claim pursuant to **Section 8.2** without the prior written consent of the Sellers, which shall not be unreasonably withheld, conditioned or delayed.

(c) ***Cooperation***. Buyer and the Sellers shall cooperate, as and to the extent reasonably requested by the other party, in connection with (i) the filing of any Returns of or with respect to the Company or its operations, and (ii) any audit, examination, voluntary disclosure or other administrative or judicial proceeding, contest, assessment, notice of deficiency, or other adjustment or proposed adjustment with respect to Taxes of the Company or its operations (a "**Tax Contest**"). Any Tax Contest shall be treated as a Third Party Claim for purposes of **Section 8.3(d)**. Such cooperation shall include retaining and providing records and information that are reasonably relevant to any such Return or Tax Contest, and making employees available on a mutually convenient basis to provide additional information and explanation of any materials provided hereunder.

(d) ***Tax Sharing Agreements***. In Buyer's sole discretion, any Tax sharing, indemnification or allocation agreement, arrangement, practice or policy to which the Company is a party or by which it is bound (other than an Ordinary Commercial Agreement) shall be terminated as of the date hereof, and the Company shall not have any liability or obligation pursuant thereto.

6.6 ***Consents***. The Company shall use reasonable best efforts to obtain all necessary consents, waivers and approvals of any parties to any Material Contract as are required thereunder in connection with the Stock Sale or for any such Material Contracts to remain in full force and effect so as to preserve all rights of, and benefits to, the Company under such Material Contract from and after the Closing. If, prior to the Closing, the other parties to any Material Contract, including lessor or licensor of any Leased Real Property, conditions its grant of a consent, waiver or approval (including by threatening to exercise a "recapture" or other termination right) upon the payment of a consent fee, "profit sharing" payment or other consideration, including increased rent payments or other payments under the Material Contract, the Company shall be responsible for making all payments required to obtain such consent, waiver or approval and such amounts shall be deemed Third Party Expenses under **Section 6.2** hereof.

6.7 ***Release of Claims***. Effective as of the Closing, each Seller, on behalf of itself, its successors, assigns, next-of-kin (to the extent the Seller is a natural person), administrators, executors, agents and Affiliates, hereby fully and unconditionally releases, acquits and forever discharges Buyer and the Company, and each of their respective past, present and future successors, predecessors, assigns, employees, agents, partners, members, subsidiaries, stockholders, parent companies, controlling persons, other Affiliates (corporate or otherwise) and legal representatives, including their respective past, present and future officers and directors, solely in their capacities as such, and any past, present and future successors, predecessors, assigns, employees, agents, partners, members, subsidiaries, stockholders, parent companies, controlling persons, other Affiliates (corporate or otherwise) and legal representatives, including past, present and future officers and directors of any of the foregoing (together, the "**Company Released Parties**"), from any and all manner of actions, causes of actions, claims, debts, obligations, demands, liabilities, Losses, compensation or other relief, whether known or unknown, matured or unmatured, contingent or otherwise, whether in law or equity, arising out of, relating to, accruing from or in connection with, (i) the Seller's ownership of Company Common Stock and/or other equity interests in the Company, (ii) the Stock Sale, any provision of this Agreement or the transactions contemplated hereby (other than with respect to such Company Released Party's respective obligations, including Buyer's payment obligations hereunder, under this Agreement or any other documents or instruments ancillary to this Agreement to which the Seller is a party), (iii) any claims alleging a breach of duty on the part of the

Company or any officer, director or stockholder of the Company and (iv) any and all other charges, complaints, claims, causes of action, promises, agreements, rights to payment, rights to any equitable remedy, rights to any equitable subordination, demands, debts, liabilities, express or implied contracts, obligations of payment or performance, rights of offset or recoupment, accounts, damages, costs, losses or expenses (including attorneys' and other professional fees and expenses) held by any Seller against any Company Released Party with respect to facts and circumstances arising prior to the Closing, whether known or unknown, matured or unmatured, suspected or unsuspected, liquidated or unliquidated, absolute or contingent, direct or derivative (clauses (i) through (iv), collectively, "**Company Released Claims**"). For the avoidance of doubt, nothing in this **Section 6.7** shall affect any right to salary, wages or other employee benefits accruing on, prior to or after the date of the Closing. It is the intention of the Sellers and Buyer that this **Section 6.7** shall, at the Closing, be effective as a full and final accord and satisfaction, and release of the Company Released Claims, and that the releases herein extend to any and all claims of whatever kind or character, known or unknown.

Article 7

CLOSING DELIVERIES

7.1 ***Conditions to Obligations of Each Party to Effect the Stock Sale***. The respective obligations of the Sellers and the Company on the one hand, and Buyer on the other hand, to effect the Stock Sale shall be subject to the satisfaction, at or prior to the Closing, of the following conditions:

(a) ***No Order***. No Governmental Authority shall have enacted, issued, promulgated, enforced or entered any statute, rule, regulation, executive order, decree, injunction or other order (whether temporary, preliminary or permanent) which is in effect and which has the effect of making the Stock Sale illegal or otherwise prohibiting consummation of the Stock Sale.

(b) ***No Injunctions or Restraints; Illegality***. No temporary restraining order, preliminary or permanent injunction or other order issued by any court of competent jurisdiction or other legal restraint or prohibition preventing the consummation of the Stock Sale shall be in effect, nor shall any proceeding brought by an administrative agency or commission or other Governmental Authority or instrumentality, domestic or foreign, seeking any of the foregoing be threatened or pending.

7.2 ***Closing Deliverables of the Company and the Sellers***. At Closing, the Company and the Sellers shall deliver to Buyer:

(a) ***Company Board Approval***. Evidence of the unanimous approval by the Board of Directors of the Company of this Agreement, the Stock Sale and the transactions contemplated hereby, which unanimous approval shall not have been modified or revoked.

(b) ***Company Stockholder Approval***. Evidence of the unanimous approval by the Stockholders of this Agreement, the Stock Sale and the transactions contemplated hereby, which unanimous approval shall not have been modified or revoked.

(c) ***Resignation of Officers and Directors***. Written resignation from each of the officers and directors of the Company effective as of the Closing.

(d) ***Certificate of Secretary of Company***. A certificate, validly executed by the Secretary of the Company, certifying (i) as to the terms and effectiveness of the Charter Documents, (ii) as to the valid adoption of resolutions of the Board of Directors of the Company (whereby this Agreement, the Stock Sale and the transactions contemplated hereunder were unanimously approved by the Board of Directors) and (iii) that the Stockholders have unanimously approved this Agreement and the consummation of the transactions contemplated hereby.

(e) ***Certificates of Good Standing***. Copies of (i) a long form certificate of good standing of the Company from the Secretary of State of the State of Delaware, and (ii) a good standing certificate from each other jurisdiction in which the Company is qualified to do business, each of which to be dated within a reasonable period prior to Closing.

(f) ***Tax Forms***. A certificate, duly completed and executed pursuant to Treasury Regulations Section 1.1445-2(b)(2) from the Company and each Seller (or, if applicable, a Seller's beneficial owner), certifying that such Seller is not a "foreign person" within the meaning of Section 1445 of the Code.

(g) ***Non-Competition and Non-Solicitation Agreements.*** A duly and validly executed Non-Competition and Non-Solicitation Agreement from each of the Sellers and such agreements shall be in full force and effect as of the Closing.

(h) ***Termination of Service Providers.*** Evidence of proper termination of employment of all employees of the Company and proper termination of contractor relationships of all independent contractors utilized by the Company, including full payment of all amounts due thereto, including pursuant to severance or other benefits.

(i) ***Consents.*** Evidence from the Company that the consents of and notices to third parties required to be obtained or delivered before Closing which are described on **Schedule 7.2(i)** to this Agreement have been obtained or delivered, as the case may be.

7.3 ***Closing Deliverables of Buyer***. At Closing, Buyer shall deliver to the Company and the Sellers:

(a) ***Non-Competition and Non-Solicitation Agreements.*** A duly and validly countersigned Non-Competition and Non-Solicitation Agreement from Buyer for each Seller. Fred Hutchinson Cancer Research Center and Gordon Roble as Sellers will not deliver a signed Non-Competition and Non-Solicitation Agreement.

(b) ***Delivery of Closing Payment***. The Closing Payment in accordance with **Section 1.3** and evidence of stock issuance and recordation on Buyer's books and records.

Article 8

SURVIVAL OF REPRESENTATIONS, WARRANTIES AND COVENANTS

8.1 ***Survival of Representations, Warranties and Covenants***. All representations, warranties, agreements, covenants and obligations herein or in the Related Agreements, the Disclosure Schedule or any Exhibit to this Agreement or a Related Agreement or any agreement, instrument, certificate or document specifically required to be delivered under this Agreement or a Related Agreement by any party incident to the transactions contemplated hereby or thereby are material and shall be deemed to have been relied upon by the parties receiving the same. The representations and warranties of the Company contained in this Agreement, the Related Agreements or in any certificate or other instruments delivered pursuant to this Agreement or the Related Agreements, shall survive until 11:59 p.m. New York City time on the date that

is twelve (12) months following the Closing Date (the "**Expiration Date**"), other than the representations and warranties of the Company contained in **Sections 3.1 (Organization of the Company)**, **3.2 (Company Capital Structure)**, **3.4 (Authority)**, **3.20 (Brokers' and Finders' Fees)**, Error! Reference source not found. **(Authority; Ownership)**, **4.3 (No Conflict)** and **4.3 (Accredited Investor)** hereof (together, the "**Fundamental Representations**"), which shall survive indefinitely. The date until which any representation or warranty survives shall be referred to as the "**Survival Date**" for such representation or warranty. Notwithstanding anything in this **Section 8.1** to the contrary, (i) if, at any time prior to 11:59 p.m. New York City time on the applicable Survival Date, an Officer's Certificate (as defined in **Section 8.3(a)**) is delivered alleging Losses and a claim for recovery under **Section 8.3(a)**, then the claim asserted in such notice shall survive the applicable Survival Date until such claim is fully and finally resolved and (ii) claims relating to fraud, intentional misrepresentation or willful breach shall survive indefinitely. The representations and warranties of Buyer contained in this Agreement, or in any certificate or other instrument delivered pursuant to this Agreement, shall terminate at the Closing. All covenants and agreements contained in this Agreement, the Related Agreements or in any certificate or other writing delivered pursuant hereto or thereto or in connection herewith or therewith shall survive the Closing and shall continue to remain in full force and effect in perpetuity after the Closing Date, unless they terminate earlier in accordance with their express terms.

8.2 ***Indemnification***. The Sellers agree to jointly and severally (except with respect to clause (b), in which case the Sellers agree to severally and not jointly) indemnify and hold Buyer and its officers, directors, and Affiliates, including the Company (each, an "**Indemnified Party**" and collectively, the "**Indemnified Parties**"), harmless against all claims, losses, liabilities, damages, Pre-Closing Taxes, deficiencies, direct costs and expenses (explicitly not including accounting and auditors' fees, nor attorneys' fees nor expenses of investigation and defense), interest, fines, and penalties (hereinafter individually a "**Loss**" and collectively "**Losses**") actually paid, incurred or sustained by the Indemnified Parties, or any of them (including the Company) prior to the Expiration Date, directly as a result of, with respect to or in connection with (a) any material breach or inaccuracy of any representation or warranty of the Company which can be shown to have caused direct economic Loss of not less than $25,000 (such Loss a "**Material Loss**" and such breach or inaccuracy a "**Material Breach**") contained in this Agreement, the Related Agreements or in any certificate or other instruments delivered by or on behalf of the Company pursuant to this Agreement or the Related Agreements or, in the case of a Third Party Claim any allegation that, if true, would constitute such a Material Breach, (b) any Material Breach of any representation or warranty of the Sellers contained in this Agreement, the Related Agreements or in any certificate or other instrument delivered by or on behalf of the Sellers pursuant to this Agreement or the Related Agreements or, in the case of a Third Party Claim any allegation that, if true, would constitute such Material Breach, (c) any failure by the Company prior to the Closing to perform, fulfill or comply with any covenant or obligation applicable to it contained in this Agreement, the Related Agreements or in any certificate or other instruments delivered pursuant to this Agreement or the Related Agreements which results in a Material Loss, (d) Pre-Closing Taxes which result in a Material Loss or (e) any Company Liability in excess of $25,000, to the extent such Company Liability (i) was not disclosed in the Statement of Liabilities or exceeds the amount disclosed in the Statement of Liabilities by more than $25,000 and (ii) becomes known to Buyer within twelve (12) months following the date hereof.

8.3 ***Indemnification Claims.***

(a) ***Claims for Indemnification***. In order to seek indemnification under **Section** Error! Reference source not found., Buyer shall deliver an Officer's Certificate to the Sellers at any time on or before 11:59 p.m. New York City time on the Expiration Date; *provided, however*, Buyer may seek indemnification for a Material Breach contained in any Fundamental Representation following the Expiration Date by delivering an Officer's Certificate to the Sellers at any time. Unless the Sellers shall

have delivered an Objection Notice pursuant to **Section 8.3(b)** hereof, the Sellers shall promptly, and in no event later than the thirty-first (31st) day after its receipt of the Officer's Certificate, deliver to the Indemnified Party an amount equal to the Loss set forth in such Officer's Certificate. Any payment hereunder shall be made based on the Sellers' Pro Rata Portions. For the purposes hereof, "**Officer's Certificate**" shall mean a certificate signed by any officer of Buyer: (x) stating that an Indemnified Party has paid, sustained, incurred, or properly accrued, or reasonably anticipates that it will have to pay, sustain, incur, or accrue Losses, and (y) specifying in reasonable detail the individual items of Losses included in the amount so stated, the date each such item was paid, sustained, incurred, or properly accrued, or the basis for such anticipated liability, and the nature of the misrepresentation, breach of warranty or covenant or other indemnity to which such item is related.

(b) ***Objections to Claims for Indemnification***. No payment shall be made under **Section 8.3(a)** if the Sellers shall object to the claim made in the Officer's Certificate in a written statement labeled "**Objection Notice**" (an "**Objection Notice**"), and such Objection Notice shall have been received by Buyer prior to 11:59 p.m. New York City time on the thirtieth (30th) day after its receipt of the Officer's Certificate. Notwithstanding the foregoing, the Sellers hereby waive the right to object to any claims in respect of any Company Liabilities. If the Sellers do not object in writing within such 30-day period, such failure to so object shall be an irrevocable acknowledgment by the Sellers that the Indemnified Party is entitled to the full amount of the claim for Losses set forth in such Officer's Certificate, and payment in respect of such Losses shall thereafter be made in accordance with **Section 8.3(a)**.

(c) ***Resolution of Conflicts.***

(i) In case the Sellers deliver an Objection Notice in accordance with **Section 8.3(b)** (other than with respect to any Company Liabilities Overage), the Sellers and Buyer shall attempt in good faith to agree upon the rights of the respective parties with respect to each of such claims.

(ii) At any time following delivery of an Objection Notice by the Sellers to Buyer or in the event of any dispute arising pursuant to **Article 8** hereof, either Buyer, on the one hand, or the Sellers, on the other hand, may pursue any and all legal or equitable remedies available to them under applicable Law.

(d) ***Third-Party Claims***. In the event Buyer becomes aware of a third party claim (a "**Third Party Claim**") that Buyer reasonably believes may result in a demand for indemnification pursuant to this **Article 8**, Buyer shall notify the Sellers in writing of such claim. The Sellers shall be entitled, at their expense, to participate in, but not to determine or conduct, the defense of such Third Party Claim; *provided, however*, that the Sellers agree and consent, as a condition of such entitlement of participation, that Buyer's legal counsel in the Third Party Claim shall not be precluded from representing Buyer as against the Sellers in the event that the Sellers dispute the fact or amount of Buyer's claim of a Loss related to such matter. Buyer shall have the right in its sole discretion to conduct the defense of, and to settle, any such claim; *provided, that*, in the event that any claim is settled without the consent of the Sellers, such settlement shall not be dispositive of the existence of an indemnifiable claim or the amount of Losses. In the event that the Sellers have consented to any such settlement, the Sellers shall have no power or authority to object to the amount of any Third Party Claim by Buyer.

8.4 ***Maximum Payments; Remedy.***

(a) Except as set forth in **Sections 8.4(b)** hereof, the maximum amount an Indemnified Party may recover from the Sellers pursuant to the indemnity set forth in **Section 8.2** hereof shall be limited to the Stock Consideration valued at such time as set forth in subsection (d) hereof.

(b) Notwithstanding anything to the contrary set forth in this Agreement, nothing in this Agreement shall limit the liability of any Person in respect of Losses (i) based on fraud, intentional misrepresentation or willful breach and (ii) incurred pursuant to clause (d) of **Section 8.2** hereof.

(c) In the event any Indemnified Party is entitled to recover Losses pursuant to this **Article 8** directly from any Seller, such seller shall have the right to elect that such recovery be satisfied in whole or part by the cancellation of the Buyer Common Stock held by such Seller valued as set forth in subsection (d) hereof, provided that if such Seller fails to make such election (by notice in writing to Buyer) within five days following the determination that Losses are required to be paid in accordance with this Agreement, Buyer shall have the right to elect whether such recovery shall be satisfied in whole or in part by the cancellation of Buyer Common Stock held by such Seller. Upon determination in accordance with this Agreement that Buyer Common Stock shall be cancelled to pay any portion of Losses owed by a Seller, such Seller shall take all reasonable action requested by Buyer to effect the cancellation of such shares, including Seller returning the stock certificate evidencing such shares to Buyer. Notwithstanding the foregoing, upon determination in accordance with this Agreement that an Indemnified Party is entitled to recover Buyer Common Stock, Buyer shall be entitled to cancel on its books any stock certificate evidencing such shares and, upon such cancellation, such shares shall cease to be outstanding.

(d) For purposes of this Article 8, the deemed value of each share of Buyer Common Stock shall be the fair market value at the time such Losses become finally due as agreed by the parties or by final adjudication by relevant tribunal, as determined in good faith by the Buyer's Board of Directors.

8.5 ***Purchase Price Adjustments.*** Amounts paid to or on behalf of any Person as indemnification under this Agreement shall be treated for all purposes, including U.S. federal and applicable state and local income Tax purposes, as adjustments to the Stock Consideration to the extent permitted by applicable Law.

8.6 ***Sole Remedy*****.** Following the Closing, the parties agree that, except for the availability of injunctive or other equitable relief and claims relating to fraud, intentional misrepresentation or willful breach, the rights to indemnification under this **Article 8** shall be the sole remedy that any Indemnified Party will have in connection with the transactions under this Agreement.

Article 9

GENERAL PROVISIONS

9.1 ***Notices***. All notices and other communications hereunder shall be in writing and shall be deemed given if delivered personally or by commercial messenger or overnight or same-day courier service of national reputation (including U.S. Postal Service overnight delivery), or sent via facsimile (with acknowledgment of complete transmission) to the parties at the following addresses (or at such other address for a party as shall be specified by like notice); *provided, however*, that notices sent by mail will not be deemed given until received:

(a) if to Buyer, to:

Sensei Biotherapeutics, Inc.
620 Professional Drive
Gaithersburg, MD 20879
Attention: Pauline Callinan
Email: pcallinan@senseibio.com

with a copy (which shall not constitute notice) to:

Cooley LLP
1299 Pennsylvania Avenue N.W., Suite 700
Washington, D.C. 20004
Attention: Eric Dixon
Email: edixon@cooley.com

(b) if to the Sellers, to:

Mai H. Le
2126 N 51st Street
Seattle, WA 98103

Benjamin B. Quinones
583 Dolores St.
San Francisco CA 94110

Robert H Pierce
2126 N 51st Street
Seattle, WA 98103

Jean S. Campbell
839 NE 92nd Street
Seattle WA 98115

Gordon Roble
136 N 81st Street
Seattle WA 98103

Fred Hutchinson Cancer Research Center
1100 Fairview Ave N, Mail Stop J2-110
Seattle, WA 98109
Attention: David H. Browdy, Vice President and Chief Financial Officer
Email:Browdy@fredhutch.org

with a copy (which shall not constitute notice) to:

Fred Hutchinson Cancer Research Center
1100 Fairview Ave N, Mail Stop J2-110
Seattle, WA 98109
Attention: Steven R. Haydon, Vice President & General
Counsel Email:haydon@fredhutch.org

9.2 ***Interpretation***. The words "include," "includes" and "including" when used herein shall be deemed in each case to be followed by the words "without limitation." The table of contents and headings contained in this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement.

9.3 ***Counterparts***. This Agreement may be executed in one or more counterparts, all of which shall be considered one and the same agreement and shall become effective when one or more counterparts have been signed by each of the parties and delivered to the other party, it being understood that all parties need not sign the same counterpart.

9.4 ***Entire Agreement; Assignment***. This Agreement, the Related Agreements, the Exhibits hereto, the Disclosure Schedule, the Confidential Disclosure Agreement, and the documents and instruments and other agreements among the parties hereto referenced herein: (a) constitute the entire agreement among the parties with respect to the subject matter hereof and supersede all prior agreements and understandings both written and oral, among the parties with respect to the subject matter hereof, (b) are not intended to confer upon any other person any rights or remedies hereunder, and (c) shall not be assigned by operation of law or otherwise without the consent of the parties hereto, other than by Buyer in connection with a Buyer change of control.

9.5 ***Severability***. In the event that any provision of this Agreement or the application thereof, becomes or is declared by a court of competent jurisdiction to be illegal, void or unenforceable, the remainder of this Agreement will continue in full force and effect and the application of such provision to other persons or circumstances will be interpreted so as reasonably to effect the intent of the parties hereto. The parties further agree to replace such void or unenforceable provision of this Agreement with a valid and enforceable provision that will achieve, to the extent possible, the economic, business and other purposes of such void or unenforceable provision.

9.6 ***Other Remedies; Specific Performance***. Any and all remedies herein expressly conferred upon a party will be deemed cumulative with and not exclusive of any other remedy conferred hereby, or by law or equity upon such party, and the exercise by a party of any one remedy will not preclude the exercise of any other remedy and nothing in this Agreement shall be deemed a waiver by any party of any right to specific performance or injunctive relief. The parties hereto agree that irreparable damage would occur in the event that any of the provisions of this Agreement were not performed in accordance with their specific terms or were otherwise breached. It is accordingly agreed that the parties shall be entitled to seek an injunction or injunctions to prevent breaches of this Agreement and to enforce specifically the terms and provisions hereof, this being in addition to any other remedy to which they are entitled at law or in equity.

9.7 ***Governing Law; Venue***. This Agreement shall be governed by and construed in accordance with the Laws of the State of Delaware, regardless of the Laws that might otherwise govern under applicable principles of conflicts of laws thereof. Each of the parties hereto irrevocably consents to the exclusive jurisdiction and venue of any court within the State of Delaware in connection with any matter based upon or arising out of this Agreement or the matters contemplated herein, agrees that process may be served upon them in any manner authorized by the Laws of the State of Delaware for such persons and waives and covenants not to assert or plead any objection which they might otherwise have to such jurisdiction, venue and such process.

9.8 ***Rules of Construction***. The parties hereto agree that they have been represented by counsel during the negotiation and execution of this Agreement and, therefore, waive the application of any Law, regulation, holding or rule of construction providing that ambiguities in an agreement or other document will be construed against the party drafting such agreement or document. In addition, each of the parties acknowledges and agrees that any purchase price adjustment as a result of the application of any provision of this Agreement, the Related Agreements or any of the other agreements contemplated hereby or thereby does not prejudice or limit in any respect whatsoever any party's rights to indemnification under any other provision of this Agreement, the Related Agreements or any other agreements contemplated hereby or thereby, except to the extent that such a recovery would result in a duplication of damages. All references to dollars or "$" shall refer to U.S. dollars unless otherwise indicated.

9.9 ***Successors and Assigns*****.** The provisions of this Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

9.10 ***Third Party Beneficiaries***. Except for the provisions of Article 8 relating to the Indemnified Parties and the Sellers, this Agreement shall be binding upon and inure solely to the benefit of the parties hereto and their respective successors and permitted assigns and nothing herein, express or implied, is intended to or shall confer upon any other person, any legal or equitable right, benefit or remedy of any nature whatsoever, including any rights of employment for any specified period, under or by reason of this Agreement.

9.11 ***Waiver of Jury Trial***. EACH OF THE PARTIES HERETO HEREBY IRREVOCABLY WAIVES ALL RIGHT TO TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM (WHETHER BASED ON CONTRACT, TORT, OR OTHERWISE) ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE ACTIONS OF ANY PARTY HERETO IN THE NEGOTIATION, ADMINISTRATION, PERFORMANCE OR ENFORCEMENT HEREOF.

9.12 ***Amendment***. This Agreement may be amended by the parties hereto at any time by execution of an instrument in writing signed on behalf of the party against whom enforcement is sought. For purposes of this **Section 9.12**, the Sellers agree that any amendment of this Agreement signed by the Majority Seller shall be binding upon and effective against all of the Sellers whether or not such Sellers have signed such amendment.

9.13 ***Extension; Waiver***. Buyer, on the one hand, and the Sellers, on the other hand, may, to the extent legally allowed, (a) extend the time for the performance of any of the obligations of the other party hereto, (b) waive any inaccuracies in the representations and warranties made by the other party contained herein or in any document delivered pursuant hereto, and (c) waive compliance with any of the covenants, agreements or conditions for the benefit of such party contained herein. Any agreement on the part of a party hereto to any such extension or waiver shall be valid only if set forth in an instrument in writing signed on behalf of such party. For purposes of this **Section 9.13**, the Sellers agree that any extension or waiver signed by the Majority Seller shall be binding upon and effective against all of the Sellers whether or not such Sellers have signed such extension or waiver.

9.14 ***Relationship among the Sellers***. By virtue of the execution of this Agreement, each of the Sellers shall be deemed to have agreed to appoint the Majority Seller as its agent and attorney-in-fact, to take all actions under this Agreement that are to be taken by the Sellers, including to amend this Agreement, to waive any provision of this Agreement, to negotiate payments due pursuant to **Article 8**, to give and receive notices and communications, to authorize payment to any Indemnified Party in satisfaction of claims by any Indemnified Party, to object to such payments, to agree to, negotiate, enter into settlements and compromises of, and comply with orders of courts with respect to such claims, to assert, negotiate, enter into settlements and compromises of, and comply with orders of courts with respect to, any other claim by any Indemnified Party against any Seller or by any such Seller against any Indemnified Party or any dispute between any Indemnified Party and any such Seller, in each case relating to this Agreement or

the transactions contemplated hereby, and to take all other actions that are either (i) necessary or appropriate in the judgment of the Majority Seller for the accomplishment of the foregoing or (ii) specifically mandated by the terms of this Agreement. A decision, act, consent or instruction of the Majority Seller, including an amendment, extension or waiver of this Agreement, shall constitute a decision of the Sellers and shall be final, binding and conclusive upon the Sellers; and Buyer may rely upon any such decision, act, consent or instruction of the Majority Seller as being the decision, act, consent or instruction of the Sellers. The Buyer is hereby relieved from any liability to any person for any decision, act, consent or instruction of the Majority Seller.

[remainder of page intentionally left blank]

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS NOT MATERIAL AND WOULD LIKELY CAUSE COMPETITIVE HARM TO THE COMPANY IF PUBLICLY DISCLOSED.

IN WITNESS WHEREOF, Buyer, the Company and the Sellers have caused this Stock Purchase Agreement to be signed, all as of the date first written above.

SENSEI BIOTHERAPEUTICS, INC.

By: /s/ John Celebi
Name: John Celebi
Title: President and CEO

ALVAXA BIOSCIENCES, INCORPORATED

By: /s/ Mai Hope Le
Name: Mai Hope Le
Title: President and CEO

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS NOT MATERIAL AND WOULD LIKELY CAUSE COMPETITIVE HARM TO THE COMPANY IF PUBLICLY DISCLOSED.

Robert H. Pierce

/s/ Robert H. Pierce
Name: Robert H. Pierce

Mai Hope Le

/s/ Mai Hope Le
Name: Mai Hope Le

Benjamin Quiñones

/s/ Benjamin Quiñones
Name: Benjamin Quiñones

Jeff Gheel

/s/ Jeff Gheel
Name: Jeff Gheel

Gordon Roble

/s/ Gordon Roble
Name: Gordon Roble

Fred Hutchinson Cancer Research Center

By: /s/ David Browdy
Name: David Browdy

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION OF SENSEI BIOTHERAPEUTICS, INC.

(Pursuant to Sections 242 and 245 of the
General Corporation Law of the State of Delaware)

Sensei Biotherapeutics, Inc., a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the "***General Corporation Law***"),

DOES HEREBY CERTIFY:

1. That the name of this corporation is Sensei Biotherapeutics, Inc., and that this corporation was originally incorporated pursuant to the General Corporation Law on December 1, 2017 under the name PPI Holdings, Inc. and that this corporation filed a Certificate of Amendment to the Certificate of Incorporation of PPI Holdings, Inc. to change its name from "PPI Holdings, Inc." to "Sensei Biotherapeutics, Inc." on December 4, 2018.

2. That the Board of Directors duly adopted resolutions proposing to amend and restate the Certificate of Incorporation of this corporation, declaring said amendment and restatement to be advisable and in the best interests of this corporation and its stockholders, and authorizing the appropriate officers of this corporation to solicit the consent of the stockholders therefor, which resolution setting forth the proposed amendment and restatement is as follows:

RESOLVED, that the Certificate of Incorporation of this corporation be amended and restated in its entirety to read as follows:

FIRST: The name of this corporation is Sensei Biotherapeutics, Inc. (the "***Corporation***").

SECOND: The address of the registered office of the Corporation in the State of Delaware is 3500 South DuPont Highway, City of Dover, County of Kent, 19901. The name of its registered agent at such address is Incorporating Services, Ltd.

THIRD: The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law.

FOURTH: The Board of Directors and the stockholders of the Corporation have determined that it is the best interests of the Corporation and its stockholders to recapitalize and reclassify the current capital structure of the Corporation. The Board of Directors and the stockholders of the Corporation have voted to convert the outstanding shares of the Corporation's Series A Preferred Stock, par value $0.0001 per share ("***Series A Preferred Stock***"), Series B Preferred Stock, par value $0.0001 par value per share ("***Series B Preferred Stock***"), Series C Preferred Stock, par value $0.0001 per share ("***Series C Preferred Stock***"), Series D Preferred Stock, par value $0.0001 per share ("***Series D Preferred Stock***"), Series E Preferred Stock, par value $0.0001 par value per share ("***Series E Preferred Stock***"), and Series F Preferred Stock, par value $0.0001 per share ("***Series F Preferred Stock***") into shares of Common Stock in the manner set forth below. Automatically and without any further action by the holders thereof, upon the filing of the of this Amended and Restated Certificate of Incorporation (the "***Effective Time***") and on requisite approvals of stockholders heretofore duly obtained, each of the issued and outstanding shares of Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock, Series D Preferred Stock,

Series E Preferred Stock and Series F Preferred Stock (collectively, the "***Old Preferred Stock***"), shall be converted into such number of shares of Common Stock of the Corporation, par value $0.0001 per share (the "***Common Stock***") calculated by dividing (a) the sum of (i) the original issue price for such share of Old Preferred Stock plus (ii) accrued but unpaid dividends thereon, by (b) the original issue price for such share of Old Preferred Stock. The certificates that theretofore represented one or more shares of the Old Preferred Stock shall thereafter represent the foregoing number of shares of Common Stock. The foregoing recapitalization, combination, reclassification and exchange described in this paragraph are referred to as the "***Reclassification***." No fractional shares of Common Stock shall be issued pursuant to the Reclassification, and in lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the original issue price for such share of Old Preferred Stock.

Each certificate then outstanding representing shares of Old Preferred Stock shall, automatically and without the necessity of presenting the same for exchange, represent after the Effective Time the shares of Common Stock into which such shares have been reclassified and converted, and the certificates representing the Old Preferred Stock shall be deemed cancelled on the books and records of the Corporation. Regardless of when a holder delivers to the Corporation his, her or its certificates representing Old Preferred Stock, such holder shall be deemed to have ceased to be a stockholder of record of the shares of Old Preferred Stock previously held by him, her or it that are so reclassified and combined hereunder as of the Effective Time, and such certificates shall thereafter represent only the shares of Common Stock into which the Old Preferred Stock previously represented by such certificates shall have been reclassified and combined hereunder. The Corporation shall not be obligated to issue any certificate evidencing shares of Common Stock resulting from the reclassification unless the certificate that had previously evidenced the shares of Old Preferred Stock in respect of which such shares of Common Stock were issued is either delivered to the Corporation or the holder notifies the Corporation that such certificate has been lost, stolen, or destroyed and executes an agreement satisfactory to the Corporation to indemnify the Corporation from any loss incurred by it in connection with such certificate. The Corporation shall, as soon as reasonably practicable after delivery of any such certificate, or such agreement and indemnification in the case of a lost, stolen or destroyed certificate, issue and deliver to such holder a certificate or certificates representing the number of shares of Common Stock to which such holder is entitled, if any, after giving effect to the Reclassification.

Immediately following the effectiveness of the Reclassification, the total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 1,230,000,000 shares of Common Stock and (ii) 870,211,737 shares of Preferred Stock, $0.0001 par value per share ("***Preferred Stock***"). Following the Reclassification, the shares of Old Preferred Stock shall be extinguished, cancelled and retired. The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A. COMMON STOCK

1. General. The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein.

2. Voting. The holders of the Common Stock are entitled to one vote for each share of Common Stock held at all meetings of stockholders (and written actions in lieu of meetings). There shall be no cumulative voting. The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of one or more series of Preferred Stock that may be required by the terms of this Amended and Restated Certificate of Incorporation) the affirmative vote of the holders of shares of capital stock of the

Corporation representing a majority of the votes represented by all outstanding shares of capital stock of the Corporation entitled to vote, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law.

B. PREFERRED STOCK

870,211,737 shares of the authorized and unissued Preferred Stock of the Corporation are hereby designated "***Series AA Preferred Stock***" with the following rights, preferences, powers, privileges and restrictions, qualifications and limitations. On or prior to January 31, 2019, holders of shares of Common Stock issued in connection with the Reclassification (collectively, "***Converted Shares***") shall have the right to exchange such Converted Shares for shares of Series AA Preferred Stock pursuant to and in accordance with the provisions set forth in that certain Series AA Preferred Stock Purchase and Exchange Agreement of the Corporation (the "***Purchase and Exchange Agreement***"). Upon the holder of Converted Shares electing to convert such Converted Shares to Series AA Preferred Stock in accordance with the Purchase and Exchange Agreement, each of the issued and outstanding shares of Common Stock so converted shall be deemed redeemed by the Corporation and no longer be outstanding. Unless otherwise indicated, references to "sections" or "subsections" in this Part B of this Article Fourth refer to sections and subsections of Part B of this Article Fourth.

1. Dividends.

The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in the Certificate of Incorporation) the holders of the Series AA Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend at the rate of 8% of the Series AA Original Issue Price (as defined below); provided that, if the Corporation declares, pays or sets aside, a dividend on shares of Common Stock (other than dividends on shares of Common Stock payable in shares of Common Stock), the dividend payable to the holders of Series AA Preferred Stock pursuant to this Section 1 shall be calculated based upon the dividend on the class or series of capital stock that would result in the highest dividend being paid to the holders of the Series AA Preferred Stock, and, if the Corporation declares, pays or sets aside, a dividend on shares of Common Stock payable in shares of Common Stock, the holders of the Series AA Preferred Stock then outstanding shall first receive, or simultaneously receive, such dividend of shares of Common Stock. The "***Series AA Original Issue Price***" means $0.082135 per share of Series AA Preferred Stock, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series AA Preferred Stock. Such dividends shall be payable only when, as and if declared by the Board of Directors (the "***Board***") and shall be non-cumulative.

2. Liquidation, Dissolution or Winding Up; Certain Mergers, Consolidations and Asset Sales.

2.1 Preferential Payments to Holders of Series AA Preferred Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, the holders of shares of Series AA Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders or, in the case of a Deemed Liquidation Event (as defined below), out of the consideration payable to stockholders in such Deemed Liquidation Event or the Available Proceeds (as defined below), before any payment shall be made to the holders of Common Stock by reason of their ownership thereof, an amount per share equal to the Series AA Original Issue Price, plus any dividends declared but unpaid thereon (the amount payable pursuant to this sentence is hereinafter referred to as the "***Series AA Liquidation Amount***"). If upon any such liquidation, dissolution or winding

up of the Corporation or Deemed Liquidation Event, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series AA Preferred Stock the full amount to which they shall be entitled under this Section 2.1, the holders of shares of Series AA Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.2 Distribution of Remaining Assets. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, after the payment in full of all Series AA Liquidation Amounts required to be paid to the holders of shares of Series AA Preferred Stock and before any payment shall be made to the holders of Common Stock by reason of their ownership thereof, the remaining assets of the Corporation available for distribution to its stockholders or, in the case of a Deemed Liquidation Event, the consideration not payable to the holders of shares of Series AA Preferred Stock pursuant to Section 2.1 or the remaining Available Proceeds, as the case may be, shall be distributed among the holders of the shares of Series AA Preferred Stock and Common Stock, pro rata based on the number of shares held by each such holder, treating for this purpose all such securities as if they had been converted to Common Stock pursuant to the terms of this Amended and Restated Certificate of Incorporation immediately prior to such liquidation, dissolution or winding up of the Corporation.

2.3 Deemed Liquidation Events.

2.3.1 Definition. Each of the following events shall be considered a "***Deemed Liquidation Event***" unless the holders of at least two-thirds of the outstanding shares of Series AA Preferred Stock (the "***Requisite Holders***") elect otherwise by written notice sent to the Corporation at least 10 days prior to the effective date of any such event:

(a) a merger or consolidation in which

(i) the Corporation is a constituent party or

(ii) a subsidiary of the Corporation is a constituent party and the Corporation issues shares of its capital stock pursuant to such merger or consolidation,

(b) except any such merger or consolidation involving the Corporation or a subsidiary in which the shares of capital stock of the Corporation outstanding immediately prior to such merger or consolidation continue to represent, or are converted into or exchanged for shares of capital stock that represent, immediately following such merger or consolidation, a majority, by voting power, of the capital stock of (1) the surviving or resulting corporation; or (2) if the surviving or resulting corporation is a wholly owned subsidiary of another corporation immediately following such merger or consolidation, the parent corporation of such surviving or resulting corporation; or (1) the sale, lease, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, by the Corporation or any subsidiary of the Corporation of all or substantially all the assets of the Corporation and its subsidiaries taken as a whole, or (2) the sale or disposition (whether by merger, consolidation or otherwise, and whether in a single transaction or a series of related transactions) of one or more subsidiaries of the Corporation if substantially all of the assets of the Corporation and its subsidiaries taken as a whole are held by such subsidiary or subsidiaries, except where such sale, lease, transfer, exclusive license or other disposition is to a wholly owned subsidiary of the Corporation.

2.3.2 Effecting a Deemed Liquidation Event.

(a) The Corporation shall not have the power to effect a Deemed Liquidation Event referred to in Section 2.3.1(a)(i) unless the agreement or plan of merger or consolidation for such transaction (the "***Merger Agreement***") provides that the consideration payable to the stockholders of the Corporation in such Deemed Liquidation Event shall be paid to the holders of capital stock of the Corporation in accordance with Sections 2.1 and 2.2.

(b) In the event of a Deemed Liquidation Event referred to in Section 2.3.1(a)(ii) or 2.3.1(b), if the Corporation does not effect a dissolution of the Corporation under the General Corporation Law within 90 days after such Deemed Liquidation Event, then (i) the Corporation shall send a written notice to each holder of Series AA Preferred Stock no later than the 90th day after the Deemed Liquidation Event advising such holders of their right (and the requirements to be met to secure such right) pursuant to the terms of the following clause; (ii) to require the redemption of such shares of Series AA Preferred Stock, and (iii) if the Requisite Holders so request in a written instrument delivered to the Corporation not later than 120 days after such Deemed Liquidation Event, the Corporation shall use the consideration received by the Corporation for such Deemed Liquidation Event (net of any retained liabilities associated with the assets sold or technology licensed, as determined in good faith by the Board of Directors of the Corporation), together with any other assets of the Corporation available for distribution to its stockholders, all to the extent permitted by Delaware law governing distributions to stockholders (the "***Available Proceeds***"), on the 150th day after such Deemed Liquidation Event, to redeem all outstanding shares of Series AA Preferred Stock at a price per share equal to the Series AA Liquidation Amount. Notwithstanding the foregoing, in the event of a redemption pursuant to the preceding sentence, if the Available Proceeds are not sufficient to redeem all outstanding shares of Series AA Preferred Stock, the Corporation shall redeem a pro rata portion of each holder's shares of Series AA Preferred Stock to the fullest extent of such Available Proceeds, based on the respective amounts which would otherwise be payable in respect of the shares to be redeemed if the Available Proceeds were sufficient to redeem all such shares, and shall redeem the remaining shares as soon as it may lawfully do so under Delaware law governing distributions to stockholders. Prior to the distribution or redemption provided for in this Section 2.3.2(b), the Corporation shall not expend or dissipate the consideration received for such Deemed Liquidation Event, except to discharge expenses incurred in connection with such Deemed Liquidation Event.

2.3.3 Amount Deemed Paid or Distributed. The amount deemed paid or distributed to the holders of capital stock of the Corporation upon any such merger, consolidation, sale, transfer, exclusive license, other disposition or redemption shall be the cash or the value of the property, rights or securities to be paid or distributed to such holders pursuant to such Deemed Liquidation Event. The value of such property, rights or securities shall be determined in good faith by the Board of Directors of the Corporation, including the approval of at least two Series AA Directors (as defined herein).

2.3.4 Allocation of Escrow and Contingent Consideration. In the event of a Deemed Liquidation Event pursuant to Section 2.3.1(a)(i), if any portion of the consideration payable to the stockholders of the Corporation is payable only upon satisfaction of contingencies (the "***Additional Consideration***"), the Merger Agreement shall provide that (a) the portion of such consideration that is not Additional Consideration (such portion, the "***Initial Consideration***") shall be allocated among the holders of capital stock of the Corporation in accordance with Sections 2.1 and 2.2 as if the Initial Consideration were the only consideration payable in connection with such Deemed Liquidation Event; and (b) any Additional Consideration which becomes payable to the stockholders of the Corporation upon satisfaction of such contingencies shall be allocated among the holders of capital stock of the Corporation in accordance with Sections 2.1 and 2.2 after taking into account the previous payment of the Initial Consideration as part of the same transaction. For the purposes of this Section 2.3.4, consideration placed into escrow or retained as a holdback to be available for satisfaction of indemnification or similar obligations in connection with such Deemed Liquidation Event shall be deemed to be Additional Consideration.

3. Voting.

3.1 General. On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written consent of stockholders in lieu of meeting), each holder of outstanding shares of Series AA Preferred Stock shall be entitled to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of Series AA Preferred Stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law or by the other provisions of this Amended and Restated Certificate of Incorporation, holders of Series AA Preferred Stock shall vote together with the holders of Common Stock as a single class and on an as-converted to Common Stock basis.

3.2 Election of Directors. The holders of record of the shares of Series AA Preferred Stock, exclusively and as a separate class, shall be entitled to elect three directors of the Corporation (the "***Series AA Directors***") and the holders of record of the shares of Common Stock, exclusively and as a separate class, shall be entitled to elect one director of the Corporation. Any director elected as provided in the preceding sentence may be removed without cause by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders. If the holders of shares of Series AA Preferred Stock or Common Stock, as the case may be, fail to elect a sufficient number of directors to fill all directorships for which they are entitled to elect directors, voting exclusively and as a separate class, pursuant to the first sentence of this Section 3.2, then any directorship not so filled shall remain vacant until such time as the holders of the Series AA Preferred Stock or Common Stock, as the case may be, elect a person to fill such directorship by vote or written consent in lieu of a meeting; and no such directorship may be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect a person to fill such directorship, voting exclusively and as a separate class. The holders of record of the shares of Common Stock and of any other class or series of voting stock (including the Series AA Preferred Stock), exclusively and voting together as a single class, shall be entitled to elect the balance of the total number of directors of the Corporation. At any meeting held for the purpose of electing a director, the presence in person or by proxy of the holders of a majority of the outstanding shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director. Except as otherwise provided in this Section 3.2, a vacancy in any directorship filled by the holders of any class or series shall be filled only by vote or written consent in lieu of a meeting of the holders of such class or series or by any remaining director or directors elected by the holders of such class or series pursuant to this Section 3.2. Any director may be removed during his or her term of office, either with or without cause, by, and only by, the affirmative vote of the holders of the shares of the class or series of stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders, and any vacancy thereby created may be filled by the holders of that class or series of stock represented at the meeting or pursuant to written consent. Notwithstanding the provisions of Section 223(a)(1) and 223(a)(2) of the General Corporation Law, any vacancy, including newly created directorships resulting from any increase in the authorized number of directors or amendment of this Amended and Restated Certificate of Incorporation, and vacancies created by removal or resignation of a director, may be filled by a majority of the directors then in office, though less than a quorum, or by a sole remaining director, and the directors so chosen shall hold office until the next annual election and until their successors are duly elected and shall qualify, unless sooner displaced; provided, however, that where such vacancy occurs among the directors elected by the holders of a class or series of stock, the holders of shares of such class or series may override the Board of

Directors' action to fill such vacancy by (A) voting for their own designee to fill such vacancy at a meeting of the Corporation's stockholders or (B) written consent, if the consenting stockholders hold a sufficient number of shares of the applicable class or series to elect their designee at a meeting of the stockholders. The rights of the holders of the Series AA Preferred Stock and the rights of the holders of the Common Stock under the first sentence of this Section 3.2 shall terminate on the first date following the Series AA Original Issue Date (as defined below) on which there are issued and outstanding less than 217,552,934 shares of Series AA Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination, or other similar recapitalization with respect to the Series AA Preferred Stock).

3.3 Series AA Preferred Stock Protective Provisions. At any time when at least 217,552,934 shares of Series AA Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series AA Preferred Stock) are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Amended and Restated Certificate of Incorporation) the written consent or affirmative vote of the Requisite Holders given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect:

(a) liquidate, dissolve or wind-up the business and affairs of the Corporation, effect any merger or consolidation or any other Deemed Liquidation Event, or consent to any of the foregoing;

(b) create, or authorize the creation of, or issue or obligate itself to issue shares of, any additional class or series of capital stock, or increase the authorized number of shares of Series AA Preferred Stock or increase the authorized number of shares of any additional class or series of capital stock of the Corporation;

(c) (i) reclassify, alter or amend any existing security of the Corporation that is pari passu with the Series AA Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to the Series AA Preferred Stock in respect of any such right, preference, or privilege or (ii) reclassify, alter or amend any existing security of the Corporation that is junior to the Series AA Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to or pari passu with the Series AA Preferred Stock in respect of any such right, preference or privilege;

(d) purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than (i) redemptions of or dividends or distributions on the Series AA Preferred Stock as expressly authorized herein, (ii) dividends or other distributions payable on the Common Stock solely in the form of additional shares of Common Stock and (iii) repurchases of stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service at the lower of the original purchase price or the then-current fair market value thereof or (iv) as approved by the Board of Directors, including the approval of at least two Series AA Directors;

(e) increase the number of shares authorized for issuance under any existing equity inventive plan or create any new equity incentive plan;

(f) amend, alter, or repeal any provision of the Certificate of Incorporation in a manner that adversely affects the Series AA Preferred Stock;

(g) alter any provision of the Corporation's Bylaws;

(h) increase or decrease the authorized number of shares of Preferred Stock or any series of Preferred Stock; or

(i) encumber or grant a security interest in all or substantially all of the assets of the Corporation in connection with an indebtedness of the Corporation.

4. Optional Conversion.

The holders of the Series AA Preferred Stock shall have conversion rights as follows (the "***Conversion Rights***"):

4.1 Right to Convert.

4.1.1 Conversion Ratio. Each share of Series AA Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of Common Stock as is determined by dividing the Series AA Original Issue Price by the Series AA Conversion Price (as defined below) in effect at the time of conversion. The "***Series AA Conversion Price***" shall initially be equal to $0.082135. Such initial Series AA Conversion Price, and the rate at which shares of Series AA Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.1.2 Termination of Conversion Rights. In the event of a liquidation, dissolution or winding up of the Corporation or a Deemed Liquidation Event, the Conversion Rights shall terminate at the close of business on the last full day preceding the date fixed for the payment of any such amounts distributable on such event to the holders of Series AA Preferred Stock.

4.2 Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of the Series AA Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of a share of Common Stock as determined in good faith by the Board of Directors of the Corporation. Whether or not fractional shares would be issuable upon such conversion shall be determined on the basis of the total number of shares of Series AA Preferred Stock the holder is at the time converting into Common Stock and the aggregate number of shares of Common Stock issuable upon such conversion.

4.3 Mechanics of Conversion.

4.3.1 Notice of Conversion. In order for a holder of Series AA Preferred Stock to voluntarily convert shares of Series AA Preferred Stock into shares of Common Stock, such holder shall (a) provide written notice to the Corporation's transfer agent at the office of the transfer agent for the Series AA Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent) that such holder elects to convert all or any number of such holder's shares of Series AA Preferred Stock and, if applicable, any event on which such conversion is contingent and (b), if such holder's shares are certificated, surrender the certificate or certificates for such shares of Series AA Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any

claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate), at the office of the transfer agent for the Series AA Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent). Such notice shall state such holder's name or the names of the nominees in which such holder wishes the shares of Common Stock to be issued. If required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or his, her or its attorney duly authorized in writing. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such notice and, if applicable, certificates (or lost certificate affidavit and agreement) shall be the time of conversion (the "***Conversion Time***"), and the shares of Common Stock issuable upon conversion of the specified shares shall be deemed to be outstanding of record as of such date. The Corporation shall, as soon as practicable after the Conversion Time (i) issue and deliver to such holder of Series AA Preferred Stock, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions hereof and a certificate for the number (if any) of the shares of Series AA Preferred Stock represented by the surrendered certificate that were not converted into Common Stock, (ii) pay in cash such amount as provided in Section 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and (iii) pay all declared but unpaid dividends on the shares of Series AA Preferred Stock converted.

4.3.2 Reservation of Shares. The Corporation shall at all times when the Series AA Preferred Stock shall be outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of the Series AA Preferred Stock, such number of its duly authorized shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding Series AA Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Series AA Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to this Amended and Restated Certificate of Incorporation. Before taking any action which would cause an adjustment reducing the Series AA Conversion Price below the then par value of the shares of Common Stock issuable upon conversion of the Series AA Preferred Stock, the Corporation will take any corporate action which may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and non-assessable shares of Common Stock at such adjusted Series AA Conversion Price.

4.3.3 Effect of Conversion. All shares of Series AA Preferred Stock which shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except only the right of the holders thereof to receive shares of Common Stock in exchange therefor, to receive payment in lieu of any fraction of a share otherwise issuable upon such conversion as provided in Section 4.2 and to receive payment of any dividends declared but unpaid thereon. Any shares of Series AA Preferred Stock so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Series AA Preferred Stock accordingly.

4.3.4 No Further Adjustment. Upon any such conversion, no adjustment to the Series AA Conversion Price shall be made for any declared but unpaid dividends on the Series AA Preferred Stock surrendered for conversion or on the Common Stock delivered upon conversion.

4.3.5 Taxes. The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of Common Stock upon conversion of shares of Series AA Preferred Stock pursuant to this Section 4. The Corporation shall not, however, be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of shares of Common Stock in a name other than that in which the shares of Series AA Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

4.4 Adjustments to Series AA Conversion Price for Diluting Issues.

4.4.1 Special Definitions. For purposes of this Article Fourth, the following definitions shall apply:

(a) "***Option***" shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(b) "***Series AA Original Issue Date***" shall mean the date on which the first share of Series AA Preferred Stock was issued.

(c) "***Convertible Securities***" shall mean any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock, but excluding Options.

(d) "***Additional Shares of Common Stock***" shall mean all shares of Common Stock issued (or, pursuant to Section 4.4.3 below, deemed to be issued) by the Corporation after the Series AA Original Issue Date, other than (1) the following shares of Common Stock and (2) shares of Common Stock deemed issued pursuant to the following Options and Convertible Securities (clauses (1) and (2), collectively, "***Exempted Securities***"):

(i) shares of Common Stock, Options or Convertible Securities issued as a dividend or distribution on Series AA Preferred Stock;

(ii) shares of Common Stock, Options or Convertible Securities issued by reason of a dividend, stock split, split-up or other distribution on shares of Common Stock that is covered by Section 4.5, 4.6, 4.7 or 4.8;

(iii) shares of Common Stock or Options issued to employees or directors of, or consultants or advisors to, the Corporation or any of its subsidiaries pursuant to a plan, agreement or arrangement approved by the Board of Directors of the Corporation, including the approval of at least two Series AA Directors;

(iv) shares of Common Stock or Convertible Securities actually issued upon the exercise of Options or shares of Common Stock actually issued upon the conversion or exchange of Convertible Securities, in each case provided such issuance is pursuant to the terms of such Option or Convertible Security;

(v) shares of Common Stock, Options or Convertible Securities issued to banks, equipment lessors or other financial institutions, or to real property lessors, pursuant to a debt financing, equipment leasing or real property leasing transaction approved by the Board of Directors of the Corporation, including the approval of at least two Series AA Directors;

(vi) shares of Common Stock, Options or Convertible Securities issued to suppliers or third party service providers in connection with the provision of goods or services pursuant to transactions approved by the Board of Directors of the Corporation, including the approval of at least two Series AA Directors;

(vii) shares of Common Stock, Options or Convertible Securities issued as acquisition consideration pursuant to the acquisition of another corporation by the Corporation by merger, purchase of substantially all of the assets or other reorganization or to a joint venture agreement, *provided* that such issuances are approved by the Board of Directors of the Corporation, including the approval of at least two Series AA Directors;

(viii) any shares of Common Stock issued in connection with the Reclassification; or

(ix) shares of Common Stock, Options or Convertible Securities issued in connection with sponsored research, collaboration, technology license, development, original equipment manufacturing, marketing or other similar agreements or strategic partnerships approved by the Board of Directors of the Corporation, including the approval of at least two Series AA Directors.

4.4.2 No Adjustment of Series AA Conversion Price. No adjustment in the Series AA Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the Requisite Holders agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock.

4.4.3 Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Series AA Original Issue Date shall issue any Options or Convertible Securities (excluding Options or Convertible Securities which are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any conditions to exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to the Series AA Conversion Price pursuant to the terms of Section 4.4.4, are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any such Option or Convertible Security or (2) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the Series AA Conversion Price computed upon the original issue of such Option or Convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such Series AA Conversion Price as would have obtained had such

revised terms been in effect upon the original date of issuance of such Option or Convertible Security. Notwithstanding the foregoing, no readjustment pursuant to this clause (b) shall have the effect of increasing the Series AA Conversion Price to an amount which exceeds the lower of (i) the Series AA Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (ii) the Series AA Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible Security (excluding Options or Convertible Securities which are themselves Exempted Securities), the issuance of which did not result in an adjustment to the Series AA Conversion Price pursuant to the terms of Section 4.4.4 (either because the consideration per share (determined pursuant to Section 4.4.5) of the Additional Shares of Common Stock subject thereto was equal to or greater than the Series AA Conversion Price then in effect, or because such Option or Convertible Security was issued before the Series AA Original Issue Date), are revised after the Series AA Original Issue Date as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or Convertible Security or (2) any decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or Convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in Section 4.4.3(a)) shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) which resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to the Series AA Conversion Price pursuant to the terms of Section 4.4.4, the Series AA Conversion Price shall be readjusted to such Series AA Conversion Price as would have obtained had such Option or Convertible Security (or portion thereof) never been issued.

(e) If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to the Series AA Conversion Price provided for in this Section 4.4.3 shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) of this Section 4.4.3). If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, cannot be calculated at all at the time such Option or Convertible Security is issued or amended, any adjustment to the Series AA Conversion Price that would result under the terms of this Section 4.4.3 at the time of such issuance or amendment shall instead be effected at the time such number of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to the Series AA Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

4.4.4 Adjustment of Series AA Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Series AA

Original Issue Date issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Section 4.4.3), without consideration or for a consideration per share less than the Series AA Conversion Price in effect immediately prior to such issuance or deemed issuance, then the Series AA Conversion Price shall be reduced, concurrently with such issue, to a price (calculated to the nearest one-hundredth of a cent) determined in accordance with the following formula:

$$CP_2 = CP_1 * (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

"***CP_2***" shall mean the Series AA Conversion Price in effect immediately after such issuance or deemed issuance of Additional Shares of Common Stock

"***CP_1***" shall mean the Series AA Conversion Price in effect immediately prior to such issuance or deemed issuance of Additional Shares of Common Stock;

"***A***" shall mean the number of shares of Preferred Stock outstanding immediately prior to such issuance or deemed issuance of Additional Shares of Common Stock;

"**B**" shall mean the number of shares of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued or deemed issued at a price per share equal to CP_1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP_1); and

"***C***" shall mean the number of such Additional Shares of Common Stock issued in such transaction.

4.4.5 Determination of Consideration. For purposes of this Section 4.4, the consideration received by the Corporation for the issuance or deemed issuance of any Additional Shares of Common Stock shall be computed as follows:

(a) **Cash and Property**: Such consideration shall:

(i) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest;

(ii) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board of Directors of the Corporation; and

(iii) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board of Directors of the Corporation.

(b) **Options and Convertible Securities**. The consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to Section 4.4.3, relating to Options and Convertible Securities, shall be determined by dividing:

(i) The total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities, by

(ii) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities.

4.4.6 Multiple Closing Dates. In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to the Series AA Conversion Price pursuant to the terms of Section 4.4.4 then, upon the final such issuance, the Series AA Conversion Price shall be readjusted to give effect to all such issuances as if they occurred on the date of the first such issuance (and without giving effect to any additional adjustments as a result of any such subsequent issuances within such period).

4.5 Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time after the Series AA Original Issue Date effect a subdivision of the outstanding Common Stock, the Series AA Conversion Price in effect immediately before that subdivision shall be proportionately decreased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Common Stock outstanding. If the Corporation shall at any time or from time to time after the Series AA Original Issue Date combine the outstanding shares of Common Stock, the Series AA Conversion Price in effect immediately before the combination shall be proportionately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of Common Stock outstanding. Any adjustment under this subsection shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.6 Adjustment for Certain Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series AA Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable on the Common Stock in additional shares of Common Stock, then and in each such event the Series AA Conversion Price in effect immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying the Series AA Conversion Price then in effect by a fraction:

(i) the numerator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date, and

(ii) the denominator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of shares of Common Stock issuable in payment of such dividend or distribution.

Notwithstanding the foregoing (a) if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, the Series AA Conversion Price shall be recomputed accordingly as of the close of business on such record date and thereafter the Series AA Conversion Price shall be adjusted pursuant to this subsection as of the time of actual payment of such dividends or distributions; and (b) that no such adjustment shall be made if the holders of Series AA Preferred Stock simultaneously receive a dividend or other distribution of shares of Common Stock in a number equal to the number of shares of Common Stock as they would have received if all outstanding shares of Series AA Preferred Stock had been converted into Common Stock on the date of such event.

4.7 Adjustments for Other Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series AA Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the Corporation (other than a distribution of shares of Common Stock in respect of outstanding shares of Common Stock) or in other property and the provisions of Section 1 do not apply to such dividend or distribution, then and in each such event the holders of Series AA Preferred Stock shall receive, simultaneously with the distribution to the holders of Common Stock, a dividend or other distribution of such securities or other property in an amount equal to the amount of such securities or other property as they would have received if all outstanding shares of Series AA Preferred Stock had been converted into Common Stock on the date of such event.

4.8 Adjustment for Merger or Reorganization, etc. Subject to the provisions of Section 2.3, if there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation in which the Common Stock (but not the Series AA Preferred Stock) is converted into or exchanged for securities, cash or other property (other than a transaction covered by Section 4.4, 4.6 or 4.7), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of Series AA Preferred Stock shall thereafter be convertible in lieu of the Common Stock into which it was convertible prior to such event into the kind and amount of securities, cash or other property which a holder of the number of shares of Common Stock of the Corporation issuable upon conversion of one share of Series AA Preferred Stock immediately prior to such reorganization, recapitalization, reclassification, consolidation or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment (as determined in good faith by the Board of Directors of the Corporation) shall be made in the application of the provisions in this Section 4 with respect to the rights and interests thereafter of the holders of the Series AA Preferred Stock, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the Series AA Conversion Price) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of the Series AA Preferred Stock.

4.9 Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Series AA Conversion Price pursuant to this Section 4, the Corporation at its expense shall, as promptly as reasonably practicable but in any event not later than 10 days thereafter, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of Series AA Preferred Stock a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the Series AA Preferred Stock is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, as promptly as reasonably practicable after the written request at any time of any holder of Series AA Preferred Stock (but in any event not later than 10 days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (i) the Series AA Conversion Price then in effect, and (ii) the number of shares of Common Stock and the amount, if any, of other securities, cash or property which then would be received upon the conversion of Series AA Preferred Stock.

4.10 Notice of Record Date. In the event:

(a) the Corporation shall take a record of the holders of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the Series AA Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of capital stock of any class or any other securities, or to receive any other security; or

(b) of any capital reorganization of the Corporation, any reclassification of the Common Stock of the Corporation, or any Deemed Liquidation Event; or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Corporation,

then, and in each such case, the Corporation will send or cause to be sent to the holders of the Series AA Preferred Stock a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the Series AA Preferred Stock) shall be entitled to exchange their shares of Common Stock (or such other capital stock or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to the Series AA Preferred Stock and the Common Stock. Such notice shall be sent at least 10 days prior to the record date or effective date for the event specified in such notice.

5. Mandatory Conversion.

5.1 Trigger Events. Upon either (a) the closing of the sale of shares of Common Stock to the public in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, resulting in at least $50,000,000 of gross proceeds to the Corporation (a "***Qualified IPO***") or (b) the date and time, or the occurrence of an event, specified by vote or written consent of holders of two-thirds of the outstanding shares of Series AA Preferred Stock (the time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as the "***Mandatory Conversion Time***"), then (i) all outstanding shares of Series AA Preferred Stock shall automatically be converted into shares of Common Stock, at the then effective conversion rate as calculated pursuant to Section 4.1.1 and (ii) such shares may not be reissued by the Corporation.

5.2 Procedural Requirements. All holders of record of shares of Series AA Preferred Stock shall be sent written notice of the Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of Series AA Preferred Stock pursuant to this Section 5. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of Series AA Preferred Stock in certificated form shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly

executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the Series AA Preferred Stock converted pursuant to Section 5.1, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the Mandatory Conversion Time (notwithstanding the failure of the holder or holders thereof to surrender any certificates at or prior to such time), except only the rights of the holders thereof, upon surrender of any certificate or certificates of such holders (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the next sentence of this Section 5.2. As soon as practicable after the Mandatory Conversion Time and, if applicable, the surrender of any certificate or certificates (or lost certificate affidavit and agreement) for Series AA Preferred Stock, the Corporation shall (a) issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof and (b) pay cash as provided in Section 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and the payment of any declared but unpaid dividends on the shares of Series AA Preferred Stock converted. Such converted Series AA Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Series AA Preferred Stock accordingly.

6. Redemption. Other than as set forth in Section 2.3.2(b), the Series AA Preferred Stock is not redeemable at the option of the holder or the Corporation.

7. Redeemed or Otherwise Acquired Shares. Any shares of Series AA Preferred Stock that are redeemed or otherwise acquired by the Corporation or any of its subsidiaries shall be automatically and immediately cancelled and retired and shall not be reissued, sold or transferred. Neither the Corporation nor any of its subsidiaries may exercise any voting or other rights granted to the holders of Series AA Preferred Stock following redemption.

8. Waiver. Any of the rights, powers, preferences and other terms of the Series AA Preferred Stock set forth herein may be waived on behalf of all holders of Series AA Preferred Stock by the affirmative written consent or vote of the Requisite Holders.

9. Notices. Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of Series AA Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation, or given by electronic communication in compliance with the provisions of the General Corporation Law, and shall be deemed sent upon such mailing or electronic transmission.

FIFTH: Subject to any additional vote required by this Amended and Restated Certificate of Incorporation or Bylaws, in furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, repeal, alter, amend and rescind any or all of the Bylaws of the Corporation.

SIXTH: Subject to any additional vote required by this Amended and Restated Certificate of Incorporation, the number of directors of the Corporation shall be determined in the manner set forth in the Bylaws of the Corporation.

SEVENTH: Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

EIGHTH: Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws of the Corporation may provide. The books of the Corporation may be kept outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

NINTH: To the fullest extent permitted by law, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the General Corporation Law or any other law of the State of Delaware is amended after approval by the stockholders of this Article Ninth to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law as so amended.

Any repeal or modification of the foregoing provisions of this Article Ninth by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of, or increase the liability of any director of the Corporation with respect to any acts or omissions of such director occurring prior to, such repeal or modification.

TENTH: The following indemnification provisions shall apply to the persons enumerated below.

1. Right to Indemnification of Directors and Officers. The Corporation shall indemnify and hold harmless, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, any person (an "***Indemnified Person***") who was or is made or is threatened to be made a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (a "***Proceeding***"), by reason of the fact that such person, or a person for whom such person is the legal representative, is or was a director or officer of the Corporation or, while a director or officer of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, limited liability company, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys'01 fees) reasonably incurred by such Indemnified Person in such Proceeding. Notwithstanding the preceding sentence, except as otherwise provided in Section 3 of this Article Tenth the Corporation shall be required to indemnify an Indemnified Person in connection with a Proceeding (or part thereof) commenced by such Indemnified Person only if the commencement of such Proceeding (or part thereof) by the Indemnified Person was authorized in advance by the Board of Directors.

2. Prepayment of Expenses of Directors and Officers. The Corporation shall pay the expenses (including attorneys' fees) incurred by an Indemnified Person in defending any Proceeding in advance of its final disposition, *provided, however*, that, to the extent required by law, such payment of expenses in advance of the final disposition of the Proceeding shall be made only upon receipt of an undertaking by the Indemnified Person to repay all amounts advanced if it should be ultimately determined that the Indemnified Person is not entitled to be indemnified under this Article Tenth or otherwise.

3. Claims by Directors and Officers. If a claim for indemnification or advancement of expenses under this Article Tenth is not paid in full within 30 days after a written claim therefor by the Indemnified Person has been received by the Corporation, the Indemnified Person may file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim. In any such action the Corporation shall have the burden of proving that the Indemnified Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

4. Indemnification of Employees and Agents. The Corporation may indemnify and advance expenses to any person who was or is made or is threatened to be made or is otherwise involved in any Proceeding by reason of the fact that such person, or a person for whom such person is the legal

representative, is or was an employee or agent of the Corporation or, while an employee or agent of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, limited liability company, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees) reasonably incurred by such person in connection with such Proceeding. The ultimate determination of entitlement to indemnification of persons who are non-director or officer employees or agents shall be made in such manner as is determined by the Board of Directors in its sole discretion. Notwithstanding the foregoing sentence, the Corporation shall not be required to indemnify a person in connection with a Proceeding initiated by such person if the Proceeding was not authorized in advance by the Board of Directors.

5. Advancement of Expenses of Employees and Agents. The Corporation may pay the expenses (including attorneys' fees) incurred by an employee or agent in defending any Proceeding in advance of its final disposition on such terms and conditions as may be determined by the Board of Directors.

6. Non-Exclusivity of Rights. The rights conferred on any person by this Article Tenth shall not be exclusive of any other rights which such person may have or hereafter acquire under any statute, provision of this Amended and Restated Certificate of Incorporation, the Bylaws of the Corporation, or any agreement, or pursuant to any vote of stockholders or disinterested directors or otherwise.

7. Other Indemnification. The Corporation's obligation, if any, to indemnify any person who was or is serving at its request as a director, officer or employee of another Corporation, partnership, limited liability company, joint venture, trust, organization or other enterprise shall be reduced by any amount such person may collect as indemnification from such other Corporation, partnership, limited liability company, joint venture, trust, organization or other enterprise.

8. Insurance. The Board of Directors may, to the full extent permitted by applicable law as it presently exists, or may hereafter be amended from time to time, authorize an appropriate officer or officers to purchase and maintain at the Corporation's expense insurance: (a) to indemnify the Corporation for any obligation which it incurs as a result of the indemnification of directors, officers and employees under the provisions of this Article Tenth; and (b) to indemnify or insure directors, officers and employees against liability in instances in which they may not otherwise be indemnified by the Corporation under the provisions of this Article Tenth.

9. Amendment or Repeal. Any repeal or modification of the foregoing provisions of this Article Tenth shall not adversely affect any right or protection hereunder of any person in respect of any act or omission occurring prior to the time of such repeal or modification. The rights provided hereunder shall inure to the benefit of any Indemnified Person and such person's heirs, executors and administrators.

ELEVENTH: The Corporation renounces, to the fullest extent permitted by law, any interest or expectancy of the Corporation in, or in being offered an opportunity to participate in, any Excluded Opportunity. An "***Excluded Opportunity***" is any matter, transaction or interest that is presented to, or acquired, created or developed by, or which otherwise comes into the possession of (i) any director of the Corporation who is not an employee of the Corporation or any of its subsidiaries, or (ii) any holder of Series AA Preferred Stock or any partner, member, director, stockholder, employee, affiliate or agent of any such holder, other than someone who is an employee of the Corporation or any of its subsidiaries (collectively, the persons referred to in clauses (i) and (ii) are "***Covered Persons***"), unless such matter, transaction or interest is presented to, or acquired, created or developed by, or otherwise comes into the possession of, a Covered Person expressly and solely in such Covered Person's capacity as a director of the Corporation. Any repeal or modification of this Article Eleventh will only be prospective and will not affect the rights

under this Article Eleventh in effect at the time of the occurrence of any actions or omissions to act giving rise to liability. Notwithstanding anything to the contrary contained elsewhere in this Amended and Restated Certificate of Incorporation, the affirmative vote of the Requisite Holders will be required to amend or repeal, or to adopt any provisions inconsistent with this Article Eleventh.

TWELFTH: Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery in the State of Delaware shall be the sole and exclusive forum for any stockholder (including a beneficial owner) to bring (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of fiduciary duty owed by any director, officer or other employee of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim against the Corporation, its directors, officers or employees arising pursuant to any provision of the Delaware General Corporation Law or the Corporation's certificate of incorporation or bylaws or (iv) any action asserting a claim against the Corporation, its directors, officers or employees governed by the internal affairs doctrine, except for, as to each of (i) through (iv) above, any claim as to which the Court of Chancery determines that there is an indispensable party not subject to the jurisdiction of the Court of Chancery (and the indispensable party does not consent to the personal jurisdiction of the Court of Chancery within 10 days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery, or for which the Court of Chancery does not have subject matter jurisdiction. If any provision or provisions of this Article Twelfth shall be held to be invalid, illegal or unenforceable as applied to any person or entity or circumstance for any reason whatsoever, then, to the fullest extent permitted by law, the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Article Twelfth (including, without limitation, each portion of any sentence of this Article Twelfth containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) and the application of such provision to other persons or entities and circumstances shall not in any way be affected or impaired thereby.

* * *

3. That the foregoing amendment and restatement was approved by the holders of the requisite number of shares of this corporation in accordance with Section 228 of the General Corporation Law.

4. That this Certificate of Incorporation, which restates and integrates and further amends the provisions of this Corporation's Certificate of Incorporation, has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law.

[**Remainder of Page Intentionally Left Blank**]

This Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of the Corporation on January 10, 2020.

By: /s/ John Celebi
John Celebi, Chief Executive Officer

Signature Page to Amended and Restated Certificate of Incorporation of Sensei Biotherapeutics,

Exhibit 3.2

BY-LAWS

Of

PPI HOLDINGS, INC.

A Delaware Corporation

Effective
December 20, 2017

BY-LAWS

OF

PPI HOLDINGS, INC.

PREAMBLE

These By-Laws are subject to and governed by the General Corporation Law of the State of Delaware (the "GCL") and the certificate of incorporation of PPI Holdings, Inc., a Delaware corporation (the "Corporation") then in effect (the "Certificate"). In the event of a direct conflict between the provisions of these By-Laws and the mandatory provisions of the GCL or the provisions of the Certificate, such provisions of the GCL or the Certificate, as the case may be, will be controlling.

I
OFFICES

The registered office of the Corporation shall be in the City of Dover, County of Kent, State of Delaware, and the name and address of its registered agent is c/o Incorporating Services, Ltd., 3500 South DuPont Highway. The Corporation may also have offices at such other places both within and without the State of Delaware as the business of the Corporation may require.

II
STOCKHOLDERS

Section 2.1 Time and Place of Meetings and Annual Meetings. All meetings of the stockholders for the election of directors or for any other purpose shall be held at such time and place, within or without the State of Delaware, as shall be designated by the Board of Directors. In the absence of any such designation by the Board of Directors, each such meeting shall be held at the principal office of the Corporation. An annual meeting of stockholders shall be held for the purpose of electing directors and transacting such other business as may properly be brought before the meeting. The date of the annual meeting shall be determined by the Board of Directors.

Section 2.2 Time and Place of Special Meetings. Unless otherwise prescribed by law or by the Certificate, Special Meetings of Stockholders, for any purpose or purposes, may be called by the President or upon the request in writing of stockholders holding fifty percent (50%) of the Capital Stock of the Corporation of all classes and series issued and outstanding and entitled to vote generally in the election of directors pursuant to the Certificate or any applicable Certificate of Designations. Such request shall state the purpose of the proposed meeting.

All Special Meetings of the Stockholders shall be held at such place, within or without the State of Delaware, as shall be designated by the Board of Directors. In the absence of any such designation by the Board of Directors, each such meeting shall be held at the principal office of the Corporation.

Section 2.3 Notice of Meetings. Written notice of each meeting of the stockholders stating the place, date and time of the meeting shall be given not less than ten (10) nor more than sixty (60) days before the date of the meeting, to each stockholder entitled to vote at such meeting. The notice of any special meeting of stockholders shall state the purpose or purposes for which the meeting is called.

Section 2.4 Quorum. The holders of a majority of the Capital Stock of the corporation of all series and classes issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business, except as otherwise provided by law. If a quorum is not present or represented, the holders of the stock present in person or represented by proxy at the meeting and entitled to vote thereat shall have power, by the affirmative vote of the holders of a majority of such stock, to adjourn the meeting to another time and/or place, without notice other than announcement at the meeting, until a quorum shall be presented or represented. At such adjourned meeting, at which a quorum shall be present or represented, any business may be transacted which might have been transacted at the original meeting. If the adjournment is for more than thirty days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

Section 2.5 Voting. Unless otherwise required by law, the Certificate, these By-Laws, or any applicable Certificate of Designations, any question brought before any meeting of stockholders shall be decided by a majority of votes cast by holders of the stock represented and entitled to vote thereon, with each such holder having the number of votes per share and voting as a member of such classes of stockholders at may be provided in the Certificate or any applicable Certificate of Designations, unless the question is one upon which, by express provision of law or of the Certificate or any applicable Certificate of Designations, a different vote is required, in which case such express provision shall govern and control the decision of such question. Such votes may be cast in person or by proxy but no proxy shall be voted on or after one year from its date, unless such proxy provides for a longer period. The Board of Directors, in its discretion, or the officer of the Corporation presiding at a meeting of stockholders, in his discretion, may require that any votes cast at such meeting shall be case by written ballot.

Section 2.6 Informal Action By Stockholders. Any action required to be taken at a meeting of the stockholders, or any other action which may be taken at a meeting of the stockholders, may be taken without a meeting if a consent in writing, setting forth the action so taken, shall be signed by stockholders having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all members having a right to vote thereon were present and voted. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing.

Section 2.7 List of Stockholders Entitled to Vote. The officer of the Corporation who has charge of the stock ledger of the Corporation shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the

examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten (10) days prior to the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder of the Corporation who is present.

Section 2.8 Stock Ledger. The stock ledger of the Corporation shall be the only evidence as to who are the stockholders entitled to examine the stock ledger, the list required by Section 2.7 of this Article II or the books of the Corporation, or to vote in person or by proxy at any meeting of stockholders.

III
DIRECTORS

Section 3.1 General Powers. The business and affairs of the Corporation shall be managed and controlled by or under the direction of a Board of Directors, which may exercise all such powers of the Corporation and do all such lawful acts and things as are not by law or by the Certificate or by these By-Laws directed or required to be exercised or done by the stockholders.

Section 3.2 Number and Election of Directors. The Board of Directors shall consist of no less than one (1), but no more than seven (7) members. Except as provided in Section 3.3 of this Article and subject to any Certificate of Designations filed with respect to the Corporation, directors shall be elected by a majority of the votes cast at Annual Meetings of Stockholders, and each director so elected shall hold office until the next Annual Meeting and until his successor is duly elected and qualified, or until his earlier resignation or removal. Any director may resign at any time upon notice to the Corporation. Directors need not be stockholders.

Section 3.3 Vacancies. Except as provided in the Certificate or any applicable Certificate of Designations, vacancies and newly created directorships resulting from any increase in the number of directors may be filled by a majority of the Directors then in office though less than a quorum may be otherwise present, and each Director so chosen shall hold office until his successor is elected and qualified or until his earlier resignation or removal. If there are no Directors in office, then an election of Directors may be held in the manner provided by law. Notwithstanding the foregoing, so long as there is one (1) duly elected and qualified member of the Board of Directors, any remaining available positions on the Board of Directors need not be filled.

Section 3.4 Place of Meetings. The Board of Directors may hold meetings, both regular and special, either within or without the State of Delaware.

Section 3.5 Regular Meetings. The Board of Directors shall hold a regular meeting, to be known as the annual meeting, immediately following each annual meeting of the stockholders. Other regular meetings of the Board of Directors shall be held at such time and at such place as shall from time to time be determined by the Board.

Section 3.6 Notice of Meetings. Notice of any regular or special meeting of directors shall be given to each director by the Secretary or by the directors calling the meeting. The notices of all meetings shall state the place, date, hour and purpose(s) of the meeting. Notice shall be duly given to each director (i) by giving notice to such director in person or by telephone or (ii) by sending a telegram or telex, or delivering written notice by hand, to his last known business or home address in each case at least two days in advance of a regular meeting and 72 hours in advance of a special meeting.

Section 3.7 Special Meetings. Special meetings of the Board of Directors may be called by the any director or the President. Two days written or telephonic notice of special meetings need be given.

Section 3.8 Quorum. Except as may be otherwise specifically provided by law, the Certificate, these By-Laws, or any applicable Certificate of Designations, at all meetings of the Board of Directors, a majority of the entire Board of Directors shall constitute a quorum for the transaction of business and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the Board of Directors. If a quorum shall not be present at any meeting of the Board of Directors, the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 3.9 Organization. The Chairman of the Board, if elected, shall act as chairman at all meetings of the Board of Directors. If a Chairman of the Board is not elected or, if elected, is not present, the President, or if the President is not present, a Director chosen by a majority of the Directors present, shall act as chairman at meetings of the Board of Directors.

Section 3.10 Action without Meeting. Unless otherwise restricted by the Certificate, these By-Laws, or any applicable Certificate of Designations, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the Board or committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board or committee.

Section 3.11 Attendance by Telephone. Unless otherwise restricted by the Certificate, these By-Laws, or any applicable Certificate of Designations, members of the Board of Directors, or of any committee designated by the Board of Directors, may participate in a meeting of the Board of Directors, or any committee, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

Section 3.12 Removal. Except as otherwise provided in the Certificate or any applicable Certificate of Designations, any one or more or all of the directors may be removed, with or without cause, by the holders of a majority of the shares then entitled to vote at an election of directors.

Section 3.13 Compensation of Directors. Directors may be paid such compensation for their services and such reimbursements for expenses of attendance at meetings as the Board of Directors may from time to time determine. No such payment shall preclude any director from serving the Corporation or any of its parent or subsidiary corporations or any of its stockholders in any other capacity and receiving compensation for such service.

IV
OFFICERS

Section 4.1 Enumerations. The officers of the Corporation shall be appointed by the Board of Directors and may include a Chairman of the Board, President, a Secretary and a Treasurer. The Board of Directors may also elect one or more Vice Chairmen, one or more Senior or other Vice Presidents, one or more Assistant Secretaries and Assistant Treasurers and such other officers and agents as it shall deem appropriate. Any number of offices may be held by the same person. The officers of the Corporation need not be stockholders of the Corporation nor, except in the case of the Chairman of the Board of Directors, need such officers be directors of the Corporation.

Section 4.2 Term of Office. The officers of the Corporation shall be appointed at the annual meeting of the Board of Directors and shall hold office until their successors are elected and qualified. Any officer elected or appointed by the Board of Directors may be removed at any time by the Board of Directors. Any vacancy occurring in any office of the Corporation required by this Article shall be filled by the Board of Directors, and any vacancy in any other office may be filled by the Board of Directors. Each successor shall hold office for the unexpired term of his predecessor and until his successor is elected and qualified, or until his earlier death, resignation or removal.

Section 4.3 Chairman of the Board. The Chairman of the Board if any, when appointed, shall have general supervision, direction and control of the business and affairs of the Corporation, subject to the control of the Board of Directors, shall preside at meetings of stockholders and shall have such other functions, authority and duties as customarily appertain to the Chairman of the Board of a business corporation or as may be prescribed by the Board of Directors. During the absence or disability of the President, the Chairman of the Board of Directors shall exercise all the powers and discharge all the duties of the President. The Chairman of the Board of Directors shall also perform such other duties and may exercise such other powers as from time to time may be assigned to him by these By-Laws.

Section 4.4 President. The President shall, subject to the control of the Board of Directors, have general supervision of the business of the Corporation and shall see that all orders and resolutions of the Board of Directors are carried into effect. He shall execute all bonds, mortgages, contracts and other instruments of the Corporation requiring a seal, under the seal of the Corporation, except where required or permitted by law to be otherwise signed and executed and except that the other officers of the Corporation may sign and execute documents when so authorized by these By-Laws, the Board of Directors or the President. In the absence or disability of the Chairman of the Board of Directors, or if there be none, the President shall preside at all meetings of the stockholders and the Board of Directors. The President shall also perform such other duties and may exercise such other powers as from time to time may be assigned to him by these By-Laws or by the Board of Directors.

Section 4.5 Vice President. At the request of the President or in his absence or in the event of his inability or refusal to act (and if there be no Chairman of the board of Directors), the Vice President or the Vice Presidents if there is more than one (in the order designated by the Board of Directors) shall perform the duties of the president, and when so acting, shall have all the powers of and be subject to all the restrictions upon the President. Each Vice President shall perform such other duties and have such other powers as the Board of Directors from time to time may prescribe. If there be no Chairman of the Board of Directors and no Vice President, the Board of Directors shall designate the officer of the Corporation who, in the absence of the President or in the event of the inability or refusal of the President to act, shall perform the duties of the President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the President.

Section 4.6 Secretary. The Secretary shall keep a record of all proceedings of the stockholders of the Corporation and of the Board of Directors, and shall perform like duties for the standing committees when required. The Secretary shall give, or cause to be given, notice, if any, of all meetings of the stockholders and shall perform such other duties as may be prescribed by the Board of Directors, the Chairman of the Board or the President. The Secretary shall have custody of the corporate seal of the Corporation and the Secretary, or in the absence of the Secretary any Assistant Secretary, shall have authority to affix the same to any instrument requiring it, and when so affixed it may be attested by the signature of the Secretary or an Assistant Secretary. The Board of Directors may give general authority to any other officer to affix the seal of the Corporation and to attest such affixing of the seal. The Secretary shall also keep a register of the post office address of each stockholder which shall be furnished to the Secretary by such stockholder, sign with the President or Vice President, certificates for shares of the Corporation, the issuance of which shall be authorized by resolution of the Board of Directors, and have general charge of the stock transfer books of the Corporation.

Section 4.7 Assistant Secretary. The Assistant Secretary, or if there be more than one, the Assistant Secretaries in the order determined by the Board of Directors (or if there be no such determination, then in the order of their election), shall, in the absence of the Secretary or in the event of the Secretary's inability or refusal to act, perform the duties and exercise the powers of the Secretary and shall perform such other duties as may from time to time be prescribed by the Board of directors, the Chairman of the Board, the President or the Secretary.

Section 4.8 Treasurer. The Treasurer shall have the custody of the corporate funds and securities and shall keep full and accurate accounts of receipts and disbursements in books belonging to the Corporation and shall deposit all moneys and other valuable effects in the name and to the credit of the Corporation in such depositories as may be designated by the Board of Directors. The Treasurer shall disburse the funds of the Corporation as may be ordered by the Board of Directors, taking proper vouchers for such disbursements, and shall render to the Chairman of the Board, the President and the Board of Directors, at its regular meetings or when the Board of Directors so requires, an account of all transactions as treasurer and of the financial condition of the Corporation. The Treasurer shall perform such other duties as may from time to time be prescribed by the Board of Directors, the Chairman of the Board or the President.

Section 4.9 Assistant Treasurer. The Assistant Treasurer, or if there shall be more than one, the Assistant Treasurers in the order determined by the Board of Directors (or if there be no such determination, then in the order of their election), shall, in the absence of the Treasurer or in the event of the Treasurer's inability or refusal to act, perform the duties and exercise the powers of the Treasurer and shall perform such other duties and have such other powers as may from time to time be prescribed by the Board of Directors, the Chairman of the Board, the President or the Treasurer.

Section 4.10 Other Officers. The President or Board of Directors may appoint other officers and agents for any Group, Division or Department into which this Corporation may be divided by the Board of Directors, with titles as the President or Board of Directors may from time to time deem appropriate. All such officers and agents shall receive such compensation, have such tenure and exercise such authority as the President or Board of Directors may specify. All appointments made by the President hereunder and all the terms and conditions thereof must be reported to the Board of Directors.

In no case shall an officer or agent of any one Group, Division or Department have authority to bind another Group, Division or Department of the Company or to bind the Corporation except as to the business and affairs of the Group, Division or Department of which he or she is an officer or agent.

Section 4.11 Salaries. The salaries of the appointed officers shall be fixed from time to time by the Board of Directors and no officer shall be prevented from receiving such salary by reason of the fact that he is also a director of the Corporation.

Section 4.12 Voting Securities Held by the Corporation. Unless otherwise provided by the Board of Directors, powers of attorney, proxies, waivers of notice of meeting, consents and other instruments relating to securities owned by the Corporation may only be executed in the name of and on behalf of the Corporation by the President in the name of and on behalf of the Corporation, take all such action as any such officer may deem advisable to vote in person or by proxy as any meeting of security holders of any corporation in which the Corporation may own securities and at any such meeting shall possess and may exercise any and all rights and powers incidental to the ownership of such securities and which, as the owner thereof, the Corporation might have exercised and possessed if present. The Board of Directors, may, by resolution, from time to time confer like powers upon any other person or persons.

V
CERTIFICATES OF STOCK

Section 5.1 Form. The shares of the Corporation shall be represented by certificates. Certificates of stock in the Corporation, if any, shall be signed by or in the name of the Corporation by the Chairman of the Board or the President and by the Treasurer or an Assistant Treasurer or the Secretary or an Assistant Secretary of the Corporation. Where a certificate is countersigned by a transfer agent, other than the Corporation or an employee of the Corporation, or by a registrar, the signatures of the Chairman of the Board, the President or a Vice President and the Treasurer or the Secretary or an Assistant Secretary may be facsimiles. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, the certificate may be issued by the Corporation with the same effect as if such officer, transfer agent or registrar were such officer, transfer agent or registrar at the date of its issue.

Section 5.2 Transfer. Except as otherwise established by rules or regulations adopted by the Board of Directors, upon surrender to the Corporation or the transfer agent of the Corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignment or authority to transfer, it shall be the duty of the Corporation to issue a new certificate of stock or uncertificated shares in place of any certificate therefor issued by the Corporation to the person entitled thereto, cancel the old certificate and record the transaction on its books.

Section 5.3 Replacement. In case of the loss, destruction or theft of a certificate for any stock of the Corporation, a new certificate of stock or uncertificated shares in place of any certificate therefor issued by the Corporation may be issued upon satisfactory proof of such loss, destruction or theft and upon such terms as the Board of Directors may prescribe. The Board of Directors may in its discretion require the owner of the lost, destroyed or stolen certificate, or his legal representative, to give the Corporation a bond, in such sum and in such form and with such surety or sureties as it may direct, to indemnify the Corporation against any claim that may be made against it with respect to a certificate alleged to have been lost, destroyed or stolen.

Section 5.4 Record Date. In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or entitled to express consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversation or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which shall not be more than sixty days nor less than ten (10) days before the date of such meeting, nor more than sixty (60) days prior to any other action. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

If no record date is fixed, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day before the day on which notice is given, or, if notice is waived, at the close of business on the day before the day on which the meeting is held. The record date for determining stockholders entitled to express consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is necessary, shall be the day on which the first written consent is expressed. The record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating to such purpose.

Section 5.5 Beneficial Owners. The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and to hold liable for calls and assessments a person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise provided by law. The Corporation shall not be required to register any transfer of shares made in violation of any agreement among a stockholder or investor in the Corporation and the Corporation, or recognize as a holder of any such shares any transferee in such a violative transaction.

VI
INDEMNIFICATION OF DIRECTORS AND OFFICERS

Section 6.1 Power to Indemnify in Actions, Suits or Proceedings other Than Those by or in the Right of the Corporation. Subject to Section 6.3 of this Article VI, the Corporation shall indemnify, to the fullest extent permitted by applicable law, now or hereafter in effect, any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Corporation) by reason of the fact that he is or was a director or executive officer of the Corporation, or is or was a director or executive officer of the Corporation serving at the request of the Corporation as a director or executive officer of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him in connection with such action, suit or proceeding if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful; provided, however, the Corporation shall be required to indemnify an officer or director in connection with an actions, suit or proceeding initiated by such person only if (i) such action, suit or proceeding was authorized by the Board or (ii) the indemnification does not relate to any liability arising under Section 16 (b) of the Securities Exchange Act of 1934, as amended or any of the rules or regulations promulgated thereunder. The termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea or nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that his conduct was unlawful.

Section 6.2 Power to Indemnify in Actions, Suits or Proceedings by or in the Right of the Corporation. Subject to Section 6.3 of this Article VI, the Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the Corporation to procure a judgment in its favor by reason of the fact that he is or was a director or executive officer of the Corporation, or is or was a director or executive officer of the Corporation serving at the request of the Corporation as a director or executive officer of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise against expenses (including attorneys' fees) actually reasonably incurred by him in connection with the defense or settlement or such action or suit if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the Corporation; except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the Corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Section 6.3 Authorization of Indemnification. Any indemnification under this Article VI (unless ordered by a court) shall be made by the Corporation only as authorized in the specific case upon a determination that indemnification of the director or executive officer is proper in the circumstances because he has met the applicable standard of conduct set forth in Section 6.1 or Section 6.2 of this Article VI, as the case may be. Such determination shall be made (i) by the Board of Directors by a majority vote of directors who were not parties to such action, suit or proceeding (even if such majority vote constitutes less than a quorum), or (ii) if the majority vote of disinterested directors so directs (even if such majority vote constitutes less than a quorum), by independent legal counsel in a written opinion, or (iii) by the stockholders. To the extent however, that a director or executive officer of the Corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding described above, or in defense of any claim, issue or matter therein, he shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by him in connection therewith, without the necessity of authorization in the specific case.

Section 6.4 Good Faith Defined. For purpose of any determination under Section 6.3 of this Article VI, a person shall be deemed to have acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the Corporation, or, with respect to any criminal action or proceeding, to have had no reasonable cause to believe his conduct was unlawful, if his action is based on the records or books of account of the Corporation or another enterprise, or on information supplied to him by the officers of the Corporation or another enterprise in the course of their duties, or on the advice of legal counsel for the Corporation or another enterprise or on information or records given or reports made to the Corporation or another enterprise by an independent certified public accountant or by an appraiser or other expert selected with reasonable care by the Corporation or another enterprise. The term "another enterprise" as used in this Section 6.4 shall mean any other corporation or any partnership, joint venture, trust, employee benefit plan or other enterprise of which such person is or was serving at the request of the corporation as a director or executive officer. The provisions of this Section 6.4 shall not be deemed to be exclusive or to limit in any way the circumstances in which a person may be deemed to have met the applicable standard of conduct set forth in Sections 6.1 or 6.2 of this Article VI, as the case may be.

Section 6.5 Indemnification by a Court. Notwithstanding any contrary determination in the specific case under Section 6.3 of this Article VI, and notwithstanding the absence of any determination thereunder, any director or executive officer may apply to any court of competent jurisdiction in the State of Delaware for indemnification to the extent otherwise permissible under Sections 6.1 and 6.2 of this Article VI. The basis of such indemnification by a court shall be a determination by such court that indemnification of the director or executive officer is proper in the circumstances because he has met the applicable standards of conduct set forth in Section 6.1 or 6.2 of this Article VI, as the case may be. Neither a contrary determination in the specific case under Section 6.3 of this Article VI nor the absence of any determination thereunder shall be a defense to such application to create a presumption that the director or executive officer seeking indemnification has not met any applicable standard of conduct. Notice of any application for indemnification pursuant to this Section 6.5 shall be given to the Corporation promptly upon the filing of such application. If successful, in whole or in part, the director or executive officer seeking indemnification shall also be entitled to be paid the expense of prosecuting such application.

Section 6.6 Expenses Payable in Advance. Expenses (including attorneys' fees) incurred by the director or executive officer in defending any civil, criminal, administrative or investigative action, suit or proceeding shall be paid by the Corporation in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such director or executive officer to repay such amount if it shall ultimately be determined that he is not entitled to be indemnified by the Corporation as authorized in this Article VI.

Section 6.7 Nonexclusivity of Indemnification and Advancement of Expenses. The indemnification and advancement of expenses provided by or granted pursuant to this Article VI shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under By-Law, agreement, contract, vote of stockholders or disinterested directors or pursuant to the direction (howsoever embodied) of any court of competent jurisdiction or otherwise, both as to action in his official capacity and as to action in another capacity while holding such office, it being the policy of the Corporation that indemnification of the persons specified in Sections 6.1 and 6.2 of this Article VI shall be made to the fullest extent permitted by law. The provisions of this Article VI shall not be deemed to preclude the indemnification of any person who is not specified in Sections 6.1 or 6.2 of this Article VI but whom the Corporation has the power or obligation to indemnify under the provisions of the GCL, or otherwise.

Section 6.8 Insurance. The Corporation may purchase and maintain insurance on behalf of any person who is or was a director or executive officer of the Corporation, or is or was a director or executive officer of the Corporation, or is or was a director or executive officer of the Corporation serving at the request of the Corporation as a director or executive officer of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise against any liability asserted against him incurred by him in any such capacity, or arising out of his status as such, whether or not the Corporation would have the power or the obligation to indemnify him against such liability under the provisions of this Article VI.

Section 6.9 Certain Definitions. For purposes of this Article VI, references to "the Corporation" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors or executive officers, so that any person who is or was a director or executive officer of such constituent corporation, or is or was a director or executive officer of such constituent corporation serving at the request of such constituent corporation serving at the request of such constituent corporation as a director or executive officer of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise, shall stand in the same position under the provisions of this Article VI with respect to the resulting or surviving corporation as he would have with respect to such constituent corporation if its separate existence had continued. For purposes of this Article VI, references to "fines" shall include any excise taxes assessed on a person

with respect to an employee benefit plan; and references to "serving at the request of the Corporation" shall include any service as a director or executive officer of the Corporation which imposes duties on, or involves services by, such director or executive officer with respect to an employee benefit plan, its participants or beneficiaries; and a person who acted in good faith and in a manner he reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the Corporation" as referred to in this Article VI.

Section 6.10 Survival of Indemnification and Advancement of Expenses. The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VI shall, unless otherwise provided when authorized or ratified, continue as to a person who has ceased to be a director or executive officer and shall inure to the benefit of the heirs, executors and administrators of such a person.

Section 6.11 Limitation on Indemnification. Notwithstanding anything contained in this Article VI to the contrary, except for proceedings to enforce rights to indemnification (which shall be governed by Section 6.5 hereof), the Corporation shall not be obligated to indemnify any director or executive officer in connection with a proceeding (or part thereof) initiated by such person unless such proceeding (or part thereof) was authorized or consented to by the Board of Directors of the Corporation.

VII
GENERAL PROVISIONS

Section 7.1 Fiscal Year. The fiscal year of the Corporation shall be fixed by resolution of the Board of Directors.

Section 7.2 Corporate Seal. The corporate seal shall be in such form as may be approved from time to time by the Board of Directors. The seal may be used by causing it or a facsimile thereof to be impressed or affixed or in any other manner reproduced.

Section 7.3 Notices. Whenever written notice is required by law, the Certificate of Incorporation or these By-Laws, to be given to any director, member of a committee or stockholder, such notice may be given by mail, addressed to such director, member of a committee or stockholder, at his address as it appears on the records of the Corporation, with postage thereon prepaid, and such notice shall be deemed to be given at the time when the same shall be deposited in the United States mail. Written notice may also be given personally or by telegram, telex or cable.

Section 7.4 Waiver of Notice. Whenever any notice is required to be given under law or the provisions of the Certificate of Incorporation or these By-Laws, a waiver thereof in writing, signed by the person or persons entitled to said notice, whether before or after the time stated therein, shall be deemed equivalent to notice.

Section 7.5 Resignations and Removals. Any director or any officer, whenever elected or appointed, may resign at any time by serving written notice of such resignation on the President or the Secretary, and such resignation shall be deemed to be effective as of the close of business on the date said notice is received by the President or Secretary. No formal action shall be required of the Board of Directors or the stockholders to make any such resignation effective. Except as the Board of Directors may otherwise determine, no officer who resigns or is removed shall have any right to any compensation as an officer for any period following his resignation or removal, or any right to damages on account of such removal, whether his compensation be by the month or by the year or otherwise, unless such compensation is expressly provided in a duly authorized written agreement with the Corporation.

Section 7.6 Disbursements. All checks or demands for money and notes of the Corporation shall be signed by such officer or officers or such other person or persons as the Board of Directors may from time to time designate.

Section 7.7 Transactions with Interested Parties. No contract or transaction between the Corporation and one or more of the directors or officers, or between the Corporation and any other corporation, partnership, association, or other organization in which one or more or the directors or officers are directors, officers or employees, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board of Directors or a committee of the Board of Directors which authorizes the contract or transaction or solely because his or their votes are counted for such purpose, if:

(a) The material facts as to his relationship or interest and as to the contract or transaction are disclosed or are known to the Board of Directors or the committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum;

(b) The material facts as to his relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or

(c) The contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified, by the Board of Directors, a committee of the Board of Directors, or the Stockholders.

Common or interested directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee which authorizes the contract or transaction.

VIII
AMENDMENTS

These By-Laws may be altered, amended or repealed or new By-Laws may be adopted by the Board of Directors. The fact that the power to amend, alter, repeal or adopt the By-Laws has been conferred upon the Board of Directors shall not divest the stockholders of the same powers.

IX
SUBJECT TO CERTIFICATE OF INCORPORATION

These By-Laws and the provisions hereof are subject to the terms and conditions of the Certificate of the Corporation (including any certificates of designations filed thereunder), and in the event of any conflict between the Certificate, these By-Laws, and any applicable Certificate of Designations, the Certificate or any applicable Certificate of Designations, as appropriate, shall control.

Exhibit 4.2

INVESTORS' RIGHTS AGREEMENT

THIS INVESTORS' RIGHTS AGREEMENT (this "***Agreement***"), is made as of January 10, 2020, by and among Sensei Biotherapeutics, Inc., a Delaware corporation (the "***Company***"), each of the investors listed on **Schedule A** hereto, each of which is referred to in this Agreement as an "***Investor***" and any Additional Purchaser (as defined in the Purchase Agreement) that becomes a party to this Agreement in accordance with Section 6.9 hereof.

RECITALS:

A. The Company and the Investors are parties to that certain Series AA Preferred Stock Purchase and Exchange Agreement of even date herewith (the "***Purchase Agreement***").

B. In order to induce the Company to enter into the Purchase Agreement and to induce the Investors to invest funds in the Company pursuant to the Purchase Agreement, the Investors and the Company hereby agree that this Agreement shall govern the rights of the Investors to cause the Company to register shares of Common Stock issuable to the Investors, to receive certain information from the Company, and to participate in future equity offerings by the Company, and shall govern certain other matters as set forth in this Agreement.

C. The Company and the Investors agree that any prior agreement with respect to the voting of the Company's capital stock, the subject matter hereof or any similar stockholder agreement shall be superseded and replaced in its entirety by this Agreement, including without limitation those agreements referenced in Section 6.11 of this Agreement.

The parties agree as follows:

1. Definitions. For purposes of this Agreement:

1.1 "***Affiliate***" means, with respect to any specified Person, any other Person who, directly or indirectly, controls, is controlled by, or is under common control with such Person, including without limitation any general partner, managing member, officer, director or trustee of such Person, or any venture capital fund or registered investment company now or hereafter existing that is controlled by one or more general partners, managing members or investment advisers of, or shares the same management company or investment adviser with, such Person.

1.2 "***Board of Directors***" means the board of directors of the Company.

1.3 "***Certificate of Incorporation***" means the Company's Amended and Restated Certificate of Incorporation, as amended and/or restated from time to time.

1.4 "***Common Stock***" means shares of the Company's common stock, par value $0.0001 per share.

1.5 "***Competitor***" means a Person engaged, directly or indirectly (including through any partnership, limited liability company, corporation, joint venture or similar arrangement (whether now existing or formed hereafter)), in the business of the Company, but shall not include any financial investment firm or collective investment vehicle that, together with its Affiliates, holds less than 20% of the outstanding equity of any Competitor and does not, nor do any of its Affiliates, have a right to designate any members of the board of directors of any Competitor. For the avoidance of doubt, neither Cambrian nor H&S, nor its respective Affiliates, shall be considered a Competitor for purposes of this Agreement.

1.6 "***Damages***" means any loss, damage, claim or liability (joint or several) to which a party hereto may become subject under the Securities Act, the Exchange Act, or other federal or state law, insofar as such loss, damage, claim or liability (or any action in respect thereof) arises out of or is based upon: (i) any untrue statement or alleged untrue statement of a material fact contained in any registration statement of the Company, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto; (ii) an omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading; or (iii) any violation or alleged violation by the indemnifying party (or any of its agents or Affiliates) of the Securities Act, the Exchange Act, any state securities law, or any rule or regulation promulgated under the Securities Act, the Exchange Act, or any state securities law.

1.7 "***Derivative Securities***" means any securities or rights convertible into, or exercisable or exchangeable for (in each case, directly or indirectly), Common Stock, including options and warrants.

1.8 "***Exchange Act***" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

1.9 "***Excluded Registration***" means (i) a registration relating to the sale or grant of securities to employees of the Company or a subsidiary pursuant to a stock option, stock purchase, equity incentive or similar plan; (ii) a registration relating to an SEC Rule 145 transaction; (iii) a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities; or (iv) a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities that are also being registered.

1.10 "***FOIA Party***" means a Person that, in the reasonable determination of the Board of Directors, may be subject to, and thereby required to disclose non-public information furnished by or relating to the Company under, the Freedom of Information Act, 5 U.S.C. 552 ("***FOIA***"), any state public records access law, any state or other jurisdiction's laws similar in intent or effect to FOIA, or any other similar statutory or regulatory requirement.

1.11 "***Form S-1***" means such form under the Securities Act as in effect on the date hereof or any successor registration form under the Securities Act subsequently adopted by the SEC.

1.12 "***Form S-3***" means such form under the Securities Act as in effect on the date hereof or any registration form under the Securities Act subsequently adopted by the SEC that permits forward incorporation of substantial information by reference to other documents filed by the Company with the SEC.

1.13 "***GAAP***" means generally accepted accounting principles in the United States as in effect from time to time.

1.14 "***Holder***" means any holder of Registrable Securities who is a party to this Agreement.

1.15 "***Immediate Family Member***" means a child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, including, adoptive relationships, of a natural person referred to herein.

1.16 "***Initiating Holders***" means, collectively, Holders who properly initiate a registration request under this Agreement.

1.17 "***IPO***" means the Company's first underwritten public offering of its Common Stock under the Securities Act.

1.18 "***Key Employee***" means any c- and executive vice president-level executive officers.

1.19 "***Major Investor***" means any Investor that, individually or together with such Investor's Affiliates, holds at least 10,000,000 shares of Registrable Securities (as adjusted for any stock split, stock dividend, combination, or other recapitalization or reclassification effected after the date hereof).

1.20 "***New Securities***" means, collectively, equity securities of the Company, whether or not currently authorized, as well as rights, options, or warrants to purchase such equity securities, or securities of any type whatsoever that are, or may become, convertible or exchangeable into or exercisable for such equity securities.

1.21 "***Person***" means any individual, corporation, partnership, trust, limited liability company, association or other entity.

1.22 "***Preferred Stock***" means, collectively, shares of Series AA Preferred Stock.

1.23 "***Registrable Securities***" means (i) the Common Stock issuable or issued upon conversion of the Preferred Stock; and (ii) any Common Stock issued as (or issuable upon the conversion or exercise of any warrant, right, or other security that is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of, the shares referenced in clause (i) above; excluding in all cases, however, any Registrable Securities sold by a Person in a transaction in which the applicable rights under this Agreement are not assigned pursuant to Section 6.1, and excluding for purposes of Section 2 any shares for which registration rights have terminated pursuant to Section 2.13 of this Agreement.

1.24 "***Registrable Securities then outstanding***" means the number of shares determined by adding the number of shares of outstanding Common Stock that are Registrable Securities and the number of shares of Common Stock issuable (directly or indirectly) pursuant to then exercisable and/or convertible securities that are Registrable Securities.

1.25 "***Restricted Securities***" means the securities of the Company required to be notated with the legend set forth in Section 2.12(b) hereof.

1.26 "***SEC***" means the Securities and Exchange Commission.

1.27 "***SEC Rule 144***" means Rule 144 promulgated by the SEC under the Securities Act.

1.28 "***SEC Rule 145***" means Rule 145 promulgated by the SEC under the Securities Act.

1.29 "***Securities Act***" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

1.30 "***Selling Expenses***" means all underwriting discounts, selling commissions, and stock transfer taxes applicable to the sale of Registrable Securities, and fees and disbursements of counsel for any Holder, except for the fees and disbursements of the Selling Holder Counsel borne and paid by the Company as provided in Section 2.6.

1.31 "***Series AA Director***" means any director of the Company that the holders of record of the Series AA Preferred Stock are entitled to elect, exclusively and as a separate class, pursuant to the Certificate of Incorporation.

1.32 "***Series AA Preferred Stock***" means shares of the Company's Series AA Preferred Stock, par value $0.0001 per share.

2. Registration Rights. The Company covenants and agrees as follows:

2.1 Demand Registration.

(a) Form S-1 Demand. If at any time after the earlier of (i) five (5) years after the date of this Agreement or (ii) 180 days after the effective date of the registration statement for an IPO resulting in proceeds to the Company of at least $50 million, the Company receives a request from Holders of at least two-thirds of the Registrable Securities then outstanding that the Company file a Form S-1 registration statement covering the registration of Registrable Securities, then the Company shall (x) within 10 days after the date such request is given, give notice thereof (the "***Demand Notice***") to all Holders other than the Initiating Holders; and (y) as soon as practicable, and in any event within 60 days after the date such request is given by the Initiating Holders, file a Form S-1 registration statement under the Securities Act covering all Registrable Securities that the Initiating Holders requested to be registered and any additional Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within 20 days of the date the Demand Notice is given, and in each case, subject to the limitations of Sections 2.1(c) and 2.3.

(b) Form S-3 Demand. If at any time when it is eligible to use a Form S-3 registration statement, the Company receives a request from Holders of at least 30% of the Registrable Securities then outstanding that the Company file a Form S-3 registration statement with respect to outstanding Registrable Securities of such Holders having an anticipated aggregate offering price, net of Selling Expenses, of at least $5 million, then the Company shall (i) within 10 days after the date such request is given, give a Demand Notice to all Holders other than the Initiating Holders; and (ii) as soon as practicable, and in any event within 45 days after the date such request is given by the Initiating Holders, file a Form S-3 registration statement under the Securities Act covering all Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within 20 days of the date the Demand Notice is given, and in each case, subject to the limitations of Sections 2.1(c) and 2.3.

(c) Notwithstanding the foregoing obligations, if the Company furnishes to Holders requesting a registration pursuant to this Section 2.1 a certificate signed by the Company's chief executive officer stating that in the good faith judgment of the Board of Directors it would be materially detrimental to the Company and its stockholders for such registration statement to either become effective or remain effective for as long as such registration statement otherwise would be required to remain effective, because it would be materially detrimental to the Company and its stockholders for such registration statement to be filed and it is therefore necessary to defer the filing of such registration

statement, then the Company shall have the right to defer taking action with respect to such filing, and any time periods with respect to filing or effectiveness thereof shall be tolled correspondingly, for a period of not more than 120 days after the request of the Initiating Holders is given; *provided, however*, that the Company may not invoke this right more than once in any 12 month period; and provided further that the Company shall not register any securities for its own account or that of any other stockholder during such 120 day period other than an Excluded Registration.

(d) The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Section 2.1(a) (i) during the period that is 60 days before the Company's good faith estimate of the date of filing of, and ending on a date that is 180 days after the effective date of, a Company-initiated registration, *provided* that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; (ii) after the Company has effected one registration pursuant to Section 2.1(a); or (iii) if the Initiating Holders propose to dispose of shares of Registrable Securities that may be immediately registered on Form S-3 pursuant to a request made pursuant to Section 2.1(b). The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Section 2.1(b) (i) during the period that is 30 days before the Company's good faith estimate of the date of filing of, and ending on a date that is 90 days after the effective date of, a Company-initiated registration, *provided* that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; or (ii) if the Company has effected two registrations pursuant to Section 2.1(b) within the 12 month period immediately preceding the date of such request. A registration shall not be counted as "effected" for purposes of this Section 2.1(d) until such time as the applicable registration statement has been declared effective by the SEC, unless the Initiating Holders withdraw their request for such registration, elect not to pay the registration expenses therefor, and forfeit their right to one demand registration statement pursuant to Section 2.6, in which case such withdrawn registration statement shall be counted as "effected" for purposes of this Section 2.1(d); *provided*, that if such withdrawal is during a period the Company has deferred taking action pursuant to Section 2.1(c), then the Initiating Holders may withdraw their request for registration and such registration will not be counted as "effected" for purposes of this Section 2.1(d).

2.2 Company Registration. If the Company proposes to register (including, for this purpose, a registration effected by the Company for stockholders other than the Holders) any of its securities under the Securities Act in connection with the public offering of such securities solely for cash (other than in an Excluded Registration), the Company shall, at such time, promptly give each Holder notice of such registration. Upon the request of each Holder given within 20 days after such notice is given by the Company, the Company shall, subject to the provisions of Section 2.3, cause to be registered all of the Registrable Securities that each such Holder has requested to be included in such registration. The Company shall have the right to terminate or withdraw any registration initiated by it under this Section 2.2 before the effective date of such registration, whether or not any Holder has elected to include Registrable Securities in such registration. The expenses (other than Selling Expenses) of such withdrawn registration shall be borne by the Company in accordance with Section 2.6.

2.3 Underwriting Requirements.

(a) If, pursuant to Section 2.1, the Initiating Holders intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to Section 2.1, and the Company shall include such information in the Demand Notice. The underwriter(s) will be selected by the Company and shall be reasonably acceptable to a majority in interest of the Initiating Holders. In such event, the right of any Holder to include such Holder's Registrable Securities in such registration shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting to the extent provided herein. All Holders proposing to distribute their securities through such

underwriting shall (together with the Company as provided in Section 2.4(e)) enter into an underwriting agreement in customary form with the underwriter(s) selected for such underwriting. Notwithstanding any other provision of this Section 2.3, if the managing underwriter(s) advise(s) the Initiating Holders in writing that marketing factors require a limitation on the number of shares to be underwritten, then the Initiating Holders shall so advise all Holders of Registrable Securities that otherwise would be underwritten pursuant hereto, and the number of Registrable Securities that may be included in the underwriting shall be allocated among such Holders of Registrable Securities, including the Initiating Holders, in proportion (as nearly as practicable) to the number of Registrable Securities owned by each Holder or in such other proportion as shall mutually be agreed to by all such selling Holders; *provided, however*, that the number of Registrable Securities held by the Holders to be included in such underwriting shall not be reduced unless all other securities are first entirely excluded from the underwriting. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest 100 shares.

(b) In connection with any offering involving an underwriting of shares of the Company's capital stock pursuant to Section 2.2, the Company shall not be required to include any of the Holders' Registrable Securities in such underwriting unless the Holders accept the terms of the underwriting as agreed upon between the Company and its underwriters, and then only in such quantity as the underwriters in their sole discretion determine will not jeopardize the success of the offering by the Company. If the total number of securities, including Registrable Securities, requested by stockholders to be included in such offering exceeds the number of securities to be sold (other than by the Company) that the underwriters in their reasonable discretion determine is compatible with the success of the offering, then the Company shall be required to include in the offering only that number of such securities, including Registrable Securities, which the underwriters and the Company in their sole discretion determine will not jeopardize the success of the offering. If the underwriters determine that less than all of the Registrable Securities requested to be registered can be included in such offering, then the Registrable Securities that are included in such offering shall be allocated among the selling Holders in proportion (as nearly as practicable to) the number of Registrable Securities owned by each selling Holder or in such other proportions as shall mutually be agreed to by all such selling Holders. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest 100 shares. Notwithstanding the foregoing, in no event shall (i) the number of Registrable Securities included in the offering be reduced unless all other securities (other than securities to be sold by the Company) are first entirely excluded from the offering, or (ii) the number of Registrable Securities included in the offering be reduced below 20% of the total number of securities included in such offering, unless such offering is the IPO, in which case the selling Holders may be excluded further if the underwriters make the determination described above and no other stockholder's securities are included in such offering. For purposes of the provision in this Section 2.3(b) concerning apportionment, for any selling Holder that is a partnership, limited liability company, or corporation, the partners, members, retired partners, retired members, stockholders, and Affiliates of such Holder, or the estates and Immediate Family Members of any such partners, retired partners, members, and retired members and any trusts for the benefit of any of the foregoing Persons, shall be deemed to be a single "selling Holder," and any pro rata reduction with respect to such "selling Holder" shall be based upon the aggregate number of Registrable Securities owned by all Persons included in such "selling Holder," as defined in this sentence.

(c) For purposes of Section 2.1, a registration shall not be counted as "effected" if, as a result of an exercise of the underwriter's cutback provisions in Section 2.3(a), fewer than 50% of the total number of Registrable Securities that Holders have requested to be included in such registration statement are actually included.

2.4 Obligations of the Company. Whenever required under this Section 2 to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) prepare and file with the SEC a registration statement with respect to such Registrable Securities and use its commercially reasonable efforts to cause such registration statement to become effective and, upon the request of the Holders of a majority of the Registrable Securities registered thereunder, keep such registration statement effective for a period of up to 120 days or, if earlier, until the distribution contemplated in the registration statement has been completed; *provided, however*, that (i) such 120 day period shall be extended for a period of time equal to the period the Holder refrains, at the request of an underwriter of Common Stock (or other securities) of the Company, from selling any securities included in such registration, and (ii) in the case of any registration of Registrable Securities on Form S-3 that are intended to be offered on a continuous or delayed basis, subject to compliance with applicable SEC rules, such 120 day period shall be extended for up to 180 days, if necessary, to keep the registration statement effective until all such Registrable Securities are sold;

(b) prepare and file with the SEC such amendments and supplements to such registration statement, and the prospectus used in connection with such registration statement, as may be necessary to comply with the Securities Act in order to enable the disposition of all securities covered by such registration statement;

(c) furnish to the selling Holders such numbers of copies of a prospectus, including a preliminary prospectus, as required by the Securities Act, and such other documents as the Holders may reasonably request in order to facilitate their disposition of their Registrable Securities;

(d) use its commercially reasonable efforts to register and qualify the securities covered by such registration statement under such other securities or blue-sky laws of such jurisdictions as shall be reasonably requested by the selling Holders; *provided* that the Company shall not be required to qualify to do business or to file a general consent to service of process in any such states or jurisdictions, unless the Company is already subject to service in such jurisdiction and except as may be required by the Securities Act;

(e) in the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the underwriter(s) of such offering;

(f) use its commercially reasonable efforts to cause all such Registrable Securities covered by such registration statement to be listed on a national securities exchange or trading system and each securities exchange and trading system (if any) on which similar securities issued by the Company are then listed;

(g) provide a transfer agent and registrar for all Registrable Securities registered pursuant to this Agreement and provide a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration;

(h) promptly make available for inspection by the selling Holders, any managing underwriter(s) participating in any disposition pursuant to such registration statement, and any attorney or accountant or other agent retained by any such underwriter or selected by the selling Holders, all financial and other records, pertinent corporate documents, and properties of the Company, and cause the Company's officers, directors, employees, and independent accountants to supply all information reasonably requested by any such seller, underwriter, attorney, accountant, or agent, in each case, as necessary or advisable to verify the accuracy of the information in such registration statement and to conduct appropriate due diligence in connection therewith;

(i) notify each selling Holder, promptly after the Company receives notice thereof, of the time when such registration statement has been declared effective or a supplement to any prospectus forming a part of such registration statement has been filed; and

(j) after such registration statement becomes effective, notify each selling Holder of any request by the SEC that the Company amend or supplement such registration statement or prospectus.

In addition, the Company shall ensure that, at all times after any registration statement covering a public offering of securities of the Company under the Securities Act shall have become effective, its insider trading policy shall provide that the Company's directors may implement a trading program under Rule 10b5-1 of the Exchange Act.

2.5 Furnish Information. It shall be a condition precedent to the obligations of the Company to take any action pursuant to this Section 2 with respect to the Registrable Securities of any selling Holder that such Holder shall furnish to the Company such information regarding itself, the Registrable Securities held by it, and the intended method of disposition of such securities as is reasonably required to effect the registration of such Holder's Registrable Securities.

2.6 Expenses of Registration. All expenses (other than Selling Expenses) incurred in connection with registrations, filings, or qualifications pursuant to Section 2, including all registration, filing, and qualification fees; printers' and accounting fees; fees and disbursements of counsel for the Company; and the reasonable fees and disbursements, not to exceed $50,000, of one counsel for the selling Holders ("***Selling Holder Counsel***"), shall be borne and paid by the Company; *provided, however*, that the Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to Section 2.1 if the registration request is subsequently withdrawn at the request of the Holders of a majority of the Registrable Securities to be registered (in which case all selling Holders shall bear such expenses pro rata based upon the number of Registrable Securities that were to be included in the withdrawn registration), unless the Holders of a majority of the Registrable Securities agree to forfeit their right to one registration pursuant to Sections 2.1(a) or 2.1(b), as the case may be then the Holders shall not be required to pay any of such expenses and shall not forfeit their right to one registration pursuant to Sections 2.1(a) or 2.1(b). All Selling Expenses relating to Registrable Securities registered pursuant to this Section 2 shall be borne and paid by the Holders pro rata on the basis of the number of Registrable Securities registered on their behalf.

2.7 Delay of Registration. No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any registration pursuant to this Agreement as the result of any controversy that might arise with respect to the interpretation or implementation of this Section 2.

2.8 Indemnification. If any Registrable Securities are included in a registration statement under this Section 2:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each selling Holder, and the partners, members, officers, directors, and stockholders of each such Holder; legal counsel and accountants for each such Holder; any underwriter (as defined in the Securities Act) for each such Holder; and each Person, if any, who controls such Holder or underwriter within the meaning of the Securities Act or the Exchange Act, against any Damages, and the Company will pay to each such Holder, underwriter, controlling Person, or other aforementioned Person any legal or other

expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; *provided, however*, that the indemnity agreement contained in this Section 2.8(a) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Company, which consent shall not be unreasonably withheld, nor shall the Company be liable for any Damages to the extent that they arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of any such Holder, underwriter, controlling Person, or other aforementioned Person expressly for use in connection with such registration.

(b) To the extent permitted by law, each selling Holder, severally and not jointly, will indemnify and hold harmless the Company, and each of its directors, each of its officers who has signed the registration statement, each Person (if any), who controls the Company within the meaning of the Securities Act, legal counsel and accountants for the Company, any underwriter (as defined in the Securities Act), any other Holder selling securities in such registration statement, and any controlling Person of any such underwriter or other Holder, against any Damages, in each case only to the extent that such Damages arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of such selling Holder expressly for use in connection with such registration; and each such selling Holder will pay to the Company and each other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; *provided, however*, that the indemnity agreement contained in this Section 2.8(b) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Holder, which consent shall not be unreasonably withheld; and *provided further* that in no event shall the aggregate amounts payable by any Holder by way of indemnity or contribution under Section 2.8(b) and 2.8(d) exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of fraud or willful misconduct by such Holder.

(c) Promptly after receipt by an indemnified party under this Section 2.8 of notice of the commencement of any action (including any governmental action) for which a party may be entitled to indemnification hereunder, such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Section 2.8, give the indemnifying party notice of the commencement thereof. The indemnifying party shall have the right to participate in such action and, to the extent the indemnifying party so desires, participate jointly with any other indemnifying party to which notice has been given, and to assume the defense thereof with counsel mutually satisfactory to the parties; *provided, however*, that an indemnified party (together with all other indemnified parties that may be represented without conflict by one counsel) shall have the right to retain one separate counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such action. The failure to give notice to the indemnifying party within a reasonable time of the commencement of any such action shall relieve such indemnifying party of any liability to the indemnified party under this Section 2.8, to the extent that such failure materially prejudices the indemnifying party's ability to defend such action. The failure to give notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Section 2.8.

(d) To provide for just and equitable contribution to joint liability under the Securities Act in any case in which either: (i) any party otherwise entitled to indemnification hereunder makes a claim for indemnification pursuant to this Section 2.8 but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case, notwithstanding the fact that this Section 2.8 provides for indemnification in such case, or (ii) contribution

under the Securities Act may be required on the part of any party hereto for which indemnification is provided under this Section 2.8, then, and in each such case, such parties will contribute to the aggregate losses, claims, damages, liabilities, or expenses to which they may be subject (after contribution from others) in such proportion as is appropriate to reflect the relative fault of each of the indemnifying party and the indemnified party in connection with the statements, omissions, or other actions that resulted in such loss, claim, damage, liability, or expense, as well as to reflect any other relevant equitable considerations. The relative fault of the indemnifying party and of the indemnified party shall be determined by reference to, among other things, whether the untrue or allegedly untrue statement of a material fact, or the omission or alleged omission of a material fact, relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent such statement or omission; *provided, however*, that, in any such case (x) no Holder will be required to contribute any amount in excess of the public offering price of all such Registrable Securities offered and sold by such Holder pursuant to such registration statement, and (y) no Person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation; and *provided further* that in no event shall a Holder's liability pursuant to this Section 2.8(d), when combined with the amounts paid or payable by such Holder pursuant to Section 2.8(b), exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of willful misconduct or fraud by such Holder.

(e) Notwithstanding the foregoing, to the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in connection with the underwritten public offering are in conflict with the foregoing provisions, the provisions in the underwriting agreement shall control.

(f) Unless otherwise superseded by an underwriting agreement entered into in connection with the underwritten public offering, the obligations of the Company and Holders under this Section 2.8 shall survive the completion of any offering of Registrable Securities in a registration under this Section 2, and otherwise shall survive the termination of this Agreement.

2.9 Reports Under Exchange Act. With a view to making available to the Holders the benefits of SEC Rule 144 and any other rule or regulation of the SEC that may at any time permit a Holder to sell securities of the Company to the public without registration or pursuant to a registration on Form S-3, the Company shall:

(a) make and keep available adequate current public information, as those terms are understood and defined in SEC Rule 144, at all times after the effective date of the registration statement filed by the Company for the IPO;

(b) use commercially reasonable efforts to file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act (at any time after the Company has become subject to such reporting requirements); and

(c) furnish to any Holder, so long as the Holder owns any Registrable Securities, forthwith upon request (i) to the extent accurate, a written statement by the Company that it has complied with the reporting requirements of SEC Rule 144 (at any time after 90 days after the effective date of the registration statement filed by the Company for the IPO), the Securities Act, and the Exchange Act (at any time after the Company has become subject to such reporting requirements), or that it qualifies as a registrant whose securities may be resold pursuant to Form S-3 (at any time after the Company so qualifies); (ii) a copy of the most recent annual or quarterly report of the Company and such other reports and documents so filed by the Company; and (iii) such other information as may be reasonably requested in availing any Holder of any rule or regulation of the SEC that permits the selling of any such securities without registration (at any time after the Company has become subject to the reporting requirements under the Exchange Act) or pursuant to Form S-3 (at any time after the Company so qualifies to use such form).

2.10 Limitations on Subsequent Registration Rights. From and after the date of this Agreement, the Company shall not, without the prior written consent of the Holders of a majority of the Registrable Securities then outstanding, enter into any agreement with any holder or prospective holder of any securities of the Company that would (i) provide to such holder or prospective holder the right to include securities in any registration on other than either a pro rata basis with respect to the Registrable Securities or on a subordinate basis after all Holders have had the opportunity to include in the registration and offering all shares of Registrable Securities that they wish to so include or (ii) allow such holder or prospective holder to include such securities in any registration unless, under the terms of such agreement, such holder or prospective holder may include such securities in any such registration only to the extent that the inclusion of such securities will not reduce the number of the Registrable Securities of the Holders that are included; *provided* that this limitation shall not apply to Registrable Securities acquired by any additional Investor that becomes a party to this Agreement in accordance with Section 6.9.

2.11 "*Market Stand-off*" Agreement. Each Holder hereby agrees that it will not, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to the registration by the Company of shares of its Common Stock or any other equity securities under the Securities Act on a registration statement on Form S-1 or Form S-3, and ending on the date specified by the Company and the managing underwriter (such period not to exceed 180 days in the case of the IPO), (i) lend; offer; pledge; sell; contract to sell; sell any option or contract to purchase; purchase any option or contract to sell; grant any option, right, or warrant to purchase; or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable (directly or indirectly) for Common Stock held immediately before the effective date of the registration statement for such offering or (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of such securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or other securities, in cash, or otherwise. The foregoing provisions of this Section 2.11 shall apply only to the IPO, shall not apply to the sale of any shares to an underwriter pursuant to an underwriting agreement, or the transfer of any shares to any trust for the direct or indirect benefit of the Holder or the immediate family of the Holder, *provided* that the trustee of the trust agrees to be bound in writing by the restrictions set forth herein, and *provided further* that any such transfer shall not involve a disposition for value, and shall be applicable to the Holders only if all officers and directors are subject to the same restrictions and the Company uses commercially reasonable efforts to obtain a similar agreement from all stockholders individually owning more than 1% of the Company's outstanding Common Stock (after giving effect to conversion into Common Stock of all outstanding Series AA Preferred Stock). The underwriters in connection with such registration are intended third-party beneficiaries of this Section 2.11 and shall have the right, power and authority to enforce the provisions hereof as though they were a party hereto. Each Holder further agrees to execute such agreements as may be reasonably requested by the underwriters in connection with such registration that are consistent with this Section 2.11 or that are necessary to give further effect thereto.

2.12 Restrictions on Transfer.

(a) The Series AA Preferred Stock and the Registrable Securities shall not be sold, pledged, or otherwise transferred, and the Company shall not recognize and shall issue stop-transfer instructions to its transfer agent with respect to any such sale, pledge, or transfer, except upon the conditions specified in this Agreement, which conditions are intended to ensure compliance with the provisions of the Securities Act. A transferring Holder will cause any proposed purchaser, pledgee, or transferee of the Series AA Preferred Stock and the Registrable Securities held by such Holder to agree to take and hold such securities subject to the provisions and upon the conditions specified in this Agreement.

(b) Each certificate, instrument, or book entry representing (i) the Series AA Preferred Stock, (ii) the Registrable Securities, and (iii) any other securities issued in respect of the securities referenced in clauses (i) and (ii), upon any stock split, stock dividend, recapitalization, merger, consolidation, or similar event, shall (unless otherwise permitted by the provisions of Section 2.12(c)) be notated with a legend substantially in the following form:

> THE SECURITIES REPRESENTED HEREBY HAVE BEEN ACQUIRED FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED. SUCH SHARES MAY NOT BE SOLD, PLEDGED, OR TRANSFERRED IN THE ABSENCE OF SUCH REGISTRATION OR A VALID EXEMPTION FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF SAID ACT. THE SECURITIES REPRESENTED HEREBY MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF AN AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY.

The Holders consent to the Company making a notation in its records and giving instructions to any transfer agent of the Restricted Securities in order to implement the restrictions on transfer set forth in this Section 2.12.

(c) The holder of such Restricted Securities, by acceptance of ownership thereof, agrees to comply in all respects with the provisions of this Section 2. Before any proposed sale, pledge, or transfer of any Restricted Securities, unless there is in effect a registration statement under the Securities Act covering the proposed transaction, the Holder thereof shall give notice to the Company of such Holder's intention to effect such sale, pledge, or transfer. Each such notice shall describe the manner and circumstances of the proposed sale, pledge, or transfer in sufficient detail and, if reasonably requested by the Company, shall be accompanied at such Holder's expense by either (i) a written opinion of legal counsel who shall, and whose legal opinion shall, be reasonably satisfactory to the Company, addressed to the Company, to the effect that the proposed transaction may be effected without registration under the Securities Act; (ii) a "no action" letter from the SEC to the effect that the proposed sale, pledge, or transfer of such Restricted Securities without registration will not result in a recommendation by the staff of the SEC that action be taken with respect thereto; or (iii) any other evidence reasonably satisfactory to counsel to the Company to the effect that the proposed sale, pledge, or transfer of the Restricted Securities may be effected without registration under the Securities Act, whereupon the Holder of such Restricted Securities shall be entitled to sell, pledge, or transfer such Restricted Securities in accordance with the terms of the notice given by the Holder to the Company. The Company will not require such a legal opinion or "no action" letter (x) in any transaction in compliance with SEC Rule 144; or (y) in any transaction in which such Holder distributes Restricted Securities to an Affiliate of such Holder for no consideration; *provided* that each transferee agrees in writing to be subject to the terms of this Section 2.12. Each certificate, instrument, or book entry representing the Restricted Securities transferred as above provided shall be notated with, except if such transfer is made pursuant to SEC Rule 144, the appropriate restrictive legend set forth in Section 2.12(b), except that such certificate instrument, or book entry shall not be notated with such restrictive legend if, in the opinion of counsel for such Holder and the Company, such legend is not required in order to establish compliance with any provisions of the Securities Act.

2.13 Termination of Registration Rights. The right of any Holder to request registration or inclusion of Registrable Securities in any registration pursuant to Sections 2.1 or 2.2 shall terminate upon the earliest to occur of:

(a) the closing of a Deemed Liquidation Event, as such term is defined in the Certificate of Incorporation; or

(b) such time after consummation of the IPO as Rule 144 or another similar exemption under the Securities Act is available for the sale of all of such Holder's shares without limitation during a three-month period without registration.

3. Information Rights.

3.1 Delivery of Financial Statements. The Company shall deliver to each Major Investor, *provided* that the Board of Directors has not reasonably determined that such Major Investor is a Competitor of the Company:

(a) as soon as practicable, but in any event within 90 days after the end of each fiscal year of the Company (which may be extended to up to 9 months from the end of the fiscal year of the Company upon approval of the Board of Directors, including the approval of the majority of the Series AA Directors) (i) a balance sheet as of the end of such year, (ii) statements of income and of cash flows for such year, and (iii) a statement of stockholders' equity as of the end of such year, all such financial statements audited and certified by independent public accountants of regionally recognized standing selected by the Company;

(b) as soon as practicable, but in any event within 45 days after the end of each quarter of each fiscal year of the Company, unaudited statements of income and cash flows for such fiscal quarter, and an unaudited balance sheet and a statement of stockholders' equity as of the end of such fiscal quarter, all prepared in accordance with GAAP (except that such financial statements may (i) be subject to normal year-end audit adjustments; and (ii) not contain all notes thereto that may be required in accordance with GAAP);

(c) as soon as practicable, but in any event within 45 days after the end of each of the first three (3) quarters of each fiscal year of the Company, a statement showing the number of shares of each class and series of capital stock and securities convertible into or exercisable for shares of capital stock outstanding at the end of the period, the Common Stock issuable upon conversion or exercise of any outstanding securities convertible or exercisable for Common Stock and the exchange ratio or exercise price applicable thereto, and the number of shares of issued stock options and stock options not yet issued but reserved for issuance, if any, all in sufficient detail as to permit the Major Investors to calculate their respective percentage equity ownership in the Company, and certified by the chief financial officer or chief executive officer of the Company as being true, complete, and correct;

(d) as soon as practicable, but in any event 30 days before the end of each fiscal year, a budget and business plan for the next fiscal year (collectively, the "***Budget***"), approved by the Board of Directors (including the majority of the Series AA Directors) prepared on a monthly basis, including balance sheets, income statements, and statements of cash flow for such months and, promptly after prepared, any other budgets or revised budgets prepared by the Company; and

(e) with respect to the financial statements called for in Section 3.1(b), an instrument executed by the chief financial officer and chief executive officer of the Company certifying that such financial statements were prepared in accordance with GAAP consistently applied with prior practice for earlier periods (except as otherwise set forth in Section 3.1(b)) and fairly present the financial condition of the Company and its results of operation for the periods specified therein.

If, for any period, the Company has any subsidiary whose accounts are consolidated with those of the Company, then in respect of such period the financial statements delivered pursuant to the foregoing sections shall be the consolidated and consolidating financial statements of the Company and all such consolidated subsidiaries.

Notwithstanding anything else in this Section 3.1 to the contrary, the Company may cease providing the information set forth in this Section 3.1 during the period starting with the date 60 days before the Company's good-faith estimate of the date of filing of a registration statement if it reasonably concludes it must do so to comply with the SEC rules applicable to such registration statement and related offering; *provided* that the Company's covenants under this Section 3.1 shall be reinstated at such time as the Company is no longer actively employing its commercially reasonable efforts to cause such registration statement to become effective.

3.2 Inspection. The Company shall permit each Major Investor, *provided* that the Board of Directors has not reasonably determined that such Major Investor is a Competitor of the Company, at such Major Investor's expense, to visit and inspect the Company's properties; examine its books of account and records; and discuss the Company's affairs, finances, and accounts with its officers, during normal business hours of the Company as may be reasonably requested by the Major Investor; *provided, however*, that the Company shall not be obligated pursuant to this Section 3.2 to provide access to any information that it reasonably and in good faith considers to be a trade secret or confidential information (unless covered by an enforceable confidentiality agreement, in form acceptable to the Company) or the disclosure of which would adversely affect the attorney-client privilege between the Company and its counsel.

3.3 Termination of Information. The covenants set forth in Section 3.1 and Section 3.2 shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) upon the closing of a Deemed Liquidation Event, as such term is defined in the Certificate of Incorporation, whichever event occurs first.

3.4 Confidentiality. Each Investor agrees that such Investor will keep confidential and will not disclose, divulge, or use for any purpose (other than to monitor its investment in the Company) any confidential information obtained from the Company pursuant to the terms of this Agreement (including notice of the Company's intention to file a registration statement), unless such confidential information (a) is known or becomes known to the public in general (other than as a result of a breach of this Section 3.4 by such Investor), (b) is or has been independently developed or conceived by such Investor without use of the Company's confidential information, or (c) is or has been made known or disclosed to such Investor by a third party without a breach of any obligation of confidentiality such third party may have to the Company; *provided, however*, that an Investor may disclose confidential information (i) to its attorneys, accountants, consultants, and other professionals to the extent necessary to obtain their services in connection with monitoring its investment in the Company; (ii) to any prospective purchaser of any Registrable Securities from such Investor, if such prospective purchaser agrees to be bound by the provisions of this Section 3.4, *provided* that the Board of Directors has not reasonably determined that such prospective purchaser is a Competitor of the Company; (iii) to any Affiliate, partner, member, stockholder, or wholly owned subsidiary of such Investor in the ordinary course of business, *provided* that such Investor informs such Person that such information is confidential and directs such Person to maintain the confidentiality of such information; or (iv) as may otherwise be required by law, regulation, rule, court order or subpoena, *provided* that such Investor promptly notifies the Company of such disclosure and takes reasonable steps to minimize the extent of any such required disclosure.

4. Rights to Future Stock Issuances.

4.1 Right of First Offer. Subject to the terms and conditions of this Section 4.1 and applicable securities laws, if the Company proposes to offer or sell any New Securities, the Company shall first offer such New Securities to each Investor. An Investor shall be entitled to apportion the right of first offer hereby granted to it in such proportions as it deems appropriate, among (i) itself, (ii) its Affiliates and (iii) its beneficial interest holders, such as limited partners, members or any other Person having "beneficial ownership," as such term is defined in Rule 13d-3 promulgated under the Exchange Act, of such Investor ("***Investor Beneficial Owners***"); *provided* that each such Affiliate or Investor Beneficial Owner (x) is not a Competitor or FOIA Party, unless such party's purchase of New Securities is otherwise consented to by the Board of Directors, (y) agrees to enter into this Agreement and each of the Voting Agreement and Right of First Refusal and Co-Sale Agreement of even date herewith among the Company, the Investors and the other parties named therein, as an "***Investor***" under each such agreement (*provided* that any Competitor or FOIA Party shall not be entitled to any rights as a Major Investor under Sections 3.1 and 3.2 or as an Investor under Section 4.1 hereof), and (z) agrees to purchase at least such number of New Securities as are allocable hereunder to the Investor holding the fewest number of Series AA Preferred Stock and any other Derivative Securities.

(a) The Company shall give notice (the "***Offer Notice***") to each Investor, stating (i) its bona fide intention to offer such New Securities, (ii) the number of such New Securities to be offered, and (iii) the price and terms, if any, upon which it proposes to offer such New Securities.

(b) By notification to the Company within 20 days after the Offer Notice is given, each Investor may elect to purchase or otherwise acquire, at the price and on the terms specified in the Offer Notice, up to that portion of such New Securities which equals the proportion that the Common Stock then held by such Investor (including all shares of Common Stock then issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of the Series AA Preferred Stock and any other Derivative Securities then held by such Investor) bears to the total Common Stock of the Company then outstanding (assuming full conversion and/or exercise, as applicable, of all Preferred Stock and any other Derivative Securities then outstanding). At the expiration of such 20-day period, the Company shall promptly notify each Investor that elects to purchase or acquire all the shares available to it (each, a "***Fully Exercising Investor***") of any other Investor's failure to do likewise. During the 10 day period commencing after the Company has given such notice, each Fully Exercising Investor may, by giving notice to the Company, elect to purchase or acquire, in addition to the number of shares specified above, up to that portion of the New Securities for which Investors were entitled to subscribe but that were not subscribed for by the Investors which is equal to the proportion that the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of Series AA Preferred Stock and any other Derivative Securities then held, by such Fully Exercising Investor bears to the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of the Series AA Preferred Stock and any other Derivative Securities then held, by all Fully Exercising Investors who wish to purchase such unsubscribed shares. The closing of any sale pursuant to this Section 4.1(b) shall occur within the later of 90 days of the date that the Offer Notice is given and the date of initial sale of New Securities pursuant to Section 4.1(c).

(c) If all New Securities referred to in the Offer Notice are not elected to be purchased or acquired as provided in Section 4.1(b), the Company may, during the 90 day period following the expiration of the periods provided in Section 4.1(b), offer and sell the remaining unsubscribed portion of such New Securities to any Person or Persons at a price not less than, and upon terms no more favorable to the offeree than, those specified in the Offer Notice. If the Company does not enter into an agreement for the sale of the New Securities within such period, or if such agreement is not consummated within 30 days of the execution thereof, the right provided hereunder shall be deemed to be revived and such New Securities shall not be offered unless first reoffered to the Investors in accordance with this Section 4.1.

(d) The right of first offer in this Section 4.1 shall not be applicable to (i) Exempted Securities (as defined in the Certificate of Incorporation); (ii) shares of Common Stock issued in the IPO; and (iii) the issuance of shares of Series AA Preferred Stock to Additional Purchasers pursuant to Section 1.3 of the Purchase Agreement.

(e) Notwithstanding any provision hereof to the contrary, in lieu of complying with the provisions of this Section 4.1, the Company may elect to give notice to the Investors within 30 days after the issuance of New Securities. Such notice shall describe the type, price, and terms of the New Securities. Each Investor shall have 20 days from the date notice is given to elect to purchase up to the number of New Securities that would, if purchased by such Investor, maintain such Investor's percentage-ownership position, calculated as set forth in Section 4.1(b) before giving effect to the issuance of such New Securities.

4.2 Termination. The covenants set forth in Section 4.1 shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) upon the closing of a Deemed Liquidation Event, as such term is defined in the Certificate of Incorporation, whichever event occurs first.

5. Additional Covenants.

5.1 Insurance. The Company shall maintain, from financially sound and reputable insurers Directors and Officers liability insurance in an amount and on terms and conditions satisfactory to the Board of Directors (including the majority of the Series AA Directors), and will use commercially reasonable efforts to cause such insurance policies to be maintained until such time as the Board of Directors determines that such insurance should be discontinued. The policy will not be cancelable by the Company without prior approval by the Board of Directors.

5.2 Employee Agreements. The Company will cause (i) each Person now or hereafter employed by it or by any subsidiary (or engaged by the Company or any subsidiary as a consultant/independent contractor) with access to confidential information and/or trade secrets to enter into a confidential information and invention assignment agreement; and (ii) each Key Employee to enter into a one year non-solicitation agreement, substantially in the form previously provided to the Board of Directors (including the Series AA Directors). In addition, the Company shall not amend, modify, terminate, waive, or otherwise alter, in whole or in part, any of the above referenced agreements or any restricted stock agreement between the Company and any employee, without the consent of at least two of the Series AA Directors.

5.3 Employee Stock. Unless otherwise approved by the Board of Directors, all future employees and consultants of the Company who purchase, receive options to purchase, or receive awards of shares of the Company's capital stock after the date hereof shall be required to execute restricted stock or option agreements, as applicable, providing for (i) vesting of shares over a four year period, with the first 25% of such shares vesting following 12 months of continued employment or service, and the remaining shares vesting in equal monthly installments over the following 36 months, and (ii) a market stand-off provision substantially similar to that in Section 2.11. Without the prior approval by the Board of Directors, the Company shall not amend, modify, terminate, waive or otherwise alter, in whole or in part, any stock purchase, stock restriction or option agreement with any existing employee or service provider if such amendment would cause it to be inconsistent with this Section 5.3. In addition, unless otherwise approved by the Board of Directors, the Company shall retain (and not waive) a "right of first refusal" on employee transfers until the IPO and shall have the right to repurchase unvested shares at cost upon termination of employment of a holder of restricted stock.

5.4 Matters Requiring Investor Director Approval. So long as the holders of Series AA Preferred Stock are entitled to elect a Series AA Director, the Company hereby covenants and agrees with each of the Investors that it shall not, without approval of the Board of Directors, which approval must include the affirmative vote of a majority of the Series AA Directors:

(a) issue or obligate itself to issue any equity or debt securities other than pursuant to an equity incentive or similar plan approved by the Board of Directors;

(b) create any new shares in an existing or novel class of stock;

(c) incur, or obligate the Company to incur, any aggregate indebtedness in excess of $100,000 that is not already included in a budget approved by the Board of Directors, other than trade credit incurred in the ordinary course of business;

(d) make, or permit any subsidiary to make, any loan or advance to, or own any stock or other securities of, any subsidiary or other corporation, partnership, or other entity unless it is wholly owned by the Company;

(e) make, or permit any subsidiary to make, any loan or advance to any Person, including, without limitation, any employee or director of the Company or any subsidiary, except advances and similar expenditures in the ordinary course of business or under the terms of an employee stock or option plan approved by the Board of Directors;

(f) guarantee, directly or indirectly, or permit any subsidiary to guarantee, directly or indirectly, any indebtedness except for trade accounts of the Company or any subsidiary arising in the ordinary course of business;

(g) make any investment inconsistent with any investment policy approved by the Board of Directors;

(h) otherwise enter into or be a party to any transaction with any director, officer, or employee of the Company or any "associate" (as defined in Rule 12b-2 promulgated under the Exchange Act) of any such Person, except for transactions contemplated by this Agreement, the Purchase Agreement, or transactions made in the ordinary course of business and pursuant to reasonable requirements of the Company's business and upon fair and reasonable terms that are approved by a majority of the Board of Directors;

(i) hire or change the compensation of the C- and EVP-level executive officers, including approving any option grants or stock awards to executive officers;

(j) change the principal business of the Company, enter new lines of business, or exit the current line of business;

(k) sell, assign, license, pledge, or encumber material technology or intellectual property, other than licenses granted in the ordinary course of business; or

(l) enter into any corporate strategic relationship involving the payment, contribution, or assignment by the Company or to the Company of money or assets greater than $200,000.

5.5 Board Matters. Unless otherwise determined by the vote of a majority of the directors then in office, the Board of Directors shall meet at least quarterly in accordance with an agreed-upon schedule. The Company shall reimburse the directors for all reasonable out-of-pocket travel expenses incurred (consistent with the Company's travel policy) in connection with attending meetings of the Board of Directors. The Company shall cause to be established, within 180 days after such request, and will maintain, an audit and compensation committee, each of which shall consist solely of non-management directors. Each non-employee director shall be entitled in such person's discretion to be a member of any committee of the Board of Directors.

5.6 Successor Indemnification. If the Company or any of its successors or assignees consolidates with or merges into any other Person and is not the continuing or surviving corporation or entity of such consolidation or merger, then to the extent necessary, proper provision shall be made so that the successors and assignees of the Company assume the obligations of the Company with respect to indemnification of members of the Board of Directors as in effect immediately before such transaction, whether such obligations are contained in the Company's Bylaws, the Certificate of Incorporation, or elsewhere, as the case may be.

5.7 Indemnification Matters. The Company hereby acknowledges that one (1) or more of the directors nominated to serve on the Board of Directors by the Investors (each an "**Investor Director**") may have certain rights to indemnification, advancement of expenses and/or insurance provided by one or more of the Investors and certain of their Affiliates (collectively, the "**Investor Indemnitors**"). The Company hereby agrees (a) that it is the indemnitor of first resort (i.e., its obligations to any such Investor Director are primary and any obligation of the Investor Indemnitors to advance expenses or to provide indemnification for the same expenses or liabilities incurred by such Investor Director are secondary), (b) that it shall be required to advance the full amount of expenses incurred by such Investor Director and shall be liable for the full amount of all expenses, judgments, penalties, fines and amounts paid in settlement by or on behalf of any such Investor Director to the extent legally permitted and as required by the Company's Certificate of Incorporation or Bylaws of the Company (or any agreement between the Company and such Investor Director), without regard to any rights such Investor Director may have against the Investor Indemnitors, and, (c) that it irrevocably waives, relinquishes and releases the Investor Indemnitors from any and all claims against the Investor Indemnitors for contribution, subrogation or any other recovery of any kind in respect thereof. The Company further agrees that no advancement or payment by the Investor Indemnitors on behalf of any such Investor Director with respect to any claim for which such Investor Director has sought indemnification from the Company shall affect the foregoing and the Investor Indemnitors shall have a right of contribution and/or be subrogated to the extent of such advancement or payment to all of the rights of recovery of such Investor Director against the Company. The Investor Directors and the Investor Indemnitors are intended third party beneficiaries of this Section 5.9 and shall have the right, power and authority to enforce the provisions of this Section 5.9 as though they were a party to this Agreement.

5.8 Right to Conduct Activities. The Company hereby agrees and acknowledges that each of Cambrian BioPharma, Inc. ("**Cambrian**") (together with its Affiliates) and H&S Ventures, LLC ("**H&S**") (together with its Affiliates) is a professional investment organization, and as such reviews the business plans and related proprietary information of many enterprises, some of which may compete directly or indirectly with the Company's business (as currently conducted or as currently proposed to be conducted). The Company hereby agrees that, to the extent permitted under applicable law, Cambrian (and its Affiliates) shall not be liable to the Company for any claim arising out of, or based upon, (i) the investment by Cambrian (or its Affiliates) in any entity competitive with the Company, or (ii) actions taken by any partner, officer, employee or other representative of Cambrian (or its Affiliates) to assist any such competitive company, whether or not such action was taken as a member of the board of directors of such competitive company or otherwise, and whether or not such action has a detrimental effect on the Company; provided, however, that the foregoing shall not relieve (x) any of the Investors from liability associated with the unauthorized disclosure of the Company's confidential information obtained pursuant to this Agreement, or (y) any director or officer of the Company from any liability associated with his or her fiduciary duties to the Company.

5.9 Harassment Policy. The Company shall, within 120 days following the Initial Closing (as defined in the Purchase Agreement), adopt and thereafter maintain in effect (i) a Code of Conduct governing appropriate workplace behavior and (ii) an Anti-Harassment and Discrimination Policy prohibiting discrimination and harassment at the Company. Such policy shall be reviewed and approved by the Board of Directors.

5.10 Cybersecurity. The Company shall, within 180 days following the Initial Closing (as defined in the Purchase Agreement), (a) identify its sensitive data and information, and restrict access (through physical and electronic controls) to those individuals who have a need to access it and (b) implement cybersecurity solution(s) (the "**Cybersecurity Solutions**") designed to protect its technology and systems (including servers, laptops, desktops, cloud, containers, virtual environments and data centers) and all data contained in such systems. The Company shall use commercially reasonable efforts to ensure that the Cybersecurity Solutions (x) are up-to-date and include industry-standard protections (e.g., antivirus, endpoint detection and response and threat hunting), (y) to the extent determined necessary by the Company or its Board of Directors, are backed by a breach prevention warranty from the vendor certifying the effectiveness of such solutions, and (z) cause vendors to notify the Company of any security incidents posing a risk to the Company's information (regardless of whether information was actually compromised). The Company shall evaluate on a regular basis whether the Cybersecurity Solutions should be updated to ensure continued effectiveness and industry-standard protections. The Company shall also educate its employees about the proper use and storage of sensitive information, including regular training as determined reasonably necessary by the Company or its Board of Directors.

5.11 Termination of Covenants. The covenants set forth in this Section 5, except for Sections 5.5, 5.6, 5.7 and 5.8 shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) upon a Deemed Liquidation Event, as such term is defined in the Certificate of Incorporation, whichever event occurs first.

6. Miscellaneous.

6.1 Successors and Assigns. The rights under this Agreement may be assigned (but only with all related obligations) by a Holder to a transferee of Registrable Securities that (i) is an Affiliate of a Holder; (ii) is a Holder's Immediate Family Member or trust for the benefit of an individual Holder or one or more of such Holder's Immediate Family Members; or (iii) after such transfer, holds at least 10,000,000 shares of Registrable Securities (subject to appropriate adjustment for stock splits, stock dividends, combinations, and other recapitalizations); provided, however, that (x) the Company is, within a reasonable time after such transfer, furnished with written notice of the name and address of such transferee and the Registrable Securities with respect to which such rights are being transferred; and (y) such transferee agrees in a written instrument delivered to the Company to be bound by and subject to the terms and conditions of this Agreement, including the provisions of Section 2.11. For the purposes of determining the number of shares of Registrable Securities held by a transferee, the holdings of a transferee (1) that is an Affiliate or stockholder of a Holder; (2) who is a Holder's Immediate Family Member; or (3) that is a trust for the benefit of an individual Holder or such Holder's Immediate Family Member shall be aggregated together and with those of the transferring Holder; provided further that all transferees who would not qualify individually for assignment of rights shall, as a condition to the applicable transfer, establish a single attorney-in-fact for the purpose of exercising any rights, receiving notices, or taking any action under this Agreement. The terms and conditions of this Agreement inure to the benefit of and are binding upon the respective successors and permitted assignees of the parties. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assignees any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided herein.

6.2 Governing Law. This Agreement shall be governed by the internal law of the State of Delaware, without regard to conflict of law principles that would result in the application of any law other than the law of the State of Delaware.

6.3 Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, the Uniform Electronic Transactions Act or other applicable law, *e.g.*, www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

6.4 Titles and Subtitles. The titles and subtitles used in this Agreement are for convenience only and are not to be considered in construing or interpreting this Agreement.

6.5 Notices.

(a) All notices and other communications given or made pursuant to this Agreement shall be in writing and shall be deemed effectively given upon the earlier of actual receipt or (i) personal delivery to the party to be notified; (ii) when sent, if sent by electronic mail or facsimile during the recipient's normal business hours, and if not sent during normal business hours, then on the recipient's next business day; (iii) five days after having been sent by registered or certified mail, return receipt requested, postage prepaid; or (iv) one business day after the business day of deposit with a nationally recognized overnight courier, freight prepaid, specifying next-day delivery, with written verification of receipt. All communications shall be sent to the respective parties at their addresses as set forth on **Schedule A** hereto, or to the principal office of the Company and to the attention of the Chief Executive Officer, in the case of the Company, or to such email address, facsimile number, or address as subsequently modified by written notice given in accordance with this Section 6.5. If notice is given to the Company, it shall be sent to 620 Professional Drive, Gaithersburg, MD 20879, *Attention*: John Celebi; and a copy (which shall not constitute notice) shall also be sent to Cooley LLP, 3175 Hanover Street, Palo Alto, CA 94304-1130, *Attention*: Michael E. Tenta.

(b) Consent to Electronic Notice. Each Investor consents to the delivery of any stockholder notice pursuant to the Delaware General Corporation Law (the "***DGCL***"), as amended or superseded from time to time, by electronic transmission pursuant to Section 232 of the DGCL (or any successor thereto) at the electronic mail address or the facsimile number set forth below such Investor's name on the Schedules hereto, as updated from time to time by notice to the Company, or as on the books of the Company. To the extent that any notice given by means of electronic transmission is returned or undeliverable for any reason, the foregoing consent shall be deemed to have been revoked until a new or corrected electronic mail address has been provided, and such attempted electronic notice shall be ineffective and deemed to not have been given. Each Investor agrees to promptly notify the Company of any change in such stockholder's electronic mail address, and that failure to do so shall not affect the foregoing.

6.6 Amendments and Waivers. Any term of this Agreement may be amended, modified or terminated and the observance of any term of this Agreement may be waived (either generally or in a particular instance, and either retroactively or prospectively) only with the written consent of the Company, the holders of at least two-thirds of the Registrable Securities then outstanding; *provided* that the Company may in its sole discretion waive compliance with Section 2.12(c) (and the Company's failure to object promptly in writing after notification of a proposed assignment allegedly in violation of Section 2.12(c) shall be deemed to be a waiver); and *provided further* that any provision hereof may be waived by any waiving party on such party's own behalf, without the consent of any other party. Notwithstanding the foregoing, (a) this Agreement may not be amended, modified or terminated and the observance of any term hereof may not be waived with respect to any Investor without the written consent of such Investor, unless such amendment, modification, termination, or waiver applies to all Investors in the same fashion (it being agreed that a waiver of the provisions of Section 4 with respect to a particular transaction shall be deemed to apply to all Investors in the same fashion if such waiver does so by its terms, notwithstanding the fact that certain Investors may nonetheless, by agreement with the Company, purchase securities in such transaction) and (b) an amendment, modification, termination to or waiver of Sections 3.1 and 3.2, and any other section of this Agreement applicable to the Major Investors (including this clause (b) of this Section 6.6) shall require only the written consent of the Company and the holders of a majority of the Registrable Securities then outstanding and held by the Major Investors. Notwithstanding the foregoing, **Schedule A** hereto may be amended by the Company from time to time to add transferees of any Registrable Securities in compliance with the terms of this Agreement without the consent of the other parties; and **Schedule A** hereto may also be amended by the Company after the date of this Agreement without the consent of the other parties to add information regarding any additional Investor who becomes a party to this Agreement in accordance with Section 6.9. The Company shall give prompt notice of any amendment, modification or termination hereof or waiver hereunder to any party hereto that did not consent in writing to such amendment, modification, termination, or waiver. Any amendment, modification, termination, or waiver effected in accordance with this Section 6.6 shall be binding on all parties hereto, regardless of whether any such party has consented thereto. No waivers of or exceptions to any term, condition, or provision of this Agreement, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such term, condition, or provision.

6.7 Severability. In case any one or more of the provisions contained in this Agreement is for any reason held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision of this Agreement, and such invalid, illegal, or unenforceable provision shall be reformed and construed so that it will be valid, legal, and enforceable to the maximum extent permitted by law.

6.8 Aggregation of Stock. All shares of Registrable Securities held or acquired by Affiliates shall be aggregated together for the purpose of determining the availability of any rights under this Agreement and such Affiliates may apportion such rights as among themselves in any manner they deem appropriate.

6.9 Additional Investors. Notwithstanding anything to the contrary contained herein, if the Company issues additional shares of the Company's Series AA Preferred Stock after the date hereof, whether pursuant to the Purchase Agreement or otherwise, any purchaser of such shares of Series AA Preferred Stock may become a party to this Agreement by executing and delivering an additional counterpart signature page to this Agreement, and thereafter shall be deemed an "Investor" for all purposes hereunder. No action or consent by the Investors shall be required for such joinder to this Agreement by such additional Investor, so long as such additional Investor has agreed in writing to be bound by all of the obligations as an "Investor" hereunder.

6.10 Entire Agreement. This Agreement (including any Schedules and Exhibits hereto) constitutes the full and entire understanding and agreement among the parties with respect to the subject matter hereof, and any other written or oral agreement relating to the subject matter hereof existing between the parties is expressly canceled.

6.11 Termination of Prior Agreements. Upon execution of this Agreement by the Company and the undersigned Investors, the following agreements by and among Panacea Pharmaceuticals, Inc. (the Company's predecessor in interest) and certain of the undersigned stockholders in their capacity as stockholders of such predecessor in interest, are hereby deemed amended and restated and superseded and replaced in its entirety by this Agreement, and such agreements shall be of no further force or effect: (i) that certain Third Amended and Restated Registration Rights Agreement, dated July 24, 2007 (the "Prior Registration Rights Agreement"), and (ii) that certain Third Amended and Restated Investor Rights Agreement, dated July 24, 2007 (the "Prior Investor Rights Agreement"). The undersigned Investors hereby agree to take all further actions as may be reasonably required to confirm the termination of such Prior Registration Rights Agreement and Prior Investor Rights Agreement.

6.12 Dispute Resolution. Any unresolved controversy or claim arising out of or relating to this Agreement, except as (i) otherwise provided in this Agreement, or (ii) any such controversies or claims arising out of either party's intellectual property rights for which a provisional remedy or equitable relief is sought, shall be submitted to arbitration by one arbitrator mutually agreed upon by the parties, and if no agreement can be reached within 30 days after names of potential arbitrators have been proposed by the American Arbitration Association (the "**AAA**"), then by one arbitrator having reasonable experience in corporate finance transactions of the type provided for in this Agreement and who is chosen by the AAA. The arbitration shall take place in Gaithersburg, Maryland, in accordance with the AAA rules then in effect, and judgment upon any award rendered in such arbitration will be binding and may be entered in any court having jurisdiction thereof. There shall be limited discovery prior to the arbitration hearing as follows: (a) exchange of witness lists and copies of documentary evidence and documents relating to or arising out of the issues to be arbitrated, (b) depositions of all party witnesses and (c) such other depositions as may be allowed by the arbitrators upon a showing of good cause. Depositions shall be conducted in accordance with the Maryland Code of Civil Procedure, the arbitrator shall be required to provide in writing to the parties the basis for the award or order of such arbitrator, and a court reporter shall record all hearings, with such record constituting the official transcript of such proceedings.

Each party will bear its own costs in respect of any disputes arising under this Agreement. The prevailing party shall be entitled to reasonable attorneys' fees, costs, and necessary disbursements in addition to any other relief to which such party may be entitled. Each of the parties to this Agreement consents to personal jurisdiction for any equitable action sought in the U.S. District Court for the District of Maryland or any court of the State of Maryland having subject matter jurisdiction.

6.13 Delays or Omissions. No delay or omission to exercise any right, power, or remedy accruing to any party under this Agreement, upon any breach or default of any other party under this Agreement, shall impair any such right, power, or remedy of such nonbreaching or nondefaulting party, nor shall it be construed to be a waiver of or acquiescence to any such breach or default, or to any similar breach or default thereafter occurring, nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. All remedies, whether under this Agreement or by law or otherwise afforded to any party, shall be cumulative and not alternative.

[Remainder of page intentionally left blank]

The parties have executed this Investors' Rights Agreement as of the date first written above.

COMPANY:

SENSEI BIOTHERAPEUTICS, INC.

By: /s/ *John Celebi*
Name: John Celebi
Title: Chief Executive Officer

The parties have executed this Investors' Rights Agreement as of the date first written above.

INVESTOR:

H&S Investments I, L.P.
By: H&S Ventures, LLC, its General Partner

By: /s/ *Michael Schulman*
Name: Michael Schulman
Title: Manager

The parties have executed this Investors' Rights Agreement as of the date first written above.

INVESTOR:

Cambrian BioPharma, Inc.

By: */s/ James G. Peyer*
Name: James G. Peyer
Title: Chief Executive Officer

The parties have executed this Investors' Rights Agreement as of the date first written above.

INVESTOR:

/s/ *Mark Lee Ford*
Mark Lee Ford

The parties have executed this Investors' Rights Agreement as of the date first written above.

INVESTOR:

Ricks Family Trust

By: */s/ James G. Peyer*
Name: James G. Peyer
Title: Chief Executive Officer

SCHEDULE A

INVESTORS

Name	Address	Email
H&S Ventures, LLC	[PRIVATE ADDRESS]	[PRIVATE ADDRESS]
Cambrian BioPharma, Inc.	[PRIVATE ADDRESS]	[PRIVATE ADDRESS]
Mark Lee Ford	[PRIVATE ADDRESS]	[PRIVATE ADDRESS]
Bright Investments, LLC	[PRIVATE ADDRESS]	[PRIVATE ADDRESS]
Panrem Investments, LLC	[PRIVATE ADDRESS]	[PRIVATE ADDRESS]
Shinichi Yokote	[PRIVATE ADDRESS]	[PRIVATE ADDRESS]
Dano Ventures, LLC	[PRIVATE ADDRESS]	[PRIVATE ADDRESS]
Lahijani Group, LLC	[PRIVATE ADDRESS]	[PRIVATE ADDRESS]
BGJ Partners, LLC	[PRIVATE ADDRESS]	[PRIVATE ADDRESS]
Ian Chin	[PRIVATE ADDRESS]	[PRIVATE ADDRESS]
S.M. Aamir Akhlaque	[PRIVATE ADDRESS]	[PRIVATE ADDRESS]
Gilbert Chavez	[PRIVATE ADDRESS]	[PRIVATE ADDRESS]
William Lance Gatling	[PRIVATE ADDRESS]	[PRIVATE ADDRESS]

Name	Address	Email
Chris Smith	[PRIVATE ADDRESS]	[PRIVATE ADDRESS]
William J. Swinton	[PRIVATE ADDRESS]	[PRIVATE ADDRESS]
Masa Matsushita	[PRIVATE ADDRESS]	[PRIVATE ADDRESS]
Ricks Family Trust	[PRIVATE ADDRESS]	[PRIVATE ADDRESS]

PPI HOLDINGS, INC.

2018 STOCK INCENTIVE PLAN

1. Purpose.

This PPI Holdings, Inc. 2018 Stock Incentive Plan (hereinafter referred to as this "Plan") is intended to promote the best interests of the Corporation and its stockholders by (i) enabling the Corporation and any Parent or Subsidiary to attract and retain persons of ability as employees, directors, consultants and advisors, (ii) providing an incentive to such persons to contribute to the growth of the Corporation by affording such persons equity participation in the Corporation and (iii) rewarding those employees, directors, consultants and advisers who contribute to the operating progress and earning power of the Corporation or any Parent or Subsidiary.

2. Definitions.

The following terms shall have the following meanings when used herein unless the context clearly requires otherwise:

A. "Board of Directors" means the Board of Directors of the Corporation.

B. "Code" means the Internal Revenue Code of 1986, as amended, or any successor statute.

C. "Common Stock" means the Common Stock of the Corporation, par value $0.0001 per share.

D. "Controlling Participant" means any Eligible Person who, immediately before any Option is granted to that particular Eligible Person, directly or indirectly possesses more than ten percent (10%) of the total combined voting power of all classes of stock of the Corporation (or any Parent or Subsidiary).

E. "Committee" means any committee of the Board of Directors to which the Board of Directors delegates any responsibility for the implementation, interpretation or administration of this Plan.

F. "Corporation Law" means the General Corporation Law of the State of Delaware.

G. "Corporation" means PPI Holdings, Inc., a Delaware corporation.

H. "Eligible Person" means any employee or director of, or consultant or adviser to, the Corporation or any Parent or Subsidiary.

I. "Exercise Price" means the price at which a share of Incentive Stock may be purchased by a particular Participant pursuant to the exercise of an Option.

J. "Fair Market Value" means the value of a share of Incentive Stock as determined by the Board of Directors in a manner that the Board of Directors believes to be in accordance with the Code.

K. "Incentive Stock" means shares of Common Stock issued pursuant to this Plan.

L. "ISO" means an Option (or a portion thereof) intended to qualify as an "incentive stock option" within the meaning of Section 422 of the Code, or any successor provision.

M. "NQSO" means an Option (or a portion thereof) which is not intended to, or does not, qualify for any reason as an "incentive stock option" within the meaning of Section 422 of the Code, or any successor provision.

N. "Option" means the right of a Participant to purchase shares of Incentive Stock in accordance with the terms of this Plan and a Stock Option Agreement between such Participant and the Corporation.

O. "Parent" means any corporation (other than the Corporation) in an unbroken chain of corporations ending with the Corporation if, at the time of granting of an Option, each of the corporations (other than the Corporation) owns stock possessing at least fifty percent (50%) of the total combined voting power of all classes of stock in one of the other corporations in such chain.

P. "Participant" means any Eligible Person to whom an Option or Restricted Stock has been granted pursuant to this Plan and who is a party to a Stock Option Agreement or Restricted Stock Agreement, as the case may be.

Q. "Plan Year" means any calendar year during which this Plan is effective.

R. "Restricted Stock" means shares of Common Stock issued to a Participant pursuant to this Plan which are subject to certain restrictions as set forth in a Restricted Stock Agreement.

S. "Restricted Stock Agreement" means an agreement by and between a Participant and the Corporation setting forth the specific terms and conditions of a Right as well as the specific terms and conditions under which Restricted Stock may be purchased by such Participant pursuant to the exercise of such Right. Each Restricted Stock Agreement shall be subject to the provisions of this Plan (which shall be incorporated by reference therein), and shall contain such provisions as the Board of Directors of the Corporation, in its sole discretion, may authorize.

T. "Right" means the right of a Participant to purchase shares of Restricted Stock in accordance with the terms of this Plan and the Restricted Stock Agreement(s) to which such Participant and the Corporation are parties.

U. "SAR" means the right of a Participant to receive cash or other consideration equal to the difference between the Fair Market Value of the Incentive Stock covered by all or any unexercised portion of an Option on the date of exercise of the SAR and the Fair Market Value of such Incentive Stock on the date of grant of the SAR.

V. "Stock Option Agreement" means an agreement by and between a Participant and the Corporation setting forth the specific terms and conditions of an Option and/or SAR, which shall establish the specific terms and conditions under which Incentive Stock may be purchased by such Participant pursuant to the exercise of such Option. Each Stock Option Agreement shall be subject to the provisions of this Plan (which shall be incorporated by reference therein) and shall contain such provisions as the Board of Directors, in its sole discretion, may authorize.

W. "Subsidiary" means any corporation (other than the Corporation) in an unbroken chain of corporations beginning with the Corporation if, at the time of granting of an Option, each of the corporations (other than the last corporation in the unbroken chain) owns stock possessing at least fifty percent (50%) of the total combined voting power of all classes of stock in one of the other corporations in such chain.

X. "Warrant" means any right of a Participant to purchase shares of Incentive Stock in accordance with the terms of this Plan and a Warrant Agreement between such Participant and the Corporation which provides for vesting of such Right only upon the occurrence of a certain event or events, and not by the mere passage of time following the grant of the Right.

Y. "Warrant Agreement" means an agreement by and between a Participant and the Corporation setting forth the specific terms and conditions of any Warrant, which shall establish the specific terms and conditions under which Incentive Stock may be purchased by such Participant pursuant to the exercise of such Warrant following vesting. Each Warrant Agreement shall be subject to the applicable provisions of this Plan (which shall be incorporated by reference therein) and shall contain such provisions as the Board of Directors, in its sole discretion, may authorize.

3. Adoption and Administration of Plan.

A. This Plan shall become effective upon its adoption by the Board of Directors; provided, however, that the stockholders of the Corporation shall approve this Plan in accordance with the Corporation Law within twelve (12) months before or after the adoption of the Plan by the Board of Directors. In the event that the stockholders of the Corporation shall not approve this Plan in accordance with the Corporation Law, within twelve (12) months after the adoption of this Plan by the Board of Directors, this Plan shall expire by its terms. No Option, SAR, grant of Restricted Stock or other award hereunder shall be exercisable or payable in any respect prior to such approval of this Plan by the stockholders of the Corporation.

B. Any Option granted pursuant to this Plan shall be granted within ten (10) years from the date that this Plan is adopted by the Board of Directors or the date that this Plan is approved by the stockholders of the Corporation, whichever is earlier.

C. The Board of Directors shall implement, interpret (except as expressly provided in this Plan) and administer this Plan. Without limiting the powers and authority of the Board of Directors in any respect, the Board of Directors shall have authority:

(i) to construe and interpret this Plan and any Stock Option Agreement or Restricted Stock Agreement entered into hereunder;

(ii) to determine the Fair Market Value of Incentive Stock;

(iii) to select Eligible Persons to whom Options or Restricted Stock may from time to time be granted hereunder;

(iv) to determine whether any Option or any portion thereof shall be an ISO or a NQSO;

(v) to determine the number of shares of Incentive Stock to be covered by any Option and the Exercise Price applicable to any Option;

(vi) to determine the number of shares of Restricted Stock to be covered by any Restricted Stock Agreement;

(vii) to determine the terms and conditions, not inconsistent with the terms of this Plan, of any Option and to approve forms of Stock Option Agreements;

(viii) to determine the terms and conditions, not inconsistent with the terms of this Plan, of any grant of Restricted Stock and to approve forms of Restricted Stock Agreements;

(ix) to determine the terms and conditions, not inconsistent with the terms of this Plan, of any grant of Warrants and to approve forms of Warrant Agreements to determine whether, and under what circumstances, a Warrant may be settled or paid in cash or other consideration;

(x) to amend, cancel, accept the surrender of, modify or accelerate the vesting of all or any portion of an Option, including amendments or modifications that may cause an ISO to become a NQSO;

(xi) to amend, cancel, accept the surrender of, modify or terminate the restrictions on a Right or Restricted Stock set forth in any Restricted Stock Agreement;

(xii) to amend, cancel, accept the surrender of, modify or terminate the restrictions on a Warrant set forth in any Warrant Agreement

(xiii) to authorize and implement any amendment, as required by the Code or with the consent of the Participant, to any Stock Option Agreement and the terms of any Option evidenced thereby, or to any Restricted Stock Agreement and the terms of any Right evidenced thereby;

(xiv) to establish policies and procedures for the exercise of Options and the satisfaction of withholding or other obligations arising in connection therewith;

(xv) to establish policies and procedures for the exercise of Rights and the purchase of Restricted Stock;

(xvi) to establish policies and procedures for the exercise of Warrants and the satisfaction of withholding or other obligations arising in connection therewith

Any action taken by the Board of Directors with respect to the implementation, interpretation or administration of this Plan shall be final, conclusive and binding.

D. To the extent not prohibited by the Corporation Law or the charter or bylaws of the Corporation, the Board of Directors may delegate any or all of its responsibilities hereunder to the Committee, and all references herein or in any Warrant Agreement, Stock Option Agreement or Restricted Stock Agreement to the “Board of Directors” shall, to the extent applicable, be deemed to refer to and include the Committee.

4. Total Number of Shares of Incentive Stock and Restricted Stock.

The number of shares of Incentive Stock and Restricted Stock which (i) may be issued by the Corporation under this Plan pursuant to the exercise of Options granted hereunder, (ii) may be covered by SAR's granted hereunder which have not expired unexercised, and (iii) may be issued by the Corporation under this Plan pursuant to the exercise of Rights granted hereunder, shall not exceed an aggregate of five million (5,000,000) shares, which amount may be increased only by a resolution adopted by the Board of Directors and approved by the stockholders of the Corporation in accordance with the Corporation Law within twelve (12) months after such adoption by the Board of Directors. Such shares of Incentive Stock and Restricted Stock may be issued out of the authorized and unissued or reacquired Common Stock of the Corporation. Any shares subject to an Option, Warrant, SAR, Right or portion thereof which expires or is terminated unexercised (unless by virtue of the exercise of an Option, SAR or Right granted in tandem therewith) as to such shares may again be subject to an Option, Warrant, SAR or Right under this Plan. To the extent there shall be any adjustment in the number of shares of Incentive Stock and/or Restricted Stock pursuant to the provisions of Section 9 hereof, the aforesaid aggregate number of shares which may be issued by the Corporation under this Plan shall be likewise adjusted.

5. Grants and Awards.

A. As soon as practicable after the Board of Directors determines to award an Option, Warrant, SAR or Right, the appropriate officer or officers of the Corporation shall give notice (written or oral) to such effect to each Eligible Person designated to be awarded an Option, Warrant, SAR or Right, which notice shall be accompanied by a copy or copies of the Stock Option Agreement, Warrant Agreement, or Restricted Stock Agreement (as applicable) to be executed by such Eligible Person. The Board of Directors may delegate to the appropriate officer or officers of the Corporation the authority to prepare, execute and deliver any Stock Option Agreement, Warrant Agreement or Restricted Stock Agreement evidencing any Option, Warrant, SAR or Right granted under this Plan; provided, however, that any such Stock Option Agreement, Warrant, or Restricted Stock Agreement shall be consistent with the terms and conditions of this Plan.

B. Notwithstanding the generality of Section 5.A hereof, for any Plan Year no award of any Option, Warrant, SAR or Right to any Eligible Person who is a member of the Board of Directors and not otherwise an employee of the Corporation or any Parent or Subsidiary (a "Non-Management Director") shall exceed the right to acquire more than thirty thousand (30,000) shares of Common Stock. Subject to the approval of the Board of Directors, this Plan authorizes the grant of Options, Warrants, SAR's or Rights of up to thirty thousand (30,000) shares of Common Stock per Plan Year to any Non-Management Director.

C. Upon receipt of the notice specified in Section 5.A hereof, an Eligible Person shall have an Option, Warrant, SAR or Right (as the case may be). Such Eligible Person shall nonetheless become and be a Participant only after the due execution and delivery by such Eligible Person and the Corporation of a Stock Option Agreement, Warrant Agreement, or Restricted Stock Agreement (in such form and number as the officer or officers of the Corporation shall direct) by such date and time as shall be specified in such notice (unless waived by the Corporation).

D. For any Option intended to qualify as an ISO, in whole or in part, (i) the Eligible Person shall then be an employee of the Corporation or a Parent or Subsidiary, as provided in the Code, (ii) the term during which such Option shall be in effect shall not be greater than ten (10) years, except in the case of an Option granted to a Controlling Participant, in which case the term shall not be greater than five (5) years, (iii) the Exercise Price shall not be less than one hundred percent (100%) of the Fair Market Value on the date that such Option is granted, except in the case of an ISO granted to a Controlling Participant, in which case the Exercise Price shall not be less than one hundred ten percent (110%) of the Fair Market Value on the date that such Option is granted and (iv) such Option shall be exercisable only by the Participant during his or her lifetime and shall be nontransferable by the Participant unless the Stock Option Agreement permits such Option to be transferred by will or the laws of descent and distribution.

E. The purchase price for each share of Restricted Stock, as determined by the Board of Directors, need not be the Fair Market Value thereof, and may vary from one Participant to another. In addition, the terms and conditions on which shares of Restricted Stock may be purchased may vary from one Participant to another. In computing the purchase price of a share of Restricted Stock, the Board of Directors may take into consideration, without limitation, the restrictions on transfer or other dispositions imposed in the applicable Restricted Stock Agreement.

F. In the event that the Corporation or any Parent or Subsidiary assumes an option granted by another entity, which option is to be covered by this Plan and upon the exercise of which shares of Incentive Stock are to be issued, the terms and conditions of such option shall remain unchanged (except the exercise price and the number and nature of shares issuable upon exercise thereof, which shall be adjusted appropriately in accordance with the Code, and references to such other entity, which shall be deemed to refer to the Corporation). In the event that the Board of Directors elects to grant an Option, SAR or Right under this Plan to replace an option, SAR or right granted by another entity (rather than assume such option, SAR or Right), the holder of such option or SAR shall be eligible to receive such replacement Option, SAR or Right, which may be granted with a similarly-adjusted Exercise Price.

6. Exercise and Termination of Options, Warrants, SAR's and Rights.

A. An Option or SAR of a Participant may be exercised during the period such Option or SAR is in effect and as set forth herein and in the Stock Option Agreement, and only if compliance with all applicable federal and state securities laws can be effected. An Option or SAR may be exercised only by (i) the Participant's completion, execution and delivery to the Corporation of a notice of such Participant's exercise of such Option and an "investment letter" (if required by the Corporation) as supplied by the Corporation and (ii) the payment to the Corporation of the aggregate Exercise Price, in accordance with Section 6.C hereof and the Stock Option Agreement, for the shares of Incentive Stock to be purchased pursuant to such exercise (as shall be specified by such Participant in such notice). Except as otherwise specifically provided by a duly executed Stock Option Agreement or unless waived by the Board of Directors, an Option or any of the rights thereunder may be exercised by such Participant only, and may not be transferred or assigned, voluntarily, involuntarily or by operation of law (including, without limitation, the laws of bankruptcy, intestacy, descent and distribution and succession).

B. A Warrant may be exercised upon or following the occurrence of the certain event effecting vesting of the Warrant as set forth in the applicable Warrant Agreement or, as applicable, the Plan, and then only if compliance with all applicable federal and state securities laws can be effected. A Warrant may be exercised only by (i) the Participant's completion, execution and delivery to the Corporation of a notice of such Participant's exercise of such Warrant and an "investment letter" (if required by the Corporation) as supplied by the Corporation and (ii) the payment to the Corporation of the aggregate Exercise Price, in accordance with Section 6.D hereof and the Warrant Agreement, for the shares of Incentive Stock to be purchased pursuant to such exercise (as shall be specified by such Participant in such notice). Except as otherwise specifically provided by a duly executed Warrant Agreement or unless waived by the Board of Directors, a Warrant or any of the rights thereunder may be exercised by such Participant only, and may not be transferred or assigned, voluntarily, involuntarily or by operation of law (including, without limitation, the laws of bankruptcy, intestacy, descent and distribution and succession).

C. A Right of a Participant may be exercised during the period such Right is in effect and as set forth herein and in the Restricted Stock Agreement, and only if compliance with all applicable federal and state securities laws can be effected. A Right may be exercised only by (i) the Participant's completion, execution and delivery to the Corporation of a notice of such Participant's exercise of such Right (if such exercise is not simultaneous with the execution of the applicable Restricted Stock Agreement) and an "investment letter" (if required by the Corporation) as supplied by the Corporation and (ii) the payment to the Corporation of the aggregate Exercise Price, in accordance with Section 6.C hereof and the Restricted Stock Agreement, for the shares of Restricted Stock to be purchased pursuant to such exercise (as shall be specified by such Participant in such notice). Except as otherwise specifically provided by a duly executed Restricted Stock Agreement or unless waived by the Board of Directors, a Right or any of the rights thereunder may be exercised by such Participant only, and may not be transferred or assigned, voluntarily, involuntarily or by operation of law (including, without limitation, the laws of bankruptcy, intestacy, descent and distribution and succession).

D. Payment by each Participant for the shares of Incentive Stock or Restricted Stock purchased hereunder upon the exercise of an Option, Warrant, or a Right shall be made (i) in cash, (ii) by good check payable to the Corporation or electronic funds transfer of immediately available funds to the Corporation, or (iii) in accordance with the terms of the applicable Stock Option Agreement, Warrant Agreement, or Restricted Stock Agreement executed by such Participant.

E. The Board of Directors at any time or from time to time may offer to buy out for a payment in cash or Incentive Stock all or a portion of an outstanding Option or Warrant held by a Participant, based on such terms and conditions as the Board of Directors shall establish and communicate to the Participant at the time that such offer is made. The Board of Directors may provide for the surrender of all or any portion of an Option or Warrant in satisfaction of specified obligations of a Participant, including tax withholding obligations.

F. In the event that the Corporation shall complete any transaction or series of transactions resulting in the reorganization of the Corporation where the stockholders of the Corporation immediately prior to the closing of such transaction or series of transaction retain voting control of the Corporation either directly or through control of any successor, parent, or affiliate of the Corporation (each, a "Successor"), then the Board of Directors may, in its sole and absolute discretion, elect to exchange any Option, Warrant, or SAR granted to any Participant prior to such closing for an equivalent Option, Warrant, or SAR in the Successor or the same terms and conditions and Exercise Price as the award or grant under this Plan.

G. As a condition to the exercise of any Option, Warrant, or SAR (for non-cash consideration), the Corporation shall have the right to require that the Participant (or the recipient of any shares of Incentive Stock or noncash consideration) remit to the Corporation or any Parent or Subsidiary an amount calculated by the Corporation to be sufficient to satisfy applicable federal, state, foreign or local withholding tax requirements prior to the delivery of any stock certificate evidencing shares of Incentive Stock or other form of non-cash consideration; in lieu thereof, the Participant may satisfy applicable withholding tax requirements by electing to have the Corporation withhold from the Incentive Stock issuable upon exercise of an Option a number of whole shares having a Fair Market Value (determined on the date that the amount of tax to be withheld is to be fixed) at least equal to the aggregate amount required to be withheld. Whenever any payments are to be made in cash (upon the exercise of a SAR or otherwise), the Corporation shall be entitled, in its sole discretion, to deduct from such payment such amount calculated by the Corporation to be sufficient to satisfy applicable federal, state, foreign or local withholding tax requirements thereon.

7. Costs and Expenses.

All costs and expenses with respect to the adoption, implementation, interpretation and administration of this Plan shall be borne by the Corporation; provided, however, that, except as otherwise specifically provided in this Plan or the applicable Stock Option Agreement, Warrant Agreement, or Restricted Stock Agreement between the Corporation and a Participant, the Corporation shall not be obligated to pay any costs or expenses (including legal fees) incurred by any Participant in connection with any Stock Option Agreement, Warrant Agreement, Restricted Stock Agreement, this Plan or any Option, Warrant, SAR, Right, Restricted Stock or Incentive Stock held by any Participant.

8. No Prior Right of Award.

Nothing in this Plan shall be deemed to give any director, officer or employee of, or advisor or consultant to, the Corporation or any Parent or Subsidiary, or such person's legal representatives or assigns, or any other person or entity claiming under or through such person, any contract or other right to participate in the benefits of this Plan. Nothing in this Plan shall be construed as constituting a commitment, guarantee, agreement or understanding of any kind or nature that the Corporation or any Parent or Subsidiary shall continue to employ, retain or engage any person (whether or not a Participant). This Plan shall not affect in any way the right of the Corporation and any Parent or Subsidiary to terminate the employment or engagement of any person (whether or not a Participant) at any time and for any reason whatsoever and to remove any person (whether or not a Participant) from any position as a director or officer. No change of a Participant's duties as an employee of the Corporation or any Parent or Subsidiary shall result in a modification of the terms of any rights of such Participant under this Plan or any Stock Option Agreement, Warrant Agreement, or Restricted Stock Agreement executed by such Participant.

9. Changes in Capital Structure.

Subject to any required action by the stockholders of the Corporation and the provisions of the Corporation Law, the number of shares of:

(i) Incentive Stock represented by the unexercised portion of an Option, Warrant, or SAR;

(ii) Restricted Stock represented by the unexercised portion of a Right; and

(iii) Incentive Stock and Restricted Stock which have been authorized or reserved for issuance hereunder (whether such shares are unissued, reacquired or subject to an Option, Warrant, SAR or Right that expired, was cancelled, surrendered or terminated unexercised as to such shares), as well as the Exercise Price under the unexercised portion of an Option, Warrant or SAR and the purchase price of a share of Restricted Stock represented by the unexercised portion of a Right, shall be proportionately adjusted for (a) each division, combination or reclassification of any of the shares of Common Stock of the Corporation and (b) each dividend declared by the Board of Directors and payable in shares of Common Stock of the Corporation.

10. Amendment or Termination of Plan.

Except as otherwise provided herein or as required by law, this Plan may be amended or terminated in whole or in part by the Board of Directors (in its sole discretion), but no such action shall adversely affect or alter any right or obligation with respect to any Option, Warrant, SAR, Right, Stock Option Agreement or Restricted Stock Agreement then in effect, except to the extent that any such action shall be required or desirable (in the opinion of the Corporation or its counsel) so that any Option intended to qualify as an ISO complies with the Code or any rule or regulation promulgated or proposed thereunder.

11. Burden and Benefit.

The terms and provisions of this Plan shall be binding upon, and shall inure to the benefit of, each Participant and such Participant's executors and administrators, estate, heirs and personal and legal representatives.

12. Headings.

The headings and other captions contained in this Plan are for convenience of reference only and shall not be used in interpreting, construing or enforcing any of the provisions of this Plan.

13. Interpretation.

Notwithstanding any provision of this Plan or any provision of any Stock Option Agreement evidencing an Option that is intended, in whole or in part, to qualify as an ISO, this Plan and each such Stock Option Agreement are intended to comply with all requirements for qualification under the Code and with any rule or regulation promulgated or proposed thereunder, and shall be interpreted and construed in a manner which is consistent with this Plan and each such Stock Option Agreement being so qualified.

14. Governing Law.

This Plan shall be governed by, and construed in accordance with, the substantive laws of the Corporation's jurisdiction of incorporation (other than provisions thereof relating to conflicts of law and choice of law).

STOCK OPTION AGREEMENT

Unless otherwise defined herein, the terms defined in the PPI Holdings, Inc. 2018 Stock Incentive Plan (the "Plan") shall have the same defined meanings in this Stock Option Agreement (the "Option Agreement").

A. NOTICE OF STOCK OPTION GRANT

Name:

The undersigned Participant has been granted an Option to purchase shares of Common Stock ("Shares") of the Corporation, subject to the terms and conditions of the Plan and this Option Agreement, as follows:

Grant Date:	
Vesting Commencement Date:	
Exercise Price per Share:	$
Total Number of Shares Granted:	
Type of Option:	☐ ISO
	☐ NQSO
Term/Expiration Date:	10th anniversary of Grant Date

Vesting Schedule:

Subject to the accelerated vesting provisions below, this Option shall be exercisable, in whole or in part, according to the following vesting schedule:

Fifty percent (50%) of the Shares subject to the Option shall vest on the Grant Date and twenty-five percent (25%) of the Shares subject to the Option shall vest on each yearly anniversary of the Grant Date, subject to Participant continuing to be an Eligible Person through each such date, such that the Option shall be fully vested as of the second anniversary of the Grant Date.

Accelerated Vesting:

Notwithstanding the Vesting Schedule above, upon a Change in Control (as defined below), the number of Shares scheduled to vest as of the next occurring vesting date shall immediately vest as if such vesting date has occurred as of the occurrence of the Change of Control subject to Participant continuing to be an Eligible Person through such date.

Termination Period:

This Option shall be exercisable for thirty (30) days after Participant ceases to be an Eligible Person, unless such termination is due to Participant's death or disability, in which case this Option shall be exercisable for twelve (12) months after Participant ceases to be an Eligible Person. Notwithstanding the foregoing sentence, in no event may this Option be exercised after the Term/Expiration Date as provided above and this Option may be subject to earlier termination as provided in Section 11 of the Agreement.

Notice Requirement:

Participant must provide the Corporation advanced written notice of no less than forty (40) business day prior to voluntarily terminating status as an Eligible Person (the "Notice Requirement"). Notwithstanding anything herein to the contrary, if Participant does not comply with the Notice Requirement, then all Shares subject to the Option (whether vested or unvested) shall immediately terminate without consideration and/or any post-termination exercise period.

Restrictive Covenants: Without limiting any confidentiality, invention assignment agreement or other similar agreements between Participant and the Corporation, Participant hereby agrees to the following covenants set forth below (collectively, the "Restrictive Covenants"). Notwithstanding anything herein to the contrary, if Participant

violates any of the Restrictive Covenants, then all Shares subject to the Option (whether vested or unvested) shall immediately terminate without consideration and/or any post-termination exercise period. Participant acknowledges and agrees that the Restrictive Covenants shall apply following the purchase of Shares subject to the Option as set forth in Section 6 of the Exercise Notice, which is incorporated herein by reference. For all purposes of the Plan and this Option Agreement, the administrator of the Plan (the "Administrator") shall have the right to determine if there has been a violation of the Restrictive Covenants in its sole reasonable good-faith discretion. The Restrictive Covenants are as follows:

Non-Disclosure: Participant will hold in the strictest confidence, and take all reasonable precautions to prevent any unauthorized use or disclosure of Confidential Information (as defined below), and Participant will not (i) use the Confidential Information for any purpose whatsoever other than as necessary for the performance of services on behalf of the Corporation, or (ii) disclose the Confidential Information to any third party without the prior written consent of an authorized representative of Corporation. Participant may disclose Confidential Information to the extent compelled by applicable law; provided however, prior to such disclosure, Participant shall provide prior written notice to Corporation and seek a protective order or such similar confidential protection as may be available under applicable law. Participant agrees that no ownership of Confidential Information is conveyed to the Participant. Without limiting the foregoing, Participant shall not use or disclose any Corporation property, intellectual property rights, trade secrets or other proprietary know-how of the Corporation to invent, author, make, develop, design, or otherwise enable others to invent, author, make, develop, or design identical or substantially similar designs as those developed under his or her service relationship with the Corporation for any third party.

Non-Solicitation: For twenty-four (24) months following a Participant's termination of status as an Eligible Person, Participant agrees not to personally solicit any of the employees either of the Corporation or any Parent or Subsidiary to become employed elsewhere or provide the names of such employees to any other company that Participant has reason to believe will solicit such employees.

Non-Compete: For twenty-four (24) months following a Participant's termination of status as an Eligible Person, Participant shall not, whether as an employee, officer, director, independent contractor, consultant, agent or otherwise, (a) provide services directly or indirectly to any party other than the Corporation or the applicable Parent or Subsidiary within the Restricted Business, or (b) encourage, solicit, induce, or otherwise facilitate any party to materially reduce or terminate its use of any of the products or services provided by the Corporation or any Parent or Subsidiary.

Invention Clause: To the extent that, in the course of performing the services to the Corporation, Participant jointly or solely conceives, develops, or reduces to practice any inventions, original works of authorship, developments, concepts, know-how, improvements or trade secrets, whether or not patentable or registrable under copyright or similar laws, based on Confidential Information obtained from the Corporation and pertaining to the Corporation's business, Participant hereby agrees to assign all rights, titles and interest to such inventions to the Corporation.

Definitions. The following terms shall have the following meanings when used in the Option Agreement:

"Change in Control" means a change in the ownership of the Corporation which occurs on the date that any one person, or more than one person acting as a group ("Person"), acquires, in a single transaction or a series of related transactions, either (a) all or substantially all of the assets of the Corporation (or the Parent of the Corporation); or (b) ownership of the stock of the Corporation that, together with the stock held by such Person, which constitutes more than fifty percent (50%) of the total voting power of the stock of the Corporation, except that any change in the ownership of the stock of the Corporation as a result of a private placement of the securities of the Corporation that is approved by the Board of Directors will not be considered a Change in Control unless the Board affirmatively determines that such private placement shall be considered a Change in Control hereunder.

"Confidential Information" means any non-public information that relates to the actual or anticipated business and/or products, research or development of the Corporation, its affiliates or subsidiaries, or to the Corporation's, its affiliates' or subsidiaries' technical data, trade secrets, or know-how, including, but not limited to, research, product plans, or other information regarding the Corporation's, its affiliates' or subsidiaries' products or services and markets therefor, customer lists and customers (including, but not limited to, customers of the Corporation on whom Participant called or with whom Participant became acquainted during the term of Participant's service relationship with the

Corporation), software, developments, inventions, processes, formulas, technology, designs, drawings, engineering, hardware configuration information, marketing, finances, and other business information disclosed by the Corporation, its affiliates or subsidiaries, either directly or indirectly, in writing, orally or by drawings or inspection of premises, parts, equipment, or other property of Corporation, its affiliates or Subsidiaries. Notwithstanding the foregoing, Confidential Information shall not include any such information which Participant can establish (i) was publicly known or made generally available prior to the time of disclosure to Participant; (ii) becomes publicly known or made generally available after disclosure to Participant through no wrongful action or inaction of Participant; or (iii) is in the rightful possession of Participant, without confidentiality obligations, at the time of disclosure as shown by Participant's then-contemporaneous written records.

"Restricted Business" means the provision of products or services which provide for or otherwise enable the treatment or diagnosis of cancer using any technology, rights, or patents owned or licensed by the Corporation.

"Successor" shall have the meaning set forth in Section 6.F of the Plan.

B. AGREEMENT

1. Grant of Option. (a) The administrator of the Plan (the "Administrator") hereby grants to the Participant named in the Notice of Stock Option Grant in Part A of this Agreement ("Participant"), an option (the "Option") to purchase the number of Shares set forth in the Notice of Stock Option Grant, at the exercise price per Share set forth in the Notice of Stock Option Grant (the "Exercise Price"), and subject to the terms and conditions of the Plan, which is incorporated herein by reference. Subject to Section 10 of the Plan, in the event of a conflict between the terms and conditions of the Plan and this Option Agreement, the terms and conditions of the Plan shall prevail.

(b) If designated in the Notice of Stock Option Grant as an ISO, this Option is intended to qualify as an "incentive stock option" as defined in Section 422 of the Code. Nevertheless, to the extent that it exceeds the $100,000 rule of Code Section 422(d), this Option shall be treated as a NQSO. Further, if for any reason this Option (or portion thereof) shall not qualify as an ISO, then, to the extent of such nonqualification, such Option (or portion thereof) shall be regarded as a NQSO granted under the Plan. In no event shall the Administrator, the Corporation or any Parent or Subsidiary or any of their respective employees or directors have any liability to Participant (or any other person) due to the failure of the Option to qualify for any reason as an ISO.

2. Exercise of Option.

(a) Right to Exercise. This Option shall be exercisable during its term in accordance with the Vesting Schedule set out in the Notice of Stock Option Grant and with the applicable provisions of the Plan and this Option Agreement.

(b) Method of Exercise. This Option shall be exercisable by delivery of an exercise notice in the form attached as Exhibit A (the "Exercise Notice") or in a manner and pursuant to such procedures as the Administrator may determine, which shall state the election to exercise the Option, the number of Shares with respect to which the Option is being exercised (the "Exercised Shares"), and such other representations and agreements as may be required by the Corporation. The Exercise Notice shall be accompanied by payment of the aggregate Exercise Price as provided in this Option Agreement as to all Exercised Shares, together with any applicable tax withholding. This Option shall be deemed to be exercised upon receipt by the Corporation of such fully executed Exercise Notice accompanied by the aggregate Exercise Price, together with any applicable tax withholding.

(c) Compliance Required. No Shares shall be issued pursuant to the exercise of an Option unless such issuance and such exercise comply with applicable laws. Assuming such compliance, for income tax purposes the Shares shall be considered transferred to Participant on the date on which the Option is exercised with respect to such Shares.

3. Participant's Representations. In the event the Shares have not been registered under the Securities Act of 1933, as amended (the "Securities Act"), at the time this Option is exercised, Participant shall, if required by the Corporation, concurrently with the exercise of all or any portion of this Option, deliver to the Corporation his or her Investment Representation Statement in the form attached hereto as Exhibit B.

4. Lock-Up Period. (a) Participant hereby agrees that Participant shall not offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any Common Stock (or other securities) of the Corporation or enter into any swap, hedging or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of any Common Stock (or other securities) of the Corporation held by Participant (other than those included in the registration) for a period specified by the representative of the underwriters of Common Stock (or other securities) of the Corporation not to exceed one hundred and eighty (180) days following the effective date of any registration statement of the Corporation filed under the Securities Act (or such other period as may be requested by the Corporation or the underwriters to accommodate regulatory restrictions on (i) the publication or other distribution of research reports and (ii) analyst recommendations and opinions, including, but not limited to, the restrictions contained in NASD Rule 2711(f)(4) or NYSE Rule 472(f)(4), or any successor provisions or amendments thereto).

(b) Participant agrees to execute and deliver such other agreements as may be reasonably requested by the Corporation or the underwriter which are consistent with the foregoing or which are necessary to give further effect thereto. In addition, if requested by the Corporation or the representative of the underwriters of Common Stock (or other securities) of the Corporation, Participant shall provide, within ten (10) days of such request, such information as may be required by the Corporation or such representative in connection with the completion of any public offering of the Corporation's securities pursuant to a registration statement filed under the Securities Act. The obligations described in this Section 4 shall not apply to a registration relating solely to employee benefit plans on Form S-1 or Form S-8 or similar forms that may be promulgated in the future, or a registration relating solely to a Commission Rule 145 transaction on Form S-4 or similar forms that may be promulgated in the future. The Corporation may impose stop-transfer instructions with respect to the shares of Common Stock (or other securities) subject to the foregoing restriction until the end of said one hundred and eighty (180) day (or other) period. Participant agrees that any transferee of the Option or shares acquired pursuant to the Option shall be bound by this Section 4.

5. Method of Payment. Payment of the aggregate Exercise Price shall be by any of the following, or a combination thereof, at the election of the Participant:

(a) cash; or

(b) a good check payable to the Corporation or an electronic funds transfer of immediately available funds to an account of the Corporations specified in writing to Participant; or

(c) only in the event of a Change in Control, net exercise such that the Participant shall receive, without payment as prescribed in Section 5(a) or Section 5(b) of the Exercise Price, such that the Participant shall receive a number of shares of Common Stock equal to (i) the product of (x) the gross number of Exercise Shares specified in the applicable Exercise Notice multiplied by (y) the per share Fair Market Value of the Common Stock as of the date of the applicable Change in Control, defined as the price per share payable for Common Stock pursuant to the applicable terms and conditions of the Change in Control, or if the per share value paid for the assets of the Corporation (or Parent) pursuant to the Change in Control calculated on a fully-diluted, as-converted basis; less (ii) the product of (x) the Exercise Price multiplied by (y) the number of Exercise Shares specified in the Exercise Notice ((i) less: (ii), the "Issued Shares"); or

(d) at any time, surrender of other Shares which (i) shall be valued at its Fair Market Value on the date of exercise, and (ii) must be owned free and clear of any liens, claims, encumbrances or security interests, if accepting such Shares, in the sole discretion of the Administrator, shall not result in any adverse accounting consequences to the Corporation.

6. Restrictions on Exercise. This Option may not be exercised until such time as the Plan has been approved by the stockholders of the Corporation, or if the issuance of such Shares upon such exercise or the method of payment of consideration for such shares would constitute a violation of any applicable law.

7. Non-Transferability of Option.

(a) This Option may not be transferred in any manner otherwise than by will or by the laws of descent or distribution and may be exercised during the lifetime of Participant only by Participant. The terms of the Plan and this Option Agreement shall be binding upon the executors, administrators, heirs, successors and assigns of Participant.

(b) Further, until the Corporation becomes subject to the reporting requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or after the Administrator determines that it is, will, or may no longer be relying upon the exemption from registration of Options under the Exchange Act as set forth in Rule 12h-1(f) promulgated under the Exchange Act (the "Reliance End Date"), Participant shall not transfer this Option or, prior to exercise, the Shares subject to this Option, in any manner other than (i) to persons who are "family members" (as defined in Rule 701(c)(3) of the Securities Act) through gifts or domestic relations orders, or (ii) to an executor or guardian of Participant upon the death or disability of Participant. Until the Reliance End Date, the Options and, prior to exercise, the Shares subject to this Option, may not be pledged, hypothecated or otherwise transferred or disposed of, including by entering into any short position, any "put equivalent position" or any "call equivalent position" (as defined in Rule 16a-1(h) and Rule 16a-1(b) of the Exchange Act, respectively), other than as permitted in clauses (i) and (ii) of this paragraph.

8. Term of Option. This Option may be exercised only within the term set out in the Notice of Stock Option Grant, and may be exercised during such term only in accordance with the Plan and the terms of this Option Agreement.

9. Tax Obligations.

(a) Tax Withholding. Participant agrees to make appropriate arrangements with the Corporation (or the Parent or Subsidiary employing or retaining Participant) for the satisfaction of all Federal, state, local and foreign income and employment tax withholding requirements applicable to the Option exercise. Participant acknowledges and agrees that the Corporation may refuse to honor the exercise and refuse to deliver the Shares if such withholding amounts are not delivered at the time of exercise.

(b) Notice of Disqualifying Disposition of ISO Shares. If the Option granted to Participant herein is an ISO, and if Participant sells or otherwise disposes of any of the Shares acquired pursuant to the ISO on or before the later of (i) the date two (2) years after the Date of Grant, or (ii) the date one (1) year after the date of exercise, Participant shall immediately notify the Corporation in writing of such disposition. Participant agrees that Participant may be subject to income tax withholding by the Corporation on the compensation income recognized by Participant.

(c) Code Section 409A. Under Code Section 409A, an Option that vests after December 31, 2004 (or that vested on or prior to such date but which was materially modified after October 3, 2004) that was granted with a per Share exercise price that is determined by the Internal Revenue Service (the "IRS") to be less than the Fair Market Value of a Share on the date of grant (a "discount option") may be considered "deferred compensation." An Option that is a "discount option" may result in (i) income recognition by Participant prior to the exercise of the Option, (ii) an additional twenty percent (20%) federal income tax, and (iii) potential penalty and interest charges. The "discount option" may also result in additional state income, penalty and interest tax to the Participant. Participant acknowledges that the Corporation cannot and has not guaranteed that the IRS will agree that the per Share exercise price of this Option equals or exceeds the Fair Market Value of a Share on the date of grant in a later examination. Participant agrees that if the IRS determines that the Option was granted with a per Share exercise price that was less than the Fair Market Value of a Share on the date of grant, Participant shall be solely responsible for Participant's costs related to such a determination.

10. Entire Agreement; Governing Law. The Plan is incorporated herein by reference. The Plan and this Option Agreement constitute the entire agreement of the parties with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements of the Corporation and Participant with respect to the subject matter hereof, and may not be modified adversely to the Participant's interest except by means of a writing signed by the Corporation and Participant. This Option Agreement is governed by the internal substantive laws but not the choice of law rules of Delaware.

11. Change in Control. In the event of a Change in Control, the Option shall be assumed or an equivalent option or right substituted by the successor corporation or a Parent or Subsidiary of the successor corporation. In the event that the successor corporation refuses to assume or substitute for the Option (or portion thereof), the Participant shall fully vest in and have the right to exercise the Option (or portion thereof) that is not assumed or substituted for as to all of the Shares subject to the Option, including Shares as to which it would not otherwise be vested or exercisable. If an Option is not assumed or substituted for in the Change in Control, the Administrator shall notify the Participant in writing or electronically that the Option shall be fully exercisable for a period of limited period of time following date of such notice, and the Option shall terminate upon the expiration of such period. For the purposes of this paragraph, the Option shall be considered assumed if, following the Change in Control, the option or right confers the right to purchase or receive, for each Share subject to the Option immediately prior to the Change in Control, the consideration (whether stock, cash, or other securities or property) received in the Change in Control by holders of Common Stock for each Share held on the effective date of the transaction (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding Shares); provided, however, that if such consideration received in the Change in Control is not solely common stock of the successor corporation or its Parent, the Administrator may, with the consent of the successor corporation, provide for the consideration to be received upon the exercise of the Option, for each Share subject to the Option, to be solely common stock of the successor corporation or its Parent equal in fair market value to the per share consideration received by holders of Common Stock in the Change in Control.

12. Replacement by Successor. In the event that the Corporation shall complete any transaction or series of transactions resulting in the reorganization of the Corporation where the stockholders of the Corporation immediately prior to the closing of such transaction or series of transaction retain voting control of the Corporation either directly or indirectly through a Successor (a "Reorganization"), then, upon notice from the Administrator, this Option Agreement shall be terminated, surrendered, and null, void and of no further force or effect provided that the Successor forthwith following such notice deliver to Participant another option agreement for the purchase of equity securities equivalent in value to the number of shares of the Corporation subject to this Option Agreement on the same terms and conditions and at the same Exercise Price as provided for otherwise under this Option Agreement (a "replacement Award"), Participant agrees to surrender this Option Agreement upon demand by the Administrator as a mandatory condition to receive any Replacement Award. Notwithstanding such notice, delivery of any Replacement Award, or surrender of this Option Agreement, upon closing of any Reorganization, this Option Agreement shall be converted solely into the right to receive a Replacement Award as provided for under this Section 12 and Section 5.E of the Plan.

13. No Guarantee of Continued Service. PARTICIPANT ACKNOWLEDGES AND AGREES THAT THE VESTING OF SHARES PURSUANT TO THE VESTING SCHEDULE HEREOF IS EARNED ONLY BY CONTINUING AS AN ELIGIBLE PERSON AT THE WILL OF THE CORPORATION (OR THE PARENT OR SUBSIDIARY EMPLOYING OR RETAINING PARTICIPANT) AND NOT THROUGH THE ACT OF BEING HIRED, BEING GRANTED THIS OPTION OR ACQUIRING SHARES HEREUNDER. PARTICIPANT FURTHER ACKNOWLEDGES AND AGREES THAT THIS AGREEMENT, THE TRANSACTIONS CONTEMPLATED HEREUNDER AND THE VESTING SCHEDULE SET FORTH HEREIN DO NOT CONSTITUTE AN EXPRESS OR IMPLIED PROMISE OF CONTINUED ENGAGEMENT AS AN ELIGIBLE PERSON FOR THE VESTING PERIOD, FOR ANY PERIOD, OR AT ALL, AND SHALL NOT INTERFERE IN ANY WAY WITH PARTICIPANT'S RIGHT OR THE RIGHT OF THE CORPORATION (OR THE PARENT OR SUBSIDIARY EMPLOYING OR RETAINING PARTICIPANT) TO TERMINATE PARTICIPANT'S RELATIONSHIP AS AN ELIGIBLE PERSON AT ANY TIME, WITH OR WITHOUT CAUSE.

Participant acknowledges receipt of a copy of the Plan and represents that he or she is familiar with the terms and provisions thereof, and hereby accepts this Option subject to all of the terms and provisions thereof. Participant agrees that the certain Stock Option Agreement Participant originally entered into with Panacea Pharmaceuticals, Inc., a Maryland corporation ("Panacea"), dated [DATE] (the "Original Option Agreement"), is hereby surrendered and terminated. Concurrent with such surrender of the Original Option Agreement and in accordance with Section 2.4 of that certain Agreement and Plan of Merger by and among the Company, Panacea, and PPI Acquisition I Corp. dated December 21, 2017 (the "Merger Agreement"), the Original Option Agreement was converted solely into the right to receive this Option Agreement such that Participant shall have the right to purchase the same number of shares of Company Common Stock on the same terms and conditions, subject to the same vesting schedule, and at the same price per share, as those shares of common stock of Panacea as set forth in the Original Option Agreement.

Participant agrees that this Option Agreement satisfies the obligations of the Company under Section 2.4 of the Merger Agreement, that this Option Agreement replaces in its entirety the Original Option Agreement, and that the Original Option Agreement is null, void, and of no further force or effect. Participant has reviewed the Plan and this Option in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Option and fully understands all provisions of the Option. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan or this Option. Participant further agrees to notify the Corporation upon any change in the Notice of Stock Option Grant.

PARTICIPANT

Signature

Print Name

Residence Address

PPI HOLDINGS, INC.

Signature

Print Name

Title

EXHIBIT A

PPI HOLDINGS, INC. STOCK INCENTIVE PLAN

EXERCISE NOTICE

PPI Holdings, Inc.
620 Professional Drive
Gaithersburg, Maryland 20874

Attention: Stock Plan Administrator

1. Exercise of Option. Effective as of today, , , the undersigned ("Participant") hereby elects to exercise Participant's option (the "Option") to purchase shares of the Common Stock (the "Shares") of PPI Holdings, Inc. (the "Corporation") under and pursuant to the PPI Holdings, Inc. Stock Incentive Plan (the "Plan") and the Stock Option Agreement dated , (the "Option Agreement").

2. Delivery of Payment. Participant herewith delivers to the Corporation the full purchase price of the Shares, as set forth in the Option Agreement, and any and all withholding taxes due in connection with the exercise of the Option.

3. Representations of Participant. Participant acknowledges that Participant has received, read and understood the Plan and the Option Agreement and agrees to abide by and be bound by their terms and conditions.

4. Rights as Stockholder; Stockholders Agreement. Until the issuance of the Shares (as evidenced by the appropriate entry on the books of the Corporation or of a duly authorized transfer agent of the Corporation), no right to vote or receive dividends or any other rights as a stockholder shall exist with respect to the Common Stock subject to an Award, notwithstanding the exercise of the Option. The Shares shall be issued to Participant as soon as practicable after the Option is exercised in accordance with the Option Agreement. No adjustment shall be made for a dividend or other right for which the record date is prior to the date of issuance except as provided in Section 9 of the Plan. Issuance of the Shares upon exercise of the Option shall require Participant to become a party to the certain Stockholders Agreement of the Corporation and Participant agrees to execute the same promptly following delivery of this Exercise Notice

5. Corporation's Repurchase Right. For a period of one hundred eighty (180) days following the later of (i) issuance of any Shares from exercise of the Option (other than following a Change in Control), or (ii) if following issuance of such Shares, Participant shall cease to be an Eligible Person, the Corporation shall have the unilateral right, but not the obligation, to repurchase such Shares from the Participant in consideration of a lump-sum payment equal to the aggregate Exercise Price paid by the Participant in the form of cash, a good check payable to Participant, or electronic funds transfer of immediately available funds to a bank account specified by Participant (the "Repurchase Right"). The Purchase Right shall be exercised by written notice (which may be delivered electronically to Participant) whereupon the Corporation shall pay amount due for such Shares in accordance with this Section 5 within five (5) days after the date of such notice. Upon the making of such notice and provision of such payment, the applicable Shares shall be deemed repurchased by the Corporation and no further act of Participant shall be required to effect the transfer of such Shares from Participant to the Corporation, and the Corporation shall be deemed the irrevocable attorney-in-fact of Participant to effect the transfer of such Shares pursuant to this Section 5.

6. Right of First Refusal. Before any Shares held by Participant or any transferee (either being sometimes referred to herein as the "Holder") may be sold or otherwise transferred (including transfer by gift or operation of law), the Corporation or its assignee(s) shall have a right of first refusal to purchase the Shares on the terms and conditions set forth in this Section 6 (the "Right of First Refusal") in addition to any rights of the Corporation or its stockholders as provide din the Stockholders Agreement.

(a) Notice of Proposed Transfer. The Holder of the Shares shall deliver to the Corporation a written notice (the "Notice") stating: (i) the Holder's bona fide intention to sell or otherwise transfer such Shares; (ii) the name of each proposed purchaser or other transferee ("Proposed Transferee"); (iii) the number of Shares to be transferred to each Proposed Transferee; and (iv) the bona fide cash price or other consideration for which the Holder proposes to transfer the Shares (the "Offered Price"), and the Holder shall offer the Shares at the Offered Price to the Corporation or its assignee(s).

(b) Exercise of Right of First Refusal. At any time within thirty (30) days after receipt of the Notice, the Corporation and/or its assignee(s) may, by giving written notice to the Holder, elect to purchase all, but not less than all, of the Shares proposed to be transferred to any one or more of the Proposed Transferees, at the purchase price determined in accordance with subsection (c) below.

(c) Purchase Price. The purchase price ("Purchase Price") for the Shares purchased by the Corporation or its assignee(s) under this Section 5 shall be the Offered Price unless the Notice is provided within the one hundred eighty (180) day time periods described in Section 5 of this Exercise Notice or if as of the date of the Notice the Holder is an Eligible Person, in which case the Purchase Price shall be the Exercise Price. If the Offered Price includes consideration other than cash, the cash equivalent value of the non-cash consideration shall be determined by the Board of Directors of the Corporation in good faith, subject to determination of the Purchase Price otherwise in accordance with this Section 6(c).

(d) Payment. Payment of the Purchase Price shall be made, at the option of the Corporation or its assignee(s), in cash (by check), by cancellation of all or a portion of any outstanding indebtedness of the Holder to the Corporation (or, in the case of repurchase by an assignee, to the assignee), or by any combination thereof within thirty (30) days after receipt of the Notice or in the manner and at the times set forth in the Notice.

(e) Holder's Right to Transfer. If all of the Shares proposed in the Notice to be transferred to a given Proposed Transferee are not purchased by the Corporation and/or its assignee(s) as provided in this Section 5, then subject to the applicable provisions of the Stockholders Agreement and applicable securities laws, the Holder may sell or otherwise transfer such Shares to that Proposed Transferee at the Offered Price or at a higher price, *provided* that such sale or other transfer is consummated within one hundred and twenty (120) days after the date of the Notice, that any such sale or other transfer is effected in accordance with any applicable securities laws and that the Proposed Transferee agrees in writing that the provisions of this Section 5 shall continue to apply to the Shares in the hands of such Proposed Transferee. If the Shares described in the Notice are not transferred to the Proposed Transferee within such period, a new Notice shall be given to the Corporation, and the Corporation and/or its assignees shall again be offered the Right of First Refusal before any Shares held by the Holder may be sold or otherwise transferred.

(f) Exception for Certain Family Transfers. Anything to the contrary contained in this Section 6 notwithstanding, the transfer of any or all of the Shares during the Participant's lifetime or on the Participant's death by will or intestacy to the Participant's immediate family or a trust for the benefit of the Participant's immediate family shall be exempt from the provisions of this Section 6. "Immediate Family" as used herein shall mean spouse, lineal descendant or antecedent, father, mother, brother or sister. In such case, the transferee or other recipient shall receive and hold the Shares so transferred subject to the provisions of this Section 6, subject to the Stockholders Agreement, and there shall be no further transfer of such Shares except in accordance with the terms of this Section 6 and the applicable provisions of the Stockholders Agreement.

(g) Termination of Right of First Refusal. The Right of First Refusal shall terminate as to any Shares upon the earlier of (i) the first sale of Common Stock of the Corporation to pursuant to a registration of such securities on Form S-1 or equivalent in accordance with the Securities Act of 1933, or (ii) a Change in Control in which the successor corporation has equity securities that are publicly traded.

7. Restrictive Covenants. Participant reaffirms the terms of the Restrictive Covenants set forth in the Notice of Stock Option Grant. If Participant violates any of the Restrictive Covenants, the Corporation shall have the right for one hundred eighty (180) days from such date a violation is determined by the Administrator (the "Determination Date") to purchase from Participant, or Purchaser's personal representative, as the case may be, all of the Participant's Shares received pursuant to exercise of the Option as of the date of such termination at the price paid by the Participant for such Shares (the "Repurchase Option"). For all purposes of the Plan, this Option Agreement and Exercise Notice, the Administrator shall have the right to determine if there has been a violation of the Restrictive Covenants in its sole reasonable good-faith discretion.

8. Notice Requirement. Participant reaffirms the terms of the Notice Requirement set forth in the Notice of Stock Option Grant. If Participant violates the Notice Requirement, the Corporation shall have the right for one hundred eighty (180) days from such date a violation is determined by the Administrator (the "Determination Date")

to purchase from Participant, or Purchaser's personal representative, as the case may be, all of the Participant's Shares exercised pursuant to the Option as of the date of such termination at the price paid by the Participant for such Shares (the "Repurchase Option"). For all purposes of the Plan, this Option Agreement and Exercise Notice, the Administrator shall have the right to determine if there has been a violation of the Notice Requirement in its sole reasonable good-faith discretion.

10. Tax Consultation. Participant understands that Participant may suffer adverse tax consequences as a result of Participant's purchase or disposition of the Shares. Participant represents that Participant has consulted with any tax consultants Participant deems advisable in connection with the purchase or disposition of the Shares and that Participant is not relying on the Corporation for any tax advice.

11. Restrictive Legends and Stop-Transfer Orders.

(a) Legends. Participant understands and agrees that the Corporation shall cause the legends set forth below or legends substantially equivalent thereto, to be placed upon any certificate(s) evidencing ownership of the Shares together with any other legends that may be required by the Corporation or by state or federal securities laws:

> THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933 (THE "ACT") AND MAY NOT BE OFFERED, SOLD OR OTHERWISE TRANSFERRED, PLEDGED OR HYPOTHECATED UNLESS AND UNTIL REGISTERED UNDER THE ACT OR, IN THE OPINION OF COUNSEL SATISFACTORY TO THE ISSUER OF THESE SECURITIES, SUCH OFFER, SALE OR TRANSFER, PLEDGE OR HYPOTHECATION IS IN COMPLIANCE THEREWITH.
>
> THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN RESTRICTIONS ON TRANSFER, REPURCHASE RIGHTS, AND A RIGHT OF FIRST REFUSAL HELD BY THE ISSUER OR ITS ASSIGNEE(S) AS SET FORTH IN THE EXERCISE NOTICE BETWEEN THE ISSUER AND THE ORIGINAL HOLDER OF THESE SHARES, A COPY OF WHICH MAY BE OBTAINED AT THE PRINCIPAL OFFICE OF THE ISSUER. SUCH TRANSFER RESTRICTIONS AND RIGHT OF FIRST REFUSAL ARE BINDING ON TRANSFEREES OF THESE SHARES.
>
> THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO RESTRICTIONS ON TRANSFER FOR A PERIOD OF TIME FOLLOWING THE EFFECTIVE DATE OF THE UNDERWRITTEN PUBLIC OFFERING OF THE CORPORATION'S SECURITIES SET FORTH IN AN AGREEMENT BETWEEN THE ISSUER AND THE ORIGINAL HOLDER OF THESE SHARES AND MAY NOT BE SOLD OR OTHERWISE DISPOSED OF BY THE HOLDER PRIOR TO THE EXPIRATION OF SUCH PERIOD WITHOUT THE CONSENT OF THE CORPORATION OR THE MANAGING UNDERWRITER.

(b) Stop-Transfer Notices. Participant agrees that, in order to ensure compliance with the restrictions referred to herein, the Corporation may issue appropriate "stop transfer" instructions to its transfer agent, if any, and that, if the Corporation transfers its own securities, it may make appropriate notations to the same effect in its own records.

(c) Refusal to Transfer. The Corporation shall not be required (i) to transfer on its books any Shares that have been sold or otherwise transferred in violation of any of the provisions of this Exercise Notice or (ii) to treat as owner of such Shares or to accord the right to vote or pay dividends to any purchaser or other transferee to whom such Shares shall have been so transferred.

12. Successors and Assigns. The Corporation may assign any of its rights under this Exercise Notice to single or multiple assignees, and this Exercise Notice shall inure to the benefit of the successors and assigns of the Corporation. Subject to the restrictions on transfer herein set forth, this Exercise Notice shall be binding upon Participant and his or her heirs, executors, administrators, successors and assigns.

13. Interpretation. Any dispute regarding the interpretation of this Exercise Notice shall be submitted by Participant or by the Corporation forthwith to the Administrator, which shall review such dispute at its next regular meeting. The resolution of such a dispute by the Administrator shall be final and binding on all parties.

14. Governing Law; Severability. This Exercise Notice is governed by the internal substantive laws, but not the choice of law rules, of the State of Delaware. In the event that any provision hereof becomes or is declared by a court of competent jurisdiction to be illegal, unenforceable or void, this Exercise Notice shall continue in full force and effect.

15. Entire Agreement. The Plan and Option Agreement are incorporated herein by reference. This Exercise Notice, the Plan, the Option Agreement and the Investment Representation Statement constitute the entire agreement of the parties with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements of the Corporation and Participant with respect to the subject matter hereof, and may not be modified adversely to the Participant's interest except by means of a writing signed by the Corporation and Participant.

Submitted by:	Accepted by:
PARTICIPANT	PPI HOLDINGS, INC.
_____	_____
Signature	By
_____	_____
Print Name	Print Name
	_____
	Title
Address:	Address:
_____	_____
_____	_____
	_____
	Date Received

EXHIBIT B

INVESTMENT REPRESENTATION STATEMENT

PARTICIPANT	:	
CORPORATION	:	PPI HOLDINGS, INC.
SECURITY	:	COMMON STOCK
AMOUNT	:	
DATE	:	

In connection with the purchase of the above-listed Securities, the undersigned Participant represents to the Corporation the following:

(a) Participant is aware of the Corporation's business affairs and financial condition and has acquired sufficient information about the Corporation to reach an informed and knowledgeable decision to acquire the Securities. Participant is acquiring these Securities for investment for Participant's own account only and not with a view to, or for resale in connection with, any "distribution" thereof within the meaning of the Securities Act of 1933, as amended (the "Securities Act").

(b) Participant acknowledges and understands that the Securities constitute "restricted securities" under the Securities Act and have not been registered under the Securities Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of Participant's investment intent as expressed herein. In this connection, Participant understands that, in the view of the Securities and Exchange Commission, the statutory basis for such exemption may be unavailable if Participant's representation was predicated solely upon a present intention to hold these Securities for the minimum capital gains period specified under tax statutes, for a deferred sale, for or until an increase or decrease in the market price of the Securities, or for a period of one (1) year or any other fixed period in the future. Participant further understands that the Securities must be held indefinitely unless they are subsequently registered under the Securities Act or an exemption from such registration is available. Participant further acknowledges and understands that the Corporation is under no obligation to register the Securities. Participant understands that the certificate evidencing the Securities shall be imprinted with any legend required under applicable state securities laws.

(c) Participant is familiar with the provisions of Rule 701 and Rule 144, each promulgated under the Securities Act, which, in substance, permit limited public resale of "restricted securities" acquired, directly or indirectly from the issuer thereof, in a non-public offering subject to the satisfaction of certain conditions. Rule 701 provides that if the issuer qualifies under Rule 701 at the time of the grant of the Option to Participant, the exercise shall be exempt from registration under the Securities Act. In the event the Corporation becomes subject to the reporting requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, ninety (90) days thereafter (or such longer period as any market stand-off agreement may require) the Securities exempt under Rule 701 may be resold, subject to the satisfaction of the applicable conditions specified by Rule 144, including in the case of affiliates (1) the availability of certain public information about the Corporation, (2) the amount of Securities being sold during any three (3) month period not exceeding specified limitations, (3) the resale being made in an unsolicited "broker's transaction", transactions directly with a "market maker" or "riskless principal transactions" (as those terms are defined under the Securities Exchange Act of 1934) and (4) the timely filing of a Form 144, if applicable.

(d) In the event that the Corporation does not qualify under Rule 701 at the time of grant of the Option, then the Securities may be resold in certain limited circumstances subject to the provisions of Rule 144, which may require (i) the availability of current public information about the Corporation; (ii) the resale to occur more than a specified period after the purchase and full payment (within the meaning of Rule 144) for the Securities; and (iii) in the case of the sale of Securities by an affiliate, the satisfaction of the conditions set forth in sections (2), (3) and (4) of the paragraph immediately above.

(e) Participant further understands that in the event all of the applicable requirements of Rule 701 or 144 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption shall be required; and that, notwithstanding the fact that Rules 144 and 701 are not exclusive, the Staff of

the Securities and Exchange Commission has expressed its opinion that persons proposing to sell private placement securities other than in a registered offering and otherwise than pursuant to Rules 144 or 701 shall have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales, and that such persons and their respective brokers who participate in such transactions do so at their own risk. Participant understands that no assurances can be given that any such other registration exemption shall be available in such event.

PARTICIPANT

Signature

Print Name

Date

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS NOT MATERIAL AND WOULD LIKELY CAUSE COMPETITIVE HARM TO THE COMPANY IF PUBLICLY DISCLOSED.

NON-EXCLUSIVE LICENSE AGREEMENT

THIS NON-EXCLUSIVE LICENSE AGREEMENT (the "Agreement") is made and effective as of January 3, 2020 (the "Effective Date") by and between Alvaxa Biosciences, Incorporated having a principal place of business at 2126 N. 51st Street, Seattle, WA 98103 ("Company"), and Fred Hutchinson Cancer Research Center ("Fred Hutch"), having a principal place of business at 1100 Fairview Avenue North, Seattle Washington 98109-1024, USA.

INTRODUCTION

WHEREAS, Company and Fred Hutch are parties to a confidentiality agreement entered into [***] ("CDA");

WHEREAS, certain Biological Materials (as defined below) were developed in the laboratory of [***] ("Principal Investigator") at Fred Hutch;

WHEREAS, Fred Hutch owns certain intellectual property rights in such innovations as listed in this Agreement, which it desires to make available for development and commercialization;

WHEREAS, Company desires that Fred Hutch grant it a non-exclusive license under such Biological Materials;

WHEREAS, Company has represented to Fred Hutch, to induce Fred Hutch to enter into this Agreement, that Company has the desire, expertise and knowledge to develop, produce, market and sell the Developed Product and that it will commit itself to use commercially reasonable efforts to develop and commercialize a program such that public benefit from the Developed Product will result; and

WHEREAS, Fred Hutch, a nonprofit corporation exempt from federal income taxation under Section 501(c)(3) of the Internal Revenue Code of 1986, as amended, organized and operated exclusively for charitable, scientific and educational purposes, has determined that this Agreement is in furtherance of its mission.

NOW, THEREFORE, in consideration of the mutual covenants and promises contained in this Agreement and other good and valuable consideration, Fred Hutch and Company agree as follows:

1. DEFINITIONS

In the terms defined and used herein, the singular will include the plural and vice versa. Undefined terms in this Agreement (other than names of parties and Article headings) which are set forth in upper case letters have the meanings assigned to such terms in the succeeding Sections of this Article 1.

1.1 "510(k)" means a premarket submission to the FD&CA (as more fully defined in 21 CFR 807.92(a)(3) et seq) and not subject to PMA and all amendments and supplements thereto filed with the FD&CA, or the equivalent application filed with any equivalent agency or governmental authority outside the United States of America (including any supra-national agency such as in the European Union), including all documents, data, and other information concerning a device product which are necessary for gaining Regulatory Approval to market and sell such medical device.

1.2 "Affiliate" means, with respect to any party, any person, corporation or other entity that, directly or indirectly through one or more intermediaries, controls, is controlled by or is under common control with such party as the case may be, for as long as such control exists. As used in this Section 1.1, "control" shall mean: (a) to possess, directly or indirectly, the power to affirmatively direct the management and policies of such person, corporation or other entity, whether through ownership of voting stock or by contract relating to voting rights or corporate governance; or (b) direct or indirect beneficial ownership of at least [***] (or such lesser percentage that is the maximum allowed to be owned by a foreign corporation in a particular jurisdiction) of the voting stock or other ownership interest in such person, corporation or other entity. Company's Affiliates as of the Effective Date are set forth on Exhibit A to this Agreement. Notwithstanding the foregoing, Fred Hutch in not an Affiliate of Company.

1.3 "Antibody" or "Antibodies" shall mean any polyclonal or monoclonal antibodies that are produced or derived from, or contained within, the Biological Material including without limitation, (i) fragments of the Antibody, (ii) genetically or biochemically modified versions of the Antibody, (iii) ribonucleotide, deoxyribonucleotide, or amino acids and/or sequences comprising thereof or which encode the sequence of the variable regions (including VHHs) of the Antibody, (iv) chimeric or humanized versions of the Antibody, and (v) any derivative of any of the aforementioned.

1.4 "Biological Material" means [***]. For purposes of clarity, Biological Materials does not include [***].

1.5 "Biologics License Application" or "BLA" means (i) a Biologics License Application as defined in the United States Federal Food, Drug and Cosmetic Act under the requirements of 21 CFR 600-680, or its successor regulation and applicable regulations promulgated thereunder from time to time, and all amendments and supplements thereto filed with the FDA or (ii) an equivalent application, including, without limitation, a marketing authorization application, filed with any equivalent foreign agency or Governmental Authority (such as the EMEA in the European Union) requiring such filing, including all documents, data and other information concerning a pharmaceutical product which are necessary for gaining Regulatory Approval to market and sell such pharmaceutical product.

1.6 "Confidential Information" of a party (the "transmitting party) means any non-public information or materials about or belonging to such a party hereto which the other party is provided, has access to, or learns hereunder that relate to the transmitting party's research or business and which are either identified as confidential at the time of disclosure or which the other party (the "receiving party") should reasonably know are deemed confidential by the transmitting party due to the nature of the information or the circumstances under which they were disclosed, including without limitation test data, samples, data, drawings, trade secrets, draft and final correspondence with the United States Patent and Trademark Office and other patent authorities, but does not include materials or information that the receiving party can, prior to its proposed use or disclosure, substantiate through written documentation: (a) is explicitly approved for public release by the transmitting party; (b) was already known by the receiving party with no obligation of confidentiality prior to receiving the information or material from the transmitting party; (c) was lawfully disclosed to the receiving party by a third party having the right to disclose it without an obligation of confidentiality; (d) was publicly known or accessible at the time of disclosure or later become part of publicly known or accessible through no fault or breach of obligation by the receiving party, its employees, or agents; or (e) was independently developed by the receiving party without use of the disclosing party's Confidential Information. Information about or included in the Biological Materials, that satisfies the foregoing definition shall be deemed Confidential Information belonging to Fred Hutch. Information about the terms, but not the existence, of this Agreement shall be deemed Confidential Information belonging to both parties.

1.7 "Developed Product" means a product or part of a product containing or derived from an Antibody in any form. For clarity, restrictions on Company's right to possess, maintain or use Biological Materials shall not in any way restrict Company's right to develop, manufacture, or commercialize Developed Products (even if any such Developed Product contains any Biological Materials).

1.8 "Epitope Tags" mean solely the following: [***].

1.9 "Field of Use" means any and all uses.

1.10 "First Commercial Sale" means the first transfer or disposition of a Developed Product for value to a party other than Company. Developed Product will be considered sold when delivered or invoiced, whichever comes first. First Commercial Sale shall not include: (a) transfers or dispositions for bona fide charitable purposes or (b) when Developed Products are distributed alone, prior to receiving Regulatory Approval for sale or use of such Developed Products, for pre-clinical, clinical, regulatory or governmental regulatory purposes.

1.11 "Governmental Authority" means any federal, state, national, supranational, local or other government, whether domestic or foreign, including any subdivision, department, agency, instrumentality, authority (including any regulatory authority), commission, board or bureau thereof, or any court, tribunal or arbitrator.

1.12 "Indication" means a generally acknowledged disease or condition, a significant manifestation of a disease or condition, or symptoms associated with a disease or condition or a risk for a disease or condition recognized by the FDA or equivalent regulatory authority for the purposes of labeling.

1.13 "IDE" means (i) an Investigational Device Exception application as defined and in 21 CFR 812 and all amendments and supplements thereto filed with the FDA or (ii) an equivalent application filed with any equivalent foreign agency or governmental authority including all documents, data and other information concerning use of an investigational diagnostic product which are necessary for gaining Regulatory Approval to ship and use such product in clinical investigations.

1.14 "IND" means (i) an Investigational New Drug application as defined and in 21 CFR 312.3 and all amendments and supplements thereto filed with the FDA or (ii) an equivalent application filed with any equivalent foreign agency or Governmental Authority including all documents, data and other information concerning use of an investigational pharmaceutical product which are necessary for gaining Regulatory Approval to ship and use such product in clinical investigations.

1.15 "Net Sales" means [***].

1.16 "New Drug Application" means a New Drug Application (as more fully defined in 21 C.F.R. 314.5 et seq.) and all amendments and supplements thereto filed with the FDA, or the equivalent application filed with any equivalent agency or governmental authority outside the United States of America (including any supra-national agency such as in the European Union), including all documents, data, and other information concerning a pharmaceutical product which are necessary for gaining Regulatory Approval to market and sell such pharmaceutical product.

1.17 "Patient-selection Assay" means [***].

1.18 "Phase I Clinical Trial" means a human clinical trial that satisfies the requirements of 21 CFR 312.21(a), or its successor regulation or its equivalent in any other jurisdiction in the Territory.

1.19 "Pre-Market Authorization" means authorization under a premarket approval application under Section 814(c) of the FD&CA requesting FDA's approval to commercially sell a medical device in the United States and its territories and possessions, including all information submitted with or incorporated by reference therein.

1.20 "Registrational Trial" means a human clinical trial that (a) satisfies the requirements of 21 C.F.R. §312.21(c), or its foreign equivalent (b) 21 C.F.R §812 and/or §814, or its foreign equivalent or (c) is otherwise intended to provide sufficient efficacy data to support the filing of a marketing authorization approval, for which the applicable Regulatory Authority has agreed could serve as the basis for a Regulatory Approval, which may include an accelerated Regulatory Approval.

1.21 "Regulatory Approval" means any approvals (including supplements, amendments, pre- and post-approvals and price approvals), licenses, registrations or authorizations (including any designations of an indication for a Developed Product as an "Orphan Product" under the Orphan Drug Act), howsoever called, of any Regulatory Authority, which are necessary for the distribution, importation, exportation, manufacture, production, use, storage, transport or clinical testing and/or sale of a Developed Product in a regulatory jurisdiction. Regulatory Approval will not include any site license for a Company manufacturing facility.

1.22 "Regulatory Authority" means the United States Federal Drug Administration ("FDA") or any counterpart of the FDA outside the United States, or other national, supra-national, regional, state or local regulatory agency, department, bureau, commission, council, or other governmental entity or government sanctioned entity with authority over the distribution, importation, exportation, manufacture, production, use, storage, transport or clinical testing and/or sale of a Developed Product hereunder.

1.23 "Regulatory Filings" means, collectively, New Drug Applications (NDAs), BLAs, NDAs, IDEs, INDs, establishment license applications (ELAs) and drug master files (DMFs), applications for designation of a Product as an "Orphan Product(s)" under the Orphan Drug Act, Orange Book filings, responses to FDA "Written Requests," or any other filings (including any foreign equivalents and further including any related correspondence and discussions), and all data contained therein, as may be required by the FDA or equivalent Regulatory Authorities for the development, manufacture or commercialization of a Developed Product hereunder.

1.24 "Targets" mean [***].

1.25 "Term" means the term of this license will begin on the Effective Date and will continue for twenty (20) years, unless otherwise terminated under Article 11 (Termination).

1.26 "Territory" means territory

1.27 "Third Party" means an individual or entity other than Fred Hutch and Company.

2. LICENSE GRANT

2.1 License Grant. Subject to the terms, conditions, and restrictions of this Agreement, Fred Hutch hereby grants to Company and its Affiliates during the Term, solely within the Territory and solely in the Field of Use, a non-exclusive license to possess, maintain, and use the Biological Materials. For purposes of clarity, sublicensing of the Biological Materials is strictly prohibited under this Agreement.

2.2 Affiliates. Company may extend rights granted to Company under this Agreement to any of its Affiliates, provided that any such Affiliate must comply with and agree to comply with all terms and conditions of this Agreement applicable to Company. Company hereby unconditionally guarantees the compliance with and performance by each of its Affiliates of all provisions of this Agreement. Company and its Affiliates who exercise rights under this Agreement will be responsible and jointly and severally liable for all payments due pursuant to this Agreement. A breach of this Agreement by any of Company's Affiliates will also be deemed a breach by Company. Company will provide Fred Hutch with an updated list of all Affiliates from time to time upon Fred Hutch's request within [***] of such request.

2.3 Limitation of Rights. No provision of this Agreement grants to Company, by implication, estoppel or otherwise, any rights other than the rights expressly granted it in this Agreement under the Biological Materials, including any license rights under any other Fred Hutch-owned technology, copyright, know-how, patent applications, or patents, or any ownership rights in the Biological Materials.

2.4 Reservation of Rights. Fred Hutch, on behalf of itself and its Affiliates and investigators, hereby reserves the right to utilize the Biological Materials for any purpose and/or to non-exclusively license the Biological Materials to any Third Party with respect to both the Territory and Field of Use. All rights not specifically granted herein are reserved to Fred Hutch and no other rights or license, whether express or implied, is granted in any of Fred Hutch's or its Affiliates' intellectual property rights.

2.5 Publication Rights. Fred Hutch reserves the right for itself and its affiliates and investigators to present, publish or otherwise disseminate the results of its and their research on the Biological Materials.

2.6 The United States Government's Rights. Biological Materials may have arose in whole or in part, from federally supported research and the federal government of the United States of America has certain rights in and to such inventions as those rights are described in Chapter 18, Title 35 of the United States Code and accompanying regulations, including Part 401, Chapter 37 of the Code of Federal Regulation. The parties' rights and obligations under this Agreement to any government-funded inventions, including the grant of license set forth in Section 2.1 (License Grant), are subject to the applicable terms of the aforementioned United States laws. The U.S. Government is entitled, as a right, under these Chapters: (a) to a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on the behalf of the U.S. Government any of the federally funded inventions throughout the world and (b) to exercise march in rights on the federally funded inventions. Company agrees that, to the extent required by Title 35 Section 204 of the United States Code, it will substantially manufacture in the United States of America all products embodying or produced through the use of a federally funded invention.

3. DUE DILIGENCE

3.1 Company will use commercially reasonable efforts and will cause any Affiliates to use commercially reasonable efforts, to develop and commercialize at least one Developed Product.

3.2 Reports. Company will also provide Fred Hutch annual reports ("Reports") within [***] summarizing the development, marketing, manufacturing, sales, and Regulatory Approval progress made since the previous year and will include sufficient detail to allow Fred Hutch to assess whether Company has met its obligations under Paragraph 3.1 to use commercially reasonable efforts. Company will provide Fred Hutch copies of any similar reports provided by Company's Affiliates.

4. CONSIDERATION

In consideration of the rights set forth herein, Company shall make the following payments to Fred Hutch:

4.1 Equity. Contemporaneously herewith and as partial consideration for the grant of the rights to Company set forth in this Agreement, Fred Hutch shall receive [***] (in the aggregate) of Company's common stock, with anti-dilution protection for up to $[***] of capital raised. Anti-dilution protection is not applicable in the event of, and shall no longer apply after, an acquisition as permitted under Section 10.1.Company hereby agrees to issue to Fred Hutch common stock on terms to be mutually agreed to between the Parties within [***]. In the event of an acquisition as permitted under Section 10.1 in which Fred Hutch is to obtain equity securities in the acquirer, Fred Hutch shall execute such agreements as are customary in connection with such transactions to be mutually agreed upon between the acquirer and Fred Hutch.

4.2 License Maintenance Fee. During the term and beginning on [***], Company will pay to Fred Hutch within [***] the license maintenance fee as follows:

[***].

4.3 Financial Milestones. Company will pay to Fred Hutch the following non-cumulative, non-creditable, and non-refundable milestone payments for the achievement of the milestone within [***] of achieving the corresponding milestone, whether achieved by Company, or its Affiliates as follows:

4.3.1 For therapeutic use:

[***]

For the above listed milestone payments, payments will only become due once per Developed Product, regardless of repeated achievement of the same milestone with such Developed Product in multiple indications. For purposes of clarity, the above milestones will be due for reach unique Target covered by a Developed Product.

4.3.2 For diagnostic use:

[***]

For the above listed milestone payments, payments will only become due once per Developed Product. For purposes of clarity, the above milestones will be due for reach unique Target covered by a Developed Product.

4.4 Consideration other than Monetary. Upon any sale, license or other distribution or disposal other than for monetary consideration, such Developed Product shall be deemed to be sold or used exclusively for money at the average price during the applicable reporting period generally achieved in arms' length transactions for such Developed Product in the country in which such sale, license or other distribution or disposal occurred when such Developed Product is sole or use alone and not with other products (or, in the absence of such sales or licenses, at the fair market value of the Developed Product).

4.5 Taxes and Other Fees. In addition to any other amounts due hereunder, Company shall pay, without any deduction to its Net Sales, all federal, state, municipal, foreign, and other governmental excise, sales, use, property, customs, import, value added and other taxes, fees and levies of any nature that are assessed upon or with respect to the development, manufacture, use, offer, sale, license distribution, export or import of the Biological Materials or otherwise arising in connection with this Agreement, other than United States taxes based on Fred Hutch's income. If any withholding tax is imposed under the laws of a country or other taxing jurisdiction outside of the United States on any amounts to be paid to Fred Hutch, such amounts will be increased by the amount of the withholding tax. Company shall be solely responsible for and shall pay any and all amounts required in the foreign location to be withheld, charged, deducted, or assessed against such payment amounts and will promptly furnish Fred Hutch with certificates evidencing payment of such amounts.

4.6 Payments; Currency. All payments under this Agreement shall be made to "Fred Hutchinson Cancer Research Center" and remitted to the address in Section 9.1. All payments shall be made in U.S. Dollars without set-off for currency conversion. With respect to Net Sales invoiced or expenses incurred in a currency other than U.S. Dollars, the Net Sales invoiced or expenses incurred shall be converted into the US Dollar equivalent using a conversion rate existing in the United States (as reported in the Wall Street Journal) on the last working day of the applicable reporting/payment period.

4.7 Unpaid Amounts; Interest; Material Breach. Any sums which have not been timely paid by Company shall accrue interest from the original due date of each sum until the date of actual receipt of payment at the annual rate of [***] or the maximum rate allowable by law, whichever is higher. Failure of Company to make timely payments under this Article 4 shall be deemed a material breach and eligible to Termination by Fred Hutch in accordance with Article 7.3.

4.8 Records; Audit. Company shall keep full, true and accurate books of accounts and other records containing all information necessary to ascertain and verify the remuneration payable to Fred Hutch hereunder for each calendar year during the Term for a period of [***] after the end of each such applicable calendar year. At any time prior to the [***], Fred Hutch shall have the right to audit, or have an agent, accountant or other representative, audit such books, records and all other material documentation of Company and its Affiliates relating to Net Sales and other payment obligations for such calendar year at reasonable times and upon reasonable notice. Fred Hutch shall only have the right to conduct one audit per calendar year. Any period of time audited by Fred Hutch shall not be subject further audit. Should the audit lead to the discovery of a discrepancy to Fred Hutch's detriment, Company shall pay the amount of the discrepancy, plus interest, within [***] of written notice with the findings of the inspection. Fred Hutch shall pay the full cost of the inspection unless the discrepancy is greater than [***] to Fred Hutch's detriment, in which case Company shall pay the reasonable cost charged by such accountant for such inspection at the time of payment of the discrepancy. The books of accounts and other records of Company will be considered the Confidential Information of Company.

5. WARRANTY DISCLAIMER

5.1 Nothing in this Agreement will be construed as:

a) A warranty or representation that anything made, used, sold or otherwise disposed of under any license granted in this Agreement is or will be free from infringement of patents, copyrights, trade secrets or other intellectual property of Third Parties;

b) Granting by implication, estoppel or otherwise any licenses under proprietary rights of Fred Hutch other than Biological Materials; or

c) An obligation to furnish any technology, technological information or other materials other than as expressly identified herein.

5.2 FRED HUTCH MAKES NO, HAS NOT MADE ANY, AND HEREBY EXPRESSLY DISCLAIMS ANY AND ALL REPRESENTATIONS OR WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, AND ASSUMES NO RESPONSIBILITIES OR LIABILITY WHATSOEVER WITH RESPECT TO THE USE, SALE OR OTHER DISPOSITION BY COMPANY OR ITS AFFILIATES, VENDEES OR OTHER AGENTS OR TRANSFEREES OR END USERS OF DEVELOPED PRODUCTS INCORPORATING OR MADE BY USE OF ANY BIOLOGICAL MATERIALS UNDER THIS AGREEMENT, FURNISHED IN CONNECTION WITH THIS AGREEMENT. THE FOREGOING ARE PROVIDED AS IS, WITHOUT WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, AND COMPANY WAIVES ALL RIGHTS TO MAKE ANY CLAIM WHATSOEVER AGAINST FRED HUTCH WITH RESPECT TO ANY OF THE FOREGOING. COMPANY SHALL BE SOLELY RESPONSIBLE FOR ALL REPRESENTATIONS AND WARRANTIES THAT COMPANY OR ITS AGENTS OR AFFILIATES MAKE TO THIRD PARTIES WITH RESPECT TO ANY OF THE FOREGOING.

6. PUBLICITY; MARKS; CONFIDENTIALITY

6.1 Publicity. Neither party will make any public press release or similar publicity announcement or disclosure regarding this Agreement without the other party's prior written consent. The disclosing party will provide copies of the proposed disclosure reasonably in advance (but in no event less than [***]) of such release or announcement for the non-disclosing party's prior review and comment. The non-disclosing party will provide its comments, if any, on such announcement as soon as practicable. Notwithstanding the foregoing, either party will be permitted, without the need for consent, to make an objective statement that this Agreement exists, without revealing its terms and conditions.

6.2 Use of Names, Logos or Symbols. No rights are granted in or to Fred Hutch's or its Affiliates' names, logos, trademarks or service marks (including, without limitation, the names "Fred Hutchinson Cancer Research Center," "FHCRC," "Fred Hutch"), or the physical likeness or names of its employees or investigators or other symbols of Fred Hutch or its Affiliates for any purpose without its prior written consent, other than as approved under Section 6.1 above.

6.3 Confidentiality Obligations. Each party agrees to maintain such Confidential Information received from the other party in strict confidence, to use it only in a manner consistent with the purpose for which it was transmitted and to not disclose it to Third Parties except to the receiving party's employees, officers, directors, consultants, contractors, subcontractors, counsel, and other agents who (a) have a need to know such information for purposes of assisting the receiving party in performing its obligations or exercising its rights hereunder, (b) have been advised of the confidential nature of such information, and (c) are under binding obligations to maintain its confidentiality pursuant to terms which are at least as stringent as those set forth herein. Each party

agrees to take the same measures to protect the Confidential Information of the other party that it takes to protect its own information of comparable sensitivity, but in no event less than reasonable care. All materials transmitted between the parties or accessed hereunder and containing Confidential Information will remain the property of the transmitting party and will, along with all copies, summaries and other tangible manifestations thereof, be immediately returned upon termination or expiration of this Agreement or upon earlier reasonable request unless previously destroyed at the transmitting party's request. Each party will, upon the other party's request, provide a written officer's certificate certifying that it has so returned or destroyed the other party's Confidential Information except that (i) one copy of such Confidential Information shall be maintained in the legal or corporate development files for the sole purpose of ascertaining its ongoing rights and responsibilities in respect of such information, and (ii) the receiving party shall not be required to destroy any computer files stored securely by the receiving party that are: (a) created during automatic system back up; or (b) retained for legal purposes by the legal division of the receiving party. Each party will be responsible for any breach of confidentiality hereunder by any of its Affiliates, consultants, employees, independent contractors, and other agents. Each party will advise the other immediately in the event that it learns or has reason to suspect that unauthorized use, access, or disclosure of the other party's Confidential Information has or is likely to occur, and will reasonably cooperate with the other party to prevent or remedy the same.

6.4 Required Disclosures. Notwithstanding the foregoing, Fred Hutch and Company may disclose each other's Confidential Information to the extent that it is required to be disclosed by law or regulation or is reasonably required to be disclosed in order to enforce rights under the Agreement, provided that the receiving party will, if reasonably possible, notify the other party of the intended disclosure in advance, reasonably cooperate with the disclosing party's effort to seek a protective order contesting or limiting the disclosure and limit its disclosure to that which is required for the foregoing purpose. Fred Hutch may also disclose the terms and conditions of this Agreement to the federal government and non-governmental funding entities and their respective agents as necessary in connection with any funding related to the Biological Materials.

6.5 Duration of Confidentiality Obligations. Notwithstanding the expiration or termination of this Agreement, the parties' respective confidentiality obligations will continue in effect for [***] after the expiration or termination of this Agreement.

6.6 Remedies. The parties each acknowledge and agree that a breach of this Article 6 may cause irreparable harm to the non-breaching party for which the award of money damages may be inadequate. The parties therefore agree that in the event of any breach of this provision, the non-breaching party will be entitled to seek injunctive relief in addition to seeking any other remedy provided in this Agreement or available at law.

7. EXPIRATION; TERMINATION

7.1 Expiration. This Agreement shall commence upon the Effective Date and expire, unless earlier terminated, upon expiration of the Term. [***]

7.2 For Convenience. Company may terminate this Agreement at any time by providing at least [***] written notice to Fred Hutch.

7.3 For Breach.

a) In the event that Company breaches any of its material obligations hereunder, Fred Hutch may at its sole option and discretion terminate this Agreement, provided that Fred Hutch will have first given Company written notice specifying the nature of the breach and Company will have failed to cure such breach within [***]. If Company has begun to cure such breach and is diligently pursuing its cure if such breach is curable, but is not capable of being cured within [***] of such notice, then Fred Hutch shall not exercise its termination rights for an additional [***] period as long as Company continues to diligently pursue its cure.

b) In the event that Fred Hutch breaches any of its material obligations hereunder, Company may, upon written notice, terminate this Agreement, provided that it will have first given Fred Hutch written notice specifying the nature of the breach and Fred Hutch will have failed to cure such breach within [***]. If Fred Hutch has begun to cure such breach and is diligently pursuing its cure if such breach is curable, but is not capable of being cured within [***] of such notice, then Company shall agree to give Fred Hutch an additional [***] period to cure such breach as long as Fred Hutch continues to diligently pursue its cure.

7.4 For Company's Bankruptcy or Insolvency. Fred Hutch may also terminate this Agreement by written notice to Company upon Company's (i) becoming insolvent or otherwise unable to pay its debts as they become due (unless Company cures such condition within [***] after receipt of written notice of a claim of insolvency by Fred Hutch); (ii) making a general assignment for the benefit of its creditors; or (iii) becoming the subject of a voluntary or involuntary petition in bankruptcy or any voluntary or involuntary proceeding relating to receivership, liquidation, or composition for benefit of creditors under domestic or foreign bankruptcy or insolvency law.

7.5 General Effect of Termination; Survival. Upon expiration or termination of this Agreement, neither party shall be relieved of any obligations incurred prior to such expiration or termination, and the obligations of the parties under any provisions which by their nature are intended to survive any such expiration or termination shall survive and continue to be enforceable, including, without limitation, those related to Articles 4 (Consideration), Article 6 (Publicity, Marks, Confidentiality), Article 7 (Expiration; Termination), Article 8 (Indemnification, Insurance, Limitation of Liability), and Article 10 (Miscellaneous). Termination or expiration of this Agreement for any reason shall not preclude any party from pursuing all rights and remedies it may have hereunder or at law or in equity with respect to any breach of this Agreement. Upon termination (but not expiration) of this Agreement, Company and Affiliates will destroy any existing Biological Materials in their possession, and provide written notification of said destruction to Fred Hutch within [***] of either the effective date of termination. Upon termination of this Agreement pursuant to either Section 7.2(a) or 7.3, Company and Affiliates will cease all further development, manufacturing and commercialization of Developed Products.

7.6 Final Report to Fred Hutch. Within [***] following either the expiration or termination of this Agreement, Company will submit a final royalty report to Fred Hutch. Any payment obligations accrued prior to such termination or expiration, including those incurred but not yet paid, will become due and payable at the same time as this final royalty report is due to Fred Hutch.

8. INDEMNIFICATION; INSURANCE; LIMITATION OF LIABILITY

8.1 Indemnification. Company will, at its sole expense, defend Fred Hutch and its Affiliates, and its and their agents, directors, trustees, officers and employees (or anyone of them) against all third party claims, suits, actions, demands, or investigations (both governmental and non-governmental) ("Third Party Claims"), and will indemnify, release and hold them harmless from and against any and all losses, damages, fees, liabilities, penalties or expenses (including, without limitation,

reasonable attorneys' fees) incurred, assessed or awarded, under any theory of liability, including, without limitation, tort, warranty or strict liability, under any such Third Party Claim to the extent arising out of or in connection with or alleged to arise out of or in connection with (i) the development, manufacture, use, commercialization, packaging, marketing or sale, lease, license or other distribution or disposition by Company and its Affiliates or any of their agents of any Developed Product hereunder, (ii) the use by Company or its Affiliates or any of their agents or transferees of Biological Materials, or the use, marketing, promotion, sale or other disposition by Company or its Affiliates or any of their agents or transferees Developed Products, or other products made by use of the Biological Materials; (iii) any representation or warranty made by Company or its Affiliates or agents to Third Parties with respect to the Biological Materials or Developed Product; (iv) any claims for death, illness or personal injury caused by the Developed Products; or (v) any asserted violation by Company or its Affiliates or any of their agents of any Export Laws or other applicable laws or regulations; or (vi) Company's breach of any representation, warranty, covenant or obligation under this Agreement (each an "Indemnifiable Claim"), except to the extent that an Indemnifiable Claim arises from or is caused by the gross negligence or willful misconduct of Fred Hutch, its Affiliates or its agents, directors, trustees, officers, or employees. Company also will reimburse Fred Hutch for its expenses, including, without limitation, reasonable attorneys' fees, in enforcing this provision.

To receive indemnification from Company, Fred Hutch must: (i) notify the Company promptly of the assertion of any Indemnifiable Claim against it; provided that any delay by the Fred Hutch in giving notice to Company of an Indemnifiable Claim will not affect Fred Hutch's right to be indemnified for such Indemnifiable Claim except to the extent that Company is actually prejudiced in its ability to defend against such Indemnifiable Claim; and, (ii) authorize and permit Company to conduct and exercise control of the defense and disposition of such claims, provided however, that Company agrees not to enter into any settlement or compromise of any claim or action in a manner that admits fault or imposes any restrictions or obligations upon an Fred Hutch or otherwise adversely affects the rights of Fred Hutch without that Fred Hutch's prior written consent, which will not be unreasonably withheld.

8.2 Insurance. Company will within [***] and continuing during the Term, carry workers' compensation insurance in the amounts statutorily required, and occurrence-based liability insurance, including products liability, general commercial liability and contractual liability, in an amount sufficient to cover the liability assumed by Company hereunder, such amount being [***]. Such policy will name Fred Hutch as an additional insured and require at least [***] notice to Fred Hutch prior to any cancellation or material change. Company will provide Fred Hutch a certificate evidencing such coverages from time to time upon Fred Hutch's reasonable request. The amounts of insurance coverage required herein will not be construed as creating any limitation on Company's indemnification obligations under this Agreement.

8.3 Exclusion of Damages; Limitation of Liability. NEITHER PARTY NOR ITS RESPECTIVE AFFILIATES SHALL BE LIABLE TO ANY PARTY FOR SPECIAL, EXEMPLARY, INDIRECT, CONSEQUENTIAL OR PUNITIVE DAMAGES, WHETHER IN CONTRACT, WARRANTY, TORT, STRICT LIABILITY OR OTHERWISE, ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT, THE BIOLOGICAL MATERIALS, AND DEVELOPED PRODUCTS, INCLUDING BUT NOT LIMITED TO DAMAGES MEASURING LOST PROFITS, GOODWILL OR BUSINESS OPPORTUNITIES, EVEN IF ADVISED IN ADVANCE OF THE POSSIBILITY OF SUCH DAMAGES.

8.4 Limitation of Liability. IN NO EVENT WILL FRED HUTCH'S AND ITS AFFILIATES' TOTAL AND CUMULATIVE LIABILITY TOGETHER OF ANY KIND, EVEN FOR DIRECT DAMAGES, ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT, THE BIOLOGICAL MATERIALS, AND DEVELOPED PRODUCTS, EXCEED THE TOTAL AMOUNT OF THE PAYMENTS ACTUALLY RECEIVED BY FRED HUTCH.

9. NOTICES

9.1 Acceptable Forms of Notice. Unless otherwise provided in this Agreement, all communications, including, notices, demands or requests required or permitted to be given hereunder, will be given in writing and will be: (a) personally delivered; (b) sent by telecopier or other electronic means of transmitting written documents; or (c) sent to the parties at their respective addresses indicated herein by registered or certified U.S. mail, return receipt requested and postage prepaid, or nationally or internationally recognized courier service. The respective addresses to be used for all such, notices, demands, requests and other communications are as follows:

If to Company:

[***]

If to Fred Hutch:

[***]

9.2 Effective Date of Notices. If personally delivered, such communication will be deemed delivered upon actual receipt. If electronically transmitted pursuant to this Section, such communication will be deemed delivered when transmitted. If sent by overnight courier pursuant to this Section, such communication will be deemed delivered within [***] of deposit with such courier. If sent by U.S. mail pursuant to this Section, such communications will be deemed delivered as of the date of delivery indicated on the receipt issued by the relevant postal service, or, if the addressee fails or refuses to accept delivery, as of the date of such failure or refusal. Any party to this Agreement may change their address for the purpose of this Agreement by giving notice in accordance with this Article.

10. MISCELLANEOUS

10.1 Assignment. This is a personal contract between Fred Hutch and Company. Fred Hutch has selected Company because of the unique qualifications of its business, reputation, competitive posture, and the character of its officers and principals. Neither this Agreement nor any of the rights or obligations hereunder may be assigned or otherwise transferred in whole or in part by Company, without the prior written consent of Fred Hutch; provided (a) either party may assign this Agreement without such consent to any Affiliate, and (b) Company may assign this Agreement in connection with the sale of all or substantially all of Company's assets to a Third Party in connection with a merger, consolidation or reorganization of Company, provided, in each case that such party is in good standing under this Agreement at such time, and that the entity to which the Agreement is assigned agrees in writing to assume all of such party's obligations under this Agreement. Any attempt to so transfer without such written consent when it is required shall be void and of no effect. Subject to the foregoing, this Agreement shall be binding upon and inure to the benefit of the parties, their legal representatives, heirs and assigns.

10.2 Export Laws. It is understood that Fred Hutch is subject to United States laws and regulations controlling the export of technical data, computer software, laboratory prototypes and other commodities, and that its obligations hereunder are contingent on compliance with all applicable United States export laws and regulations ("Export Laws"). The transfer of certain technical data and/or commodities may require a license from the cognizant agency of the United States

Government and/or written assurances by Company that Company and its Affiliates will not export data or commodities to certain foreign countries without prior approval of such agency. Fred Hutch neither represents nor warrants that a license will not be required nor that, if required, it will be issued. In any event, Company specifically agrees not to export or re-export any information and/or technical data and/or products in violation of any applicable laws and/or regulations.

10.3 Governing Law; Venue. This Agreement and all matters related thereto will be construed and interpreted under and governed by the laws of the State of Washington (without giving effect to principles and provisions thereof relating to conflict or choice of laws irrespective of the fact that any one of the parties is now or may become a resident of a different state) and the federal patent, trademark, copyright and other applicable federal laws of the United States of America, and not under the United Nations Convention on Contracts. Company and Fred Hutch hereby submit to the exclusive jurisdiction of the federal and state courts located in King County, Washington for the any dispute, claim or legal proceeding arising out of or related to this Agreement, waive any objection to such jurisdiction on the grounds of venue, forum non conveniens, or similar ground, and agree that any such dispute, claim or proceeding will be brought exclusively in one of those courts.

10.4 Force Majeure. Neither party will be liable for any default or delay in the performance of its obligations under this Agreement to the extent that such default or delay is caused, directly or indirectly, by acts of God, civil disturbance, war, fires, acts or orders of any Government agency or official, other than Company's failure to obtain Regulatory Approvals, natural catastrophes, or any other circumstances beyond such party's reasonable control. In any such event, the non-performing party will be excused from any further performance or observance of the obligation so affected only for as long as such circumstances prevail and such party continues to use commercially reasonable efforts to recommence performance or observance as soon as practicable. Any party whose performance is delayed or prevented by any cause or condition within the purview of this Section will promptly notify the other party thereof, the anticipated duration of the non-performance, and the action(s) being taken to overcome or mitigate the delay or failure to perform. Notwithstanding the foregoing, under no circumstances will any delay or nonperformance be excused or forgiven (a) if the cause of the nonperformance could have been prevented or avoided by the exercise of reasonable diligence; (b) if the party whose performance is delayed or prevented fails to use reasonable diligence to promptly overcome and mitigate the delay or failure to perform; or (c) if the nonperformance is caused by the negligence, intentional conduct or misconduct of the nonperforming party. The parties understand and agree that governmental acts, orders or restrictions do not constitute excusing events hereunder if such acts, orders or restrictions are issued due to either party's alleged failure to conform to applicable laws, regulations or other governmental requirements. If the delay or non-performance lasts for more than [***], then the non-affected party may terminate this Agreement upon written notice with respect to the countries in the Territory affected by the delay or non-performance.

10.5 Severability. Whenever possible, each provision of this Agreement shall be interpreted in such manner as to be effective and valid under applicable law. The provisions set forth in this Agreement will be considered to be severable and independent of each other. In the event that any provision of this Agreement will be determined to be unenforceable by a court of competent jurisdiction with respect to any in any situation or jurisdiction, such determination will not be deemed to affect the enforceability of any other provision or the same provision in any other situation or jurisdiction and the parties agree that any court making such a determination is hereby requested and empowered to limit or modify such provision and to substitute for such unenforceable provision a valid and enforceable provision that comes closest to expressing the intention of the unenforceable provision, and the parties agree that such substitute provision will be as enforceable in said jurisdiction and

situation as if set forth initially in this Agreement. Any such substitute provision will be applicable only in the country and situation in which the original provision was determined to be unenforceable. However, in the event that such court declines to modify such provisions, then the parties will in good faith negotiate a modification to the provision to the minimum extent necessary to render it valid and enforceable in conformity with the parties' intent as manifested herein.

10.6 Construction. This Agreement will be construed and fairly interpreted in accordance with its terms, without any strict construction in favor of or against any party. Ambiguities will not be interpreted against any party because of its role in preparing the Agreement. In construing or interpreting this Agreement, the word "or" will not be construed as exclusive, and the word "including" will not be limiting. The use of the singular or plural form will include the other form and the use of the masculine, feminine or neuter gender will include the other genders. All captions and headings in this Agreement are for convenience only and will not be considered as substantive parts of this Agreement or determinative in the interpretation of this Agreement. Unless otherwise stated, references in this Agreement to sections or exhibits refer to sections and exhibits of this Agreement. Except where specifically stated to the contrary, whenever this Agreement requires any consent or approval to be given by either party, or either party must or may exercise discretion, the parties agree that such consent or approval will not be unreasonably withheld or delayed, and that such discretion will be reasonably exercised. All exhibits and addendums to this Agreement will be deemed incorporated by reference and part of this Agreement.

10.7 Independent Contractors. The relationship between Fred Hutch and Company created by this Agreement is solely that of independent contractors. This Agreement does not create any agency, distributorship, employee-employer, partnership, joint venture or similar business relationship between the parties. No party is a legal representative of another party, and no party has the right to assume or create any obligation, representation, warranty or guarantee, express or implied, on behalf of another party for any purpose whatsoever. Each party will use its own discretion and will have complete and authoritative control over its employees and the details of performing its obligations under this Agreement.

10.8 Entire Agreement; Amendment. This Agreement, together with its Exhibits, which are hereby incorporated by reference, contains the full understanding of the parties with respect to the subject matter hereof and supersedes all prior understandings and writings relating thereto. However, the CDA shall not be superseded by this Agreement. The parties' obligations under this Agreement shall be in addition to, and not in lieu of, the parties' obligations under the CDA; to extent of any conflict or inconsistency between the CDA and the provisions of this Agreement relating to Confidential Information, this Agreement shall govern. This Agreement may not be modified or amended except by a writing signed by both parties identified as an amendment to this Agreement.

10.9 Waiver. No waiver by any party of any of the provisions hereof shall be effective unless explicitly set forth in writing and signed by the waiving party. Except as otherwise set forth in this Agreement, no failure to exercise, or delay in exercising, any rights, remedy, power or privilege arising from this Agreement shall operate or be construed as a waiver thereof, nor shall any single or partial exercise of any right, remedy, power or privilege hereunder preclude any other or further exercise thereof or the exercise of any other right, remedy, power or privilege.

10.10 Counterparts. This Agreement may be executed in separate counterparts, each of which so executed and delivered will constitute an original, but all such counterparts will together constitute one and the same instrument. Any such counterpart may comprise one or more duplicates or duplicate signature pages any of which may be executed by less than all of the parties provided that each party executes at least one such duplicate or duplicate signature page. A facsimile, scanned, or photocopied signature (and any signature duplicated in another similar manner) identical to the original will be considered an original signature.

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS NOT MATERIAL AND WOULD LIKELY CAUSE COMPETITIVE HARM TO THE COMPANY IF PUBLICLY DISCLOSED.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their properly and duly authorized officers or representatives as of the Effective Date.

Fred Hutch

By: /s/ Nicole C. Robinson, PhD
Print Name: Nicole C. Robinson, PhD
Title: VP & Deputy COO
Date: January 3, 2020

Company

By: /s/ Mai-Hope Le, MD
Print Name: Mai-Hope Le, MD
Title: President & CEO
Date: January 6, 2020

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS NOT MATERIAL AND WOULD LIKELY CAUSE COMPETITIVE HARM TO THE COMPANY IF PUBLICLY DISCLOSED.

Exhibit A
Company's Affiliates

[***]

FIRST AMENDMENT TO NON-EXCLUSIVE LICENSE AGREEMENT

THIS FIRST AMENDMENT TO NON-EXCLUSIVE LICENSE AGREEMENT ("**First Amendment**") is made and entered into as of March 30, 2020 (the "**Amendment Date**"), by and between **Alvaxa Biosciences, Inc.**, having an address at 2126 N. 51' Street, Seattle, WA 98103 ("**Company**") and **Fred Hutchinson Cancer Research Center**, having an address at 1100 Fairview Avenue North, Seattle, WA 98109 ("**Fred Hutch**"). Each of Company and Fred Hutch may be referred to herein as a "**Party**" or collectively as the "**Parties.**"

WHEREAS, Company and Fred Hutch are parties to that certain Non-Exclusive License Agreement dated January 3, 2020 (the "**License Agreement**"), pursuant to which, among other things, Fred Hutch granted Company a non-exclusive license to possess, maintain, and use certain biological materials; and

WHEREAS, the Parties wish to amend the License Agreement to correct the territory of the licensed rights granted to Company under the License Agreement.

NOW, THEREFORE, in consideration of the foregoing recitals and the mutual promises herein made and exchanged, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

1. Defined Terms. Capitalized terms used but not otherwise defined in this Amendment shall have the meanings provided in the License Agreement.

2. Amendment of Article 1 (Definitions). Effective as of the Effective Date of the License Agreement, Section 1.26 is hereby amended by replacing Section 1.26 with the following text.

"1.26 "Territory" means worldwide."

3. MISCELLANEOUS.

(a) Effect of Amendment. The provisions of the License Agreement are hereby amended by the provisions of this First Amendment. Except as expressly amended herein, the License Agreement shall remain in full force and effect in accordance with its terms.

(b) Counterparts. This First Amendment may be executed in counterparts, each of which shall be deemed an original document, and all of which, together with this writing, shall be deemed one instrument. This First Amendment may be executed by electronic, facsimile or PDF signatures, which signatures shall have the same force and effect as original signatures.

Signature Page to Follow

IN WITNESS WHEREOF, the Parties, intending to be legally bound, have caused this First Amendment to be executed by their duly authorized representatives.

Alvaxa Biosciences, Inc.

By: */s/ Mai Hope Le*
Name: Mai Hope Le, MD
Title: President and CEO

Fred Hutchinson Cancer Research Center

By: */s/ Patrick Shelby*
Name: Patrick Shelby
Title: Director of Technology Management

Exhibit 10.4

INDEMNIFICATION AGREEMENT

THIS INDEMNIFICATION AGREEMENT (the "**Agreement**") is made and entered into as of January 10, 2020 between Sensei Biotherapeutics, Inc., a Delaware corporation (the "**Company**"), and ("**Indemnitee**").

WITNESSETH THAT:

WHEREAS, highly competent persons have become more reluctant to serve corporations as directors or in other capacities unless they are provided with adequate protection through insurance or adequate indemnification against inordinate risks of claims and actions against them arising out of their service to and activities on behalf of the corporation;

WHEREAS, the Board of Directors of the Company (the "**Board**") has determined that, in order to attract and retain qualified individuals, the Company will attempt to maintain on an ongoing basis, at its sole expense, liability insurance to protect persons serving the Company and its subsidiaries from certain liabilities. Although the furnishing of such insurance has been a customary and widespread practice among United States-based corporations and other business enterprises, the Company believes that, given current market conditions and trends, such insurance may be available to it in the future only at higher premiums and with more exclusions. At the same time, directors, officers, and other persons in service to corporations or business enterprises are being increasingly subjected to expensive and time-consuming litigation relating to, among other things, matters that traditionally would have been brought only against the Company or business enterprise itself. The Bylaws and Certificate of Incorporation of the Company require indemnification of the officers and directors of the Company. Indemnitee may also be entitled to indemnification pursuant to the General Corporation Law of the State of Delaware ("**DGCL**"). The Bylaws and Certificate of Incorporation and the DGCL expressly provide that the indemnification provisions set forth therein are not exclusive, and thereby contemplate that contracts may be entered into between the Company and members of the Board, officers and other persons with respect to indemnification;

WHEREAS, the uncertainties relating to such insurance and to indemnification have increased the difficulty of attracting and retaining such persons;

WHEREAS, the Board has determined that the increased difficulty in attracting and retaining such persons is detrimental to the best interests of the Company's stockholders and that the Company should act to assure such persons that there will be increased certainty of such protection in the future;

WHEREAS, it is reasonable, prudent and necessary for the Company contractually to obligate itself to indemnify, and to advance expenses on behalf of, such persons to the fullest extent permitted by applicable law so that they will serve or continue to serve the Company free from undue concern that they will not be so indemnified;

WHEREAS, this Agreement is a supplement to and in furtherance of the Bylaws and Certificate of Incorporation of the Company and any resolutions adopted pursuant thereto, and shall not be deemed a substitute therefor, nor to diminish or abrogate any rights of Indemnitee thereunder; and

WHEREAS, Indemnitee does not regard the protection available under the Company's Bylaws and Certificate of Incorporation and insurance as adequate in the present circumstances, and may not be willing to serve as an officer or director without adequate protection, and the Company desires Indemnitee to serve in such capacity. Indemnitee is willing to serve, continue to serve and to take on additional service for or on behalf of the Company on the condition that he be so indemnified; and

[**WHEREAS**, Indemnitee has certain rights to indemnification and/or insurance provided by which Indemnitee and intend to be secondary to the primary obligation of the Company to indemnify Indemnitee as provided herein, with the Company's acknowledgement and agreement to the foregoing being a material condition to Indemnitee's willingness to serve on the Board.]

NOW, THEREFORE, in consideration of Indemnitee's agreement to serve as a director from and after the date hereof, the parties hereto agree as follows:

1. Indemnity of Indemnitee. The Company hereby agrees to hold harmless and indemnify Indemnitee to the fullest extent permitted by law, as such may be amended from time to time. In furtherance of the foregoing indemnification, and without limiting the generality thereof.

(a) Proceedings Other Than Proceedings by or in the Right of the Company. Indemnitee shall be entitled to the rights of indemnification provided in this Section 1(a) if, by reason of his Corporate Status (as hereinafter defined), the Indemnitee is, or is threatened to be made, a party to or participant in any Proceeding (as hereinafter defined) other than a Proceeding by or in the right of the Company. Pursuant to this Section 1(a), Indemnitee shall be indemnified against all Expenses (as hereinafter defined), judgments, penalties, fines and amounts paid in settlement actually and reasonably incurred by him, or on his behalf, in connection with such Proceeding or any claim, issue or matter therein, if the Indemnitee acted in good faith and in a manner the Indemnitee reasonably believed to be in or not opposed to the best interests of the Company, and with respect to any criminal Proceeding, had no reasonable cause to believe the Indemnitee's conduct was unlawful.

(b) Proceedings by or in the Right of the Company. Indemnitee shall be entitled to the rights of indemnification provided in this Section 1(b) if, by reason of his Corporate Status, the Indemnitee is, or is threatened to be made, a party to or participant in any Proceeding brought by or in the right of the Company. Pursuant to this Section 1(b), Indemnitee shall be indemnified against all Expenses actually and reasonably incurred by the Indemnitee, or on the Indemnitee's behalf, in connection with such Proceeding if the Indemnitee acted in good faith and in a manner the Indemnitee reasonably believed to be in or not opposed to the best interests of the Company; provided, however, if applicable law so provides, no indemnification against such Expenses shall be made in respect of any claim, issue or matter in such Proceeding as to which Indemnitee shall have been adjudged to be liable to the Company unless and to the extent that the Court of Chancery of the State of Delaware shall determine that such indemnification may be made.

(c) Indemnification for Expenses of a Party Who is Wholly or Partly Successful. Notwithstanding any other provision of this Agreement, to the extent that Indemnitee is, by reason of his Corporate Status, a party to and is successful, on the merits or otherwise, in any Proceeding, he shall be indemnified to the maximum extent permitted by law, as such may be amended from time to time, against all Expenses actually and reasonably incurred by him or on his behalf in connection therewith. If Indemnitee is not wholly successful in such Proceeding but is successful, on the merits or otherwise, as to one or more but less than all claims, issues or matters in such Proceeding, the Company shall indemnify Indemnitee against all Expenses actually and reasonably incurred by him or on his behalf in connection with each successfully resolved claim, issue or matter. For purposes of this Section and without limitation, the termination of any claim, issue or matter in such a Proceeding by dismissal, with or without prejudice, shall be deemed to be a successful result as to such claim, issue or matter.

(d) [Indemnification of Appointing Stockholder. If (i) Indemnitee is or was affiliated with one or more venture capital funds that has invested in the Company (an "**Appointing Stockholder**"), (ii) the Appointing Stockholder is, or is threatened to be made, a party to or a participant in any Proceeding, and (iii) the Appointing Stockholder's involvement in the Proceeding results from any claim based on the Indemnitee's service to the Company as a director or other fiduciary of the Company, the Appointing Stockholder will be entitled to indemnification hereunder for Expenses to the same extent as Indemnitee, and the terms of this Agreement as they relate to procedures for indemnification of Indemnitee and advancement of Expenses shall apply to any such indemnification of Appointing Stockholder.]

2. Additional Indemnity. In addition to, and without regard to any limitations on, the indemnification provided for in Section 1 of this Agreement, the Company shall and hereby does indemnify and hold harmless Indemnitee against all Expenses, judgments, penalties, fines and amounts paid in settlement actually and reasonably incurred by him or on his behalf if, by reason of his Corporate Status, he is, or is threatened to be made, a party to or participant in any Proceeding (including a Proceeding by or in the right of the Company), including, without limitation, all liability arising out of the negligence or active or passive wrongdoing of Indemnitee. The only limitation that shall exist upon the Company's obligations pursuant to this Agreement shall be that the Company shall not be obligated to make any payment to Indemnitee that is finally determined (under the procedures, and subject to the presumptions, set forth in Sections 6 and 7 hereof) to be unlawful.

3. Contribution.

(a) Whether or not the indemnification provided in Sections 1 and 2 hereof is available, in respect of any threatened, pending or completed action, suit or proceeding in which the Company is jointly liable with Indemnitee (or would be if joined in such action, suit or proceeding), the Company shall pay, in the first instance, the entire amount of any judgment or settlement of such action, suit or proceeding without requiring Indemnitee to contribute to such payment and the Company hereby waives and relinquishes any right of contribution it may have against Indemnitee. The Company shall not enter into any settlement of any action, suit or proceeding in which the Company is jointly liable with Indemnitee (or would be if joined in such action, suit or proceeding) unless such settlement provides for a full and final release of all claims asserted against Indemnitee.

(b) Without diminishing or impairing the obligations of the Company set forth in the preceding subparagraph, if, for any reason, Indemnitee shall elect or be required to pay all or any portion of any judgment or settlement in any threatened, pending or completed action, suit or proceeding in which the Company is jointly liable with Indemnitee (or would be if joined in

such action, suit or proceeding), the Company shall contribute to the amount of Expenses, judgments, fines and amounts paid in settlement actually and reasonably incurred and paid or payable by Indemnitee in proportion to the relative benefits received by the Company and all officers, directors or employees of the Company, other than Indemnitee, who are jointly liable with Indemnitee (or would be if joined in such action, suit or proceeding), on the one hand, and Indemnitee, on the other hand, from the transaction or events from which such action, suit or proceeding arose; provided, however, that the proportion determined on the basis of relative benefit may, to the extent necessary to conform to law, be further adjusted by reference to the relative fault of the Company and all officers, directors or employees of the Company other than Indemnitee who are jointly liable with Indemnitee (or would be if joined in such action, suit or proceeding), on the one hand, and Indemnitee, on the other hand, in connection with the transaction or events that resulted in such expenses, judgments, fines or settlement amounts, as well as any other equitable considerations which applicable law may require to be considered. The relative fault of the Company and all officers, directors or employees of the Company, other than Indemnitee, who are jointly liable with Indemnitee (or would be if joined in such action, suit or proceeding), on the one hand, and Indemnitee, on the other hand, shall be determined by reference to, among other things, the degree to which their actions were motivated by intent to gain personal profit or advantage, the degree to which their liability is primary or secondary and the degree to which their conduct is active or passive.

(c) The Company hereby agrees to fully indemnify and hold Indemnitee harmless from any claims of contribution which may be brought by officers, directors, or employees of the Company, other than Indemnitee, who may be jointly liable with Indemnitee.

(d) To the fullest extent permissible under applicable law, if the indemnification provided for in this Agreement is unavailable to Indemnitee for any reason whatsoever, the Company, in lieu of indemnifying Indemnitee, shall contribute to the amount incurred by Indemnitee, whether for judgments, fines, penalties, excise taxes, amounts paid or to be paid in settlement and/or for Expenses, in connection with any claim relating to an indemnifiable event under this Agreement, in such proportion as is deemed fair and reasonable in light of all of the circumstances of such Proceeding in order to reflect (i) the relative benefits received by the Company and Indemnitee as a result of the event(s) and/or transaction(s) giving cause to such Proceeding and/or (ii) the relative fault of the Company (and its directors, officers, employees and agents) and Indemnitee in connection with such event(s) and/or transaction(s).

4. Indemnification for Expenses of a Witness. Notwithstanding any other provision of this Agreement, to the extent that Indemnitee is, by reason of his Corporate Status, a witness, or is made (or asked) to respond to discovery requests, in any Proceeding to which Indemnitee is not a party, he shall be indemnified against all Expenses actually and reasonably incurred by him or on his behalf in connection therewith.

5. Advancement of Expenses. Notwithstanding any other provision of this Agreement, the Company shall advance all Expenses incurred by or on behalf of Indemnitee in connection with any Proceeding by reason of Indemnitee's Corporate Status within thirty (30) days after the receipt by the Company of a statement or statements from Indemnitee requesting such advance or advances from time to time, whether prior to or after final disposition of such Proceeding. Such statement or statements shall reasonably evidence the Expenses incurred by Indemnitee and shall include or be preceded or accompanied by a written undertaking by or on behalf of Indemnitee to repay any Expenses advanced if it shall ultimately be determined that Indemnitee is not entitled to be indemnified against such Expenses. Any advances and undertakings to repay pursuant to this Section 5 shall be unsecured and interest free.

6. Procedures and Presumptions for Determination of Entitlement to Indemnification. It is the intent of this Agreement to secure for Indemnitee rights of indemnity that are as favorable as may be permitted under the DGCL and public policy of the State of Delaware. Accordingly, the parties agree that the following procedures and presumptions shall apply in the event of any question as to whether Indemnitee is entitled to indemnification under this Agreement:

(a) To obtain indemnification under this Agreement, Indemnitee shall submit to the Company a written request, including therein or therewith such documentation and information as is reasonably available to Indemnitee and is reasonably necessary to determine whether and to what extent Indemnitee is entitled to indemnification. The Secretary of the Company shall, promptly upon receipt of such a request for indemnification, advise the Board in writing that Indemnitee has requested indemnification. Notwithstanding the foregoing, any failure of Indemnitee to provide such a request to the Company, or to provide such a request in a timely fashion, shall not relieve the Company of any liability that it may have to Indemnitee unless, and to the extent that, such failure actually and materially prejudices the interests of the Company.

(b) Upon written request by Indemnitee for indemnification pursuant to the first sentence of Section 6(a) hereof, a determination with respect to Indemnitee's entitlement thereto shall be made in the specific case by one of the following four methods, which shall be at the election of the Board (1) by a majority vote of the disinterested directors, even though less than a quorum, (2) by a committee of disinterested directors designated by a majority vote of the disinterested directors, even though less than a quorum, (3) if there are no disinterested directors or if the disinterested directors so direct, by independent legal counsel in a written opinion to the Board, a copy of which shall be delivered to the Indemnitee, or (4) if so directed by the Board, by the stockholders of the Company. For purposes hereof, disinterested directors are those members of the Board who are not parties to the action, suit or proceeding in respect of which indemnification is sought by Indemnitee.

(c) If the determination of entitlement to indemnification is to be made by Independent Counsel pursuant to Section 6(b) hereof, the Independent Counsel shall be selected as provided in this Section 6(c). The Independent Counsel shall be selected by the Board. Indemnitee may, within ten (10) days after such written notice of selection shall have been given, deliver to the Company a written objection to such selection; provided, however, that such objection may be asserted only on the ground that the Independent Counsel so selected does not meet the requirements of "**Independent Counsel**" as defined in Section 13 of this Agreement, and the objection shall set forth with particularity the factual basis of such assertion. Absent a proper and timely objection, the person so selected shall act as Independent Counsel. If a written objection is made and substantiated, the Independent Counsel selected may not serve as Independent Counsel unless and until such objection is withdrawn or a court has determined that such objection is without merit. If, within twenty (20) days after submission by Indemnitee of a written request for indemnification pursuant to Section 6(a) hereof, no Independent Counsel shall have been selected and not objected to, either the Company or Indemnitee may petition the Court of Chancery of the State of Delaware or other court of competent jurisdiction for resolution of any objection which shall have been made by the Indemnitee to the Company's selection of

Independent Counsel and/or for the appointment as Independent Counsel of a person selected by the court or by such other person as the court shall designate, and the person with respect to whom all objections are so resolved or the person so appointed shall act as Independent Counsel under Section 6(b) hereof. The Company shall pay any and all reasonable fees and expenses of Independent Counsel incurred by such Independent Counsel in connection with acting pursuant to Section 6(b) hereof, and the Company shall pay all reasonable fees and expenses incident to the procedures of this Section 6(c), regardless of the manner in which such Independent Counsel was selected or appointed.

(d) In making a determination with respect to entitlement to indemnification hereunder, the person or persons or entity making such determination shall presume that Indemnitee is entitled to indemnification under this Agreement. Anyone seeking to overcome this presumption shall have the burden of proof and the burden of persuasion by clear and convincing evidence. Neither the failure of the Company (including by its directors or independent legal counsel) to have made a determination prior to the commencement of any action pursuant to this Agreement that indemnification is proper in the circumstances because Indemnitee has met the applicable standard of conduct, nor an actual determination by the Company (including by its directors or independent legal counsel) that Indemnitee has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that Indemnitee has not met the applicable standard of conduct.

(e) Indemnitee shall be deemed to have acted in good faith if Indemnitee's action is based on the records or books of account of the Enterprise (as hereinafter defined), including financial statements, or on information supplied to Indemnitee by the officers of the Enterprise in the course of their duties, or on the advice of legal counsel for the Enterprise or on information or records given or reports made to the Enterprise by an independent certified public accountant or by an appraiser or other expert selected with reasonable care by the Enterprise. In addition, the knowledge and/or actions, or failure to act, of any director, officer, agent or employee of the Enterprise shall not be imputed to Indemnitee for purposes of determining the right to indemnification under this Agreement. Whether or not the foregoing provisions of this Section 6(e) are satisfied, it shall in any event be presumed that Indemnitee has at all times acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the Company. Anyone seeking to overcome this presumption shall have the burden of proof and the burden of persuasion by clear and convincing evidence.

(f) If the person, persons or entity empowered or selected under Section 6 to determine whether Indemnitee is entitled to indemnification shall not have made a determination within sixty (60) days after receipt by the Company of the request therefor, the requisite determination of entitlement to indemnification shall be deemed to have been made and Indemnitee shall be entitled to such indemnification absent (i) a misstatement by Indemnitee of a material fact, or an omission of a material fact necessary to make Indemnitee's statement not materially misleading, in connection with the request for indemnification, or (ii) a prohibition of such indemnification under applicable law; provided, however, that such sixty (60) day period may be extended for a reasonable time, not to exceed an additional thirty (30) days, if the person, persons or entity making such determination with respect to entitlement to indemnification in good faith requires such additional time to obtain or evaluate documentation and/or information relating thereto; and provided further, that the foregoing provisions of this Section 6(f) shall not apply if the determination of entitlement to indemnification is to be made by the stockholders pursuant to Section 6(b) of this Agreement and if (A) within fifteen (15) days after receipt by the

Company of the request for such determination, the Board or the Disinterested Directors, if appropriate, resolve to submit such determination to the stockholders for their consideration at an annual meeting thereof to be held within seventy five (75) days after such receipt and such determination is made thereat, or (B) a special meeting of stockholders is called within fifteen (15) days after such receipt for the purpose of making such determination, such meeting is held for such purpose within sixty (60) days after having been so called and such determination is made thereat.

(g) Indemnitee shall cooperate with the person, persons or entity making such determination with respect to Indemnitee's entitlement to indemnification, including providing to such person, persons or entity upon reasonable advance request any documentation or information which is not privileged or otherwise protected from disclosure and which is reasonably available to Indemnitee and reasonably necessary to such determination. Any Independent Counsel, member of the Board or stockholder of the Company shall act reasonably and in good faith in making a determination regarding the Indemnitee's entitlement to indemnification under this Agreement. Any costs or expenses (including attorneys' fees and disbursements) incurred by Indemnitee in so cooperating with the person, persons or entity making such determination shall be borne by the Company (irrespective of the determination as to Indemnitee's entitlement to indemnification) and the Company hereby indemnifies and agrees to hold Indemnitee harmless therefrom.

(h) The Company acknowledges that a settlement or other disposition short of final judgment may be successful if it permits a party to avoid expense, delay, distraction, disruption and uncertainty. In the event that any action, claim or proceeding to which Indemnitee is a party is resolved in any manner other than by adverse judgment against Indemnitee (including, without limitation, settlement of such action, claim or proceeding with or without payment of money or other consideration) it shall be presumed that Indemnitee has been successful on the merits or otherwise in such action, suit or proceeding. Anyone seeking to overcome this presumption shall have the burden of proof and the burden of persuasion by clear and convincing evidence.

(i) The termination of any Proceeding or of any claim, issue or matter therein, by judgment, order, settlement or conviction, or upon a plea of nolo contendere or its equivalent, shall not (except as otherwise expressly provided in this Agreement) of itself adversely affect the right of Indemnitee to indemnification or create a presumption that Indemnitee did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the Company or, with respect to any criminal Proceeding, that Indemnitee had reasonable cause to believe that his conduct was unlawful.

7. Remedies of Indemnitee.

(a) In the event that (i) a determination is made pursuant to Section 6 of this Agreement that Indemnitee is not entitled to indemnification under this Agreement, (ii) advancement of Expenses is not timely made pursuant to Section 5 of this Agreement, (iii) no determination of entitlement to indemnification is made pursuant to Section 6(b) of this Agreement within ninety (90) days after receipt by the Company of the request for indemnification, (iv) payment of indemnification is not made pursuant to this Agreement within ten (10) days after receipt by the Company of a written request therefor, or (v) payment of indemnification is not made within ten (10) days after a determination has been made that

Indemnitee is entitled to indemnification or such determination is deemed to have been made pursuant to Section 6 of this Agreement, Indemnitee shall be entitled to an adjudication in an appropriate court of the State of Delaware, or in any other court of competent jurisdiction, of Indemnitee's entitlement to such indemnification. Indemnitee shall commence such proceeding seeking an adjudication within one hundred eighty (180) days following the date on which Indemnitee first has the right to commence such proceeding pursuant to this Section 7(a). The Company shall not oppose Indemnitee's right to seek any such adjudication.

(b) In the event that a determination shall have been made pursuant to Section 6(b) of this Agreement that Indemnitee is not entitled to indemnification, any judicial proceeding commenced pursuant to this Section 7 shall be conducted in all respects as a de novo trial on the merits, and Indemnitee shall not be prejudiced by reason of the adverse determination under Section 6(b).

(c) If a determination shall have been made pursuant to Section 6(b) of this Agreement that Indemnitee is entitled to indemnification, the Company shall be bound by such determination in any judicial proceeding commenced pursuant to this Section 7, absent (i) a misstatement by Indemnitee of a material fact, or an omission of a material fact necessary to make Indemnitee's misstatement not materially misleading in connection with the application for indemnification, or (ii) a prohibition of such indemnification under applicable law.

(d) In the event that Indemnitee, pursuant to this Section 7, seeks a judicial adjudication of his rights under, or to recover damages for breach of, this Agreement, or to recover under any directors' and officers' liability insurance policies maintained by the Company, the Company shall pay on his behalf, in advance, any and all expenses (of the types described in the definition of Expenses in Section 13 of this Agreement) actually and reasonably incurred by him in such judicial adjudication, regardless of whether Indemnitee ultimately is determined to be entitled to such indemnification, advancement of expenses or insurance recovery.

(e) The Company shall be precluded from asserting in any judicial proceeding commenced pursuant to this Section 7 that the procedures and presumptions of this Agreement are not valid, binding and enforceable and shall stipulate in any such court that the Company is bound by all the provisions of this Agreement. The Company shall indemnify Indemnitee against any and all Expenses and, if requested by Indemnitee, shall (within ten (10) days after receipt by the Company of a written request therefore) advance, to the extent not prohibited by law, such expenses to Indemnitee, which are incurred by Indemnitee in connection with any action brought by Indemnitee for indemnification or advance of Expenses from the Company under this Agreement or under any directors' and officers' liability insurance policies maintained by the Company, regardless of whether Indemnitee ultimately is determined to be entitled to such indemnification, advancement of Expenses or insurance recovery, as the case may be.

(f) Notwithstanding anything in this Agreement to the contrary, no determination as to entitlement to indemnification under this Agreement shall be required to be made prior to the final disposition of the Proceeding.

8. Non-Exclusivity; Survival of Rights; Insurance; Primacy of Indemnification; Subrogation.

(a) The rights of indemnification as provided by this Agreement shall not be deemed exclusive of any other rights to which Indemnitee may at any time be entitled under applicable law, the Certificate of Incorporation, the By-laws, any agreement, a vote of stockholders, a resolution of directors of the Company, or otherwise. No amendment, alteration or repeal of this Agreement or of any provision hereof shall limit or restrict any right of Indemnitee under this Agreement in respect of any action taken or omitted by such Indemnitee in his Corporate Status prior to such amendment, alteration or repeal. To the extent that a change in the DGCL, whether by statute or judicial decision, permits greater indemnification than would be afforded currently under the Certificate of Incorporation, By-laws and this Agreement, it is the intent of the parties hereto that Indemnitee shall enjoy by this Agreement the greater benefits so afforded by such change. No right or remedy herein conferred is intended to be exclusive of any other right or remedy, and every other right and remedy shall be cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or employment of any right or remedy hereunder, or otherwise, shall not prevent the concurrent assertion or employment of any other right or remedy.

(b) To the extent that the Company maintains an insurance policy or policies providing liability insurance for directors, officers, employees, or agents or fiduciaries of the Company or of any other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise that such person serves at the request of the Company, Indemnitee shall be covered by such policy or policies in accordance with its or their terms to the maximum extent of the coverage available for any director, officer, employee, agent or fiduciary under such policy or policies. If, at the time of the receipt of a notice of a claim pursuant to the terms hereof, the Company has directors' and officers' liability insurance in effect, the Company shall give prompt notice of the commencement of such proceeding to the insurers in accordance with the procedures set forth in the respective policies. The Company shall thereafter take all necessary or desirable action to cause such insurers to pay, on behalf of the Indemnitee, all amounts payable as a result of such proceeding in accordance with the terms of such policies.

(c) [The Company hereby acknowledges that Indemnitee has certain rights to indemnification, advancement of expenses and/or insurance provided by and certain of its affiliates (collectively, the "**Fund Indemnitors**"). The Company hereby agrees (i) that it is the indemnitor of first resort (*i.e.*, its obligations to Indemnitee are primary and any obligation of the Fund Indemnitors to advance expenses or to provide indemnification for the same expenses or liabilities incurred by Indemnitee are secondary), (ii) that it shall be required to advance the full amount of expenses incurred by Indemnitee and shall be liable for the full amount of all Expenses, judgments, penalties, fines and amounts paid in settlement to the extent legally permitted and as required by the terms of this Agreement and the Certificate of Incorporation or Bylaws of the Company (or any other agreement between the Company and Indemnitee), without regard to any rights Indemnitee may have against the Fund Indemnitors, and (iii) that it irrevocably waives, relinquishes and releases the Fund Indemnitors from any and all claims against the Fund Indemnitors for contribution, subrogation or any other recovery of any kind in respect thereof. The Company further agrees that no advancement or payment by the Fund Indemnitors on behalf of Indemnitee with respect to any claim for which Indemnitee has sought indemnification from the Company shall affect the foregoing and the Fund Indemnitors shall have a right of contribution and/or be subrogated to the extent of such advancement or payment to all of the rights of recovery of Indemnitee against the Company. The Company and Indemnitee agree that the Fund Indemnitors are express third party beneficiaries of the terms of this Section 8(c).]

(d) [Except as provided in paragraph (c) above, in] [In] the event of any payment under this Agreement, the Company shall be subrogated to the extent of such payment to all of the rights of recovery of Indemnitee [other than against the Fund Indemnitors)], who shall execute all papers required and take all action necessary to secure such rights, including execution of such documents as are necessary to enable the Company to bring suit to enforce such rights.

(e) [Except as provided in paragraph (c) above, the] [The] Company shall not be liable under this Agreement to make any payment of amounts otherwise indemnifiable hereunder if and to the extent that Indemnitee has otherwise actually received such payment under any insurance policy, contract, agreement or otherwise.

(f) [Except as provided in paragraph (c) above, the] [The] Company's obligation to indemnify or advance Expenses hereunder to Indemnitee who is or was serving at the request of the Company as a director, officer, employee or agent of any other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise shall be reduced by any amount Indemnitee has actually received as indemnification or advancement of expenses from such other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise.

9. Exception to Right of Indemnification. Notwithstanding any provision in this Agreement, the Company shall not be obligated under this Agreement to make any indemnity in connection with any claim made against Indemnitee:

(a) for which payment has actually been made to or on behalf of Indemnitee under any insurance policy or other indemnity provision, except with respect to any excess beyond the amount paid under any insurance policy or other indemnity provision, provided, that the foregoing shall not affect the rights of Indemnitee [or the Fund Indemnitors set forth in Section 8 (c) above]; or

(b) for an accounting of profits made from the purchase and sale (or sale and purchase) by Indemnitee of securities of the Company within the meaning of Section 16(b) of the Securities Exchange Act of 1934, as amended, or similar provisions of state statutory law or common law; or

(c) in connection with any Proceeding (or any part of any Proceeding) initiated by Indemnitee, including any Proceeding (or any part of any Proceeding) initiated by Indemnitee against the Company or its directors, officers, employees or other indemnitees, unless (i) the Board authorized the Proceeding (or any part of any Proceeding) prior to its initiation, or (ii) the Company provides the indemnification, in its sole discretion, pursuant to the powers vested in the Company under applicable law.

10. Duration of Agreement. All agreements and obligations of the Company contained herein shall continue during the period Indemnitee is an officer or director of the Company (or is or was serving at the request of the Company as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise) and shall continue thereafter so long as Indemnitee shall be subject to any Proceeding (or any proceeding commenced under Section 7 hereof) by reason of his Corporate Status, whether or not he is acting or serving in any such capacity at the time any liability or expense is incurred for which indemnification can be provided under this Agreement. This Agreement shall be binding upon and inure to the benefit of and be enforceable by the parties hereto and their respective successors (including any direct or indirect successor by purchase, merger, consolidation or otherwise to all or substantially all of the business or assets of the Company), assigns, spouses, heirs, executors and personal and legal representatives.

11. Security. To the extent requested by Indemnitee and approved by the Board, the Company may at any time and from time to time provide security to Indemnitee for the Company's obligations hereunder through an irrevocable bank line of credit, funded trust or other collateral. Any such security, once provided to Indemnitee, may not be revoked or released without the prior written consent of the Indemnitee.

12. Enforcement.

(a) The Company expressly confirms and agrees that it has entered into this Agreement and assumes the obligations imposed on it hereby in order to induce Indemnitee to serve as an officer or director of the Company, and the Company acknowledges that Indemnitee is relying upon this Agreement in serving as an officer or director of the Company.

(b) This Agreement constitutes the entire agreement between the parties hereto with respect to the subject matter hereof and supersedes all prior agreements and understandings, oral, written and implied, between the parties hereto with respect to the subject matter hereof.

(c) The Company shall not seek from a court, or agree to, a "bar order" which would have the effect of prohibiting or limiting the Indemnitee's rights to receive advancement of expenses under this Agreement.

13. Definitions. For purposes of this Agreement:

(a) "**Corporate Status**" describes the status of a person who is or was a director, officer, employee, agent or fiduciary of the Company or of any other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise that such person is or was serving at the express written request of the Company.

(b) "**Disinterested Director**" means a director of the Company who is not and was not a party to the Proceeding in respect of which indemnification is sought by Indemnitee.

(c) "**Enterprise**" shall mean the Company and any other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise that Indemnitee is or was serving at the express written request of the Company as a director, officer, employee, agent or fiduciary.

(d) "**Expenses**" shall include all reasonable attorneys' fees, retainers, court costs, transcript costs, fees of experts, witness fees, travel expenses, duplicating costs, printing and binding costs, telephone charges, postage, delivery service fees and all other disbursements or expenses of the types customarily incurred in connection with prosecuting, defending, preparing to prosecute or defend, investigating, participating, or being or preparing to be a witness in a Proceeding, or responding to, or objecting to, a request to provide discovery in any Proceeding. Expenses also shall include Expenses incurred in connection with any appeal resulting from any Proceeding and any federal, state, local or foreign taxes imposed on the Indemnitee as a result of the actual or deemed receipt of any payments under this Agreement, including without limitation the premium, security for, and other costs relating to any cost bond, supersede as bond, or other appeal bond or its equivalent. Expenses, however, shall not include amounts paid in settlement by Indemnitee or the amount of judgments or fines against Indemnitee.

(e) "**Independent Counsel**" means a law firm, or a member of a law firm, that is experienced in matters of corporation law and neither presently is, nor in the past five years has been, retained to represent (i) the Company or Indemnitee in any matter material to either such party (other than with respect to matters concerning Indemnitee under this Agreement, or of other indemnitees under similar indemnification agreements), or (ii) any other party to the Proceeding giving rise to a claim for indemnification hereunder. Notwithstanding the foregoing, the term "Independent Counsel" shall not include any person who, under the applicable standards of professional conduct then prevailing, would have a conflict of interest in representing either the Company or Indemnitee in an action to determine Indemnitee's rights under this Agreement. The Company agrees to pay the reasonable fees of the Independent Counsel referred to above and to fully indemnify such counsel against any and all Expenses, claims, liabilities and damages arising out of or relating to this Agreement or its engagement pursuant hereto.

(f) "**Proceeding**" includes any threatened, pending or completed action, suit, arbitration, alternate dispute resolution mechanism, investigation, inquiry, administrative hearing or any other actual, threatened or completed proceeding, whether brought by or in the right of the Company or otherwise and whether civil, criminal, administrative or investigative, in which Indemnitee was, is or will be involved as a party or otherwise, by reason of his or her Corporate Status, by reason of any action taken by him or of any inaction on his part while acting in his or her Corporate Status; in each case whether or not he is acting or serving in any such capacity at the time any liability or expense is incurred for which indemnification can be provided under this Agreement; including one pending on or before the date of this Agreement, but excluding one initiated by an Indemnitee pursuant to Section 7 of this Agreement to enforce his rights under this Agreement.

14. Severability. The invalidity or unenforceability of any provision hereof shall in no way affect the validity or enforceability of any other provision. Further, the invalidity or unenforceability of any provision hereof as to [either] Indemnitee [or Appointing Stockholder] shall in no way affect the validity or enforceability of any provision hereof as to the other. Without limiting the generality of the foregoing, this Agreement is intended to confer upon Indemnitee [and Appointing Stockholder] indemnification rights to the fullest extent permitted by applicable laws. In the event any provision hereof conflicts with any applicable law, such provision shall be deemed modified, consistent with the aforementioned intent, to the extent necessary to resolve such conflict.

15. Modification and Waiver. No supplement, modification, termination or amendment of this Agreement shall be binding unless executed in writing by both of the parties hereto. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provisions hereof (whether or not similar) nor shall such waiver constitute a continuing waiver.

16. Notice By Indemnitee. Indemnitee agrees promptly to notify the Company in writing upon being served with or otherwise receiving any summons, citation, subpoena, complaint, indictment, information or other document relating to any Proceeding or matter which may be subject to indemnification covered hereunder. The failure to so notify the Company shall not relieve the Company of any obligation which it may have to Indemnitee under this Agreement or otherwise unless and only to the extent that such failure or delay materially prejudices the Company.

17. Notices. All notices and other communications given or made pursuant to this Agreement shall be in writing and shall be deemed effectively given (a) upon personal delivery to the party to be notified, (b) when sent by confirmed electronic mail or facsimile if sent during normal business hours of the recipient, and if not so confirmed, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent:

(a) To Indemnitee at the address set forth below Indemnitee signature hereto.

(b) To the Company at:

Sensei Biotherapeutics, Inc.
620 Professional Drive
Gaithersburg, MD 20879

Attention: Chief Executive Officer

or to such other address as may have been furnished to Indemnitee by the Company or to the Company by Indemnitee, as the case may be.

18. Successor Agreement. The Company and Indemnitee hereby expressly agree that this Agreement replaces, supercedes and expressly amends and restates any prior contractual indemnification agreement the Company may have with Indemnitee. Upon execution of this Agreement, any such prior Agreement (if any) shall be amended and restated in its entirety as set forth herein.

19. Counterparts. This Agreement may be executed in two (2) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, *e.g.*, www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

20. Headings. The headings of the paragraphs of this Agreement are inserted for convenience only and shall not be deemed to constitute part of this Agreement or to affect the construction thereof.

21. Governing Law and Consent to Jurisdiction. This Agreement and the legal relations among the parties shall be governed by, and construed and enforced in accordance with, the laws of the State of Delaware, without regard to its conflict of laws rules. The Company and Indemnitee hereby irrevocably and unconditionally (i) agree that any action or proceeding arising out of or in connection with this Agreement shall be brought only in the Chancery Court of the State of Delaware (the "**Delaware Court**"), and not in any other state or federal court in the United States of America or any court in any other country, (ii) consent to submit to the exclusive jurisdiction of the Delaware Court for purposes of any action or proceeding arising out of or in connection with this Agreement, (iii) waive any objection to the laying of venue of any such action or proceeding in the Delaware Court, and (iv) waive, and agree not to plead or to make, any claim that any such action or proceeding brought in the Delaware Court has been brought in an improper or inconvenient forum.

SIGNATURE PAGE TO FOLLOW

IN WITNESS WHEREOF, the parties hereto have executed this Indemnification Agreement on and as of the day and year first above written.

SENSEI BIOTHERAPEUTICS, INC.

By: _____
Name: _____
Title: _____

INDEMNITEE

_____
Name: _____

Address: _____
_____
_____
_____

AMENDED AND RESTATED EMPLOYMENT AGREEMENT

This **AMENDED AND RESTATED EMPLOYMENT AGREEMENT** (the "***Agreement***"), by and between Sensei Biotherapeutics, Inc., f/k/a Panacea Pharmaceuticals, Inc. (the "***Company***") and John Celebi (the "***Employee***"), amends, restates, and supersedes in its entirety the Employment Agreement between the Company and the Employee that was effective February 22, 2018 (the "***Prior Agreement***"). This Agreement is entered into effective January 1, 2021 (the "***Effective Date***").

The Company desires to continue to employ the Employee, in the capacity of full-time President and Chief Executive Officer pursuant to the terms of this Agreement and, in connection therewith, to compensate the Employee for Employee's personal services to the Company; and

The Employee wishes to continue to be employed by the Company and provide personal services to the Company in return for certain compensation.

Accordingly, in consideration of the mutual promises and covenants contained herein, the parties agree to the following:

1. EMPLOYMENT BY THE COMPANY.

1.1 At-Will Employment. Employee shall continue to be employed by the Company on an "at-will" basis, meaning either the Company or Employee may terminate Employee's employment at any time, with or without cause or advanced notice. Any contrary representations that may have been made to Employee shall be superseded by this Agreement. This Agreement shall constitute the full and complete agreement between Employee and the Company on the "at-will" nature of Employee's employment with the Company, which may be changed only in an express written agreement signed by Employee and a duly authorized officer of the Company. Employee's rights to any compensation following a termination shall be only as set forth in Section 6.

1.2 Position. Subject to the terms set forth herein, the Company agrees to continue to employ Employee, initially in the position of President and Chief Executive Officer, and Employee hereby accepts such continued employment. During the term of Employee's employment with the Company, Employee will devote Employee's best efforts and substantially all of Employee's business time and attention to the business of the Company.

1.3 Duties. Employee will report to the Board of Directors of the Company (the "***Board***") performing such duties as are normally associated with his then current position and such duties as are assigned to him from time to time, subject to the oversight and direction of the Board. In general, and without limitation, Employee will be the principal executive officer and operational executive of the Company. Employee shall perform his duties under this Agreement principally out of the Company's office in the Boston, Massachusetts area or such other location as assigned. In addition, Employee shall make such business trips to such places as may be necessary or advisable for the efficient operations of the Company.

1.4 Company Policies and Benefits. The employment relationship between the parties shall also continue to be subject to the Company's personnel policies and procedures as they may be interpreted, adopted, revised or deleted from time to time in the Company's sole discretion. Employee will be eligible to participate on the same basis as similarly-situated employees in the Company's benefit plans in effect from time to time during his employment. All matters of eligibility for coverage or benefits under any benefit plan shall be determined in accordance with the provisions of such plan. The Company reserves the right to change, alter, or terminate any benefit plan in its sole discretion. Notwithstanding the foregoing, in the event that the terms of this Agreement differ from or are in conflict with the Company's general employment policies or practices, this Agreement shall control.

1.5 Insurance. While this Agreement is in effect, for actions within the scope of Employee's employment, the Company will include Employee as an insured at a level comparable to similarly-situated employees at the Company in its Directors and Officers Liability insurance policy in effect from time to time.

2. COMPENSATION.

2.1 Salary. Employee shall initially continue to receive for Employee's services to be rendered hereunder an initial annualized base salary of $395,000 ("***Base Salary***"). The Base Salary is subject to review and adjustment from time to time by the Company in its sole discretion. The Base Salary is payable subject to standard federal and state payroll withholding requirements in accordance with the Company's standard payroll practices.

2.2 Annual Bonus. Employee shall be eligible to earn an annual performance bonus of up to 30% (the "***Target Percentage***") of his then-current Base Salary ("***Annual Bonus***"). The Annual Bonus will be based upon the Company's assessment of the Employee's performance and the Company's attainment of targeted goals as set by the Board in its sole discretion, overall economic conditions and forecasts, and related financial factors, all as determined by the Company in its sole discretion. The Annual Bonus, if any, will be subject to applicable payroll deductions and withholdings. Following the close of each calendar year, the Company will determine whether the Employee has earned the Annual Bonus, and the amount of any Annual Bonus (which can be less than the Target Percentage), based on the set criteria. No amount of the Annual Bonus is guaranteed, and Employee must be an employee in good standing on the Annual Bonus payment date to be eligible to receive an Annual Bonus; no partial or prorated bonuses will be provided (except as stated in Section 6.1). The Employee's eligibility for an Annual Bonus is subject to change in the discretion of the Board (or any authorized committee thereof).

2.3 Future Equity Awards. Employee remains eligible to be considered for future equity awards as may be determined by the Board or a committee of the Board in its discretion in accordance with the terms of any applicable equity plan or arrangement that may be in effect from time to time.

2.4 Reimbursements.

(a) **General Expense Reimbursement**. The Company will reimburse Employee for all reasonable, documented business expenses incurred in connection with his services hereunder, in accordance with the Company's business expense reimbursement policies and procedures as may be in effect from time to time. These business expenses shall include, but not be limited to, mobile phone equipment and service (including unlimited 4G or greater data connectivity).

(b) **Travel and Lodging Expenses**. While this Agreement is in effect and so long as Employee's primary residence is in Connecticut, the Company will reimburse Employee for reasonable lodging in the Boston, Massachusetts area, as well as related reasonable travel expenses from his home in Connecticut to the Boston, Massachusetts area, in a combined maximum gross amount of $4,000.00 per month (less any required withholding and/or deductions required by applicable law) ("***Travel and Lodging Expenses***"). The Company shall reimburse such Travel and Lodging Expenses within thirty (30) days of receipt of an invoice or other documentation that complies with Company policies, provided that Employee submits such receipts and other documentation within sixty (60) days following the date such Travel and Lodging Expenses are incurred.

(c) **409A**. For the avoidance of doubt, to the extent that any reimbursements payable to Employee under this Section 2.4 are subject to the provisions of Section 409A of the Internal Revenue Code of 1986, as amended (the "***Code***"): (a) any such reimbursements will be paid no later than December 31 of the year following the year in which the expense was incurred, (b) the amount of expenses reimbursed in one year will not affect the amount eligible for reimbursement in any subsequent year, and (c) the right to reimbursement under this Agreement will not be subject to liquidation or exchange for another benefit.

3. CONFIDENTIAL INFORMATION, INVENTIONS, NON-SOLICITATION AND NON-COMPETITION OBLIGATIONS. Contemporaneously with this Agreement and as a condition of employment, Employee agrees to sign and abide by the Employee Confidential Information and Inventions Assignment Agreement (the "***Confidential Information Agreement***") attached hereto as **Exhibit A**. The Confidential Information Agreement may be amended by the parties from time to time without regard to this Agreement. The Confidential Information Agreement contains provisions that are intended by the parties to survive and do survive termination or expiration of this Agreement.

4. OUTSIDE ACTIVITIES. Except with the prior written consent of the Company's Board, Employee will not, while employed by the Company, undertake or engage in any other employment, occupation or business enterprise that would interfere with Employee's responsibilities and the performance of Employee's duties hereunder except for (i) reasonable time devoted to volunteer services for or on behalf of such religious, educational, non-profit and/or other charitable organization as Employee may wish to serve; (ii) reasonable time devoted to activities in the non-profit and business communities consistent with Employee's duties; and (iii) such other activities as may be specifically approved by the Board. This restriction shall not, however, preclude Employee from owning less than one percent (1%) of the total outstanding shares of a publicly-traded company.

5. NO CONFLICT WITH EXISTING OBLIGATIONS. Employee represents that Employee's continued performance of all the terms of this Agreement and as an employee of the Company do not and will not breach any agreement or obligation of any kind made prior to

Employee's employment by the Company, including agreements or obligations Employee may have with prior employers or entities for which Employee has provided services. Employee has not entered into, and Employee agrees that Employee will not enter into, any agreement or obligation, either written or oral, in conflict herewith.

6. TERMINATION OF EMPLOYMENT. The parties acknowledge that Employee's employment relationship with the Company continues to be at-will. Either Employee or the Company may terminate the employment relationship at any time, with or without Cause. The provisions in this Section govern the amount of compensation, if any, to be provided to Employee upon termination of employment and do not alter this at-will status.

6.1 Termination by the Company Without Cause or Resignation by Employee for Good Reason.

(a) The Company shall have the right to terminate Employee's employment with the Company pursuant to this Section 6.1 at any time without "Cause" (as defined in Section 6.2(a) below) by giving notice as described in Section 6.6 of this Agreement. A termination pursuant to Section 6.4 or 6.5 below is not a termination without "***Cause***" for purposes of receiving the Severance Benefits described in (and as defined in) this Section 6.1.

(b) If the Company terminates Employee's employment at any time without Cause or Employee terminates his employment with the Company for "Good Reason" (as defined in Section 6.1(g) below), then Employee shall be entitled to receive the Accrued Obligations (defined in 6.1(d) below). If such termination without Cause or for Good Reason constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h), without regard to any alternative definition thereunder, a "***Separation from Service***"), and Employee complies with the obligations in Section 6.1(c) below, Employee shall also be eligible to receive the following "***Severance Benefits***":

(i) The Company will pay Employee an amount equal to Employee's then current Base Salary for nine (9) months (the "***Severance Period***"), less all applicable withholdings and deductions ("***Severance***"), paid in equal installments beginning on the Company's first regularly scheduled payroll date following the Release Effective Date (as defined in Section 6.1(c) below), with the remaining installments occurring on the Company's regularly scheduled payroll dates thereafter; *provided, however*, the Severance shall be reduced by fifty percent (50%) of any amounts which Employee receives as base salary from any other company, business, organization, or entity within the life sciences industry (defined as any company, business, organization, or entity in the business of developing or marketing products or services for the treatment or diagnosis of disease) (such entity, a "***Successor Employer***") during the Severance Period. Employee shall notify the Company upon being engaged by any Successor Employer (whether as employee, contractor, consultant, director or otherwise) and disclose the amount of base salary payable to Employee by the Successor Employer during the Severance Period in such notice.

(ii) If Employee timely elects continued coverage under COBRA, or state continuation coverage (as applicable), for himself and his covered dependents under the Company's group health plans following such termination, then the Company shall pay

the portion of the COBRA, or state continuation coverage, premiums which is equal to the cost of the coverage that the Company was paying as of the date of termination, to continue Employee's and his covered dependents' health insurance coverage in effect for himself (and his covered dependents) on the termination date until the earliest of: (i) nine (9) months following the termination date (the "***COBRA Severance Period***"); (ii) the date when Employee becomes eligible for substantially equivalent health insurance coverage in connection with new employment or self-employment; or (iii) the date Employee ceases to be eligible for COBRA continuation coverage for any reason, including plan termination (such period from the termination date through the earlier of (i)-(iii), (the "***COBRA Payment Period***"). Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA, or state continuation coverage, premiums on Employee's behalf would result in a violation of applicable law (including, but not limited to, the 2010 Patient Protection and Affordable Care Act, as amended by the 2010 Health Care and Education Reconciliation Act), then in lieu of paying a portion of Employee's COBRA premiums pursuant to this Section, the Company shall pay Employee on the last day of each remaining month of the COBRA Payment Period, a fully taxable cash payment equal to the portion of such COBRA or state continuation coverage premium that would have been paid by the Company for such month, subject to applicable tax withholding, for the remainder of the COBRA Payment Period. Nothing in this Agreement shall deprive Employee of his rights under COBRA or ERISA for benefits under plans and policies arising under his employment by the Company.

(iii) Notwithstanding the terms of any equity plan or award agreement to the contrary, the unvested portion of all time-based equity awards outstanding on the date of Employee's termination that would have vested over the nine (9) month period following the date of Employee's termination had he remained continuously employed by the Company during such period will be automatically vested and exercisable as of the Separation Date (as defined below). Notwithstanding the foregoing, in the event that such termination without Cause or resignation for Good Reason under this Section 6.1 occurs within twelve (12) months following the effective date of a Change in Control (as defined in the Plan), and provided that such termination without Cause constitutes a Separation from Service, and subject to Employee's full compliance with Section 6.1(c), then, effective as of Employee's date of termination, each of Employee's then outstanding options and equity awards that have been continued, assumed or substituted for by the Company or the surviving entity or acquirer in such Change in Control, including awards that would otherwise vest only upon satisfaction of performance criteria, shall accelerate and become vested and exercisable as to 100% of the then-unvested and, in the case of performance-based awards, then-unearned (at the actual performance level or, if the actual performance level has not been determined at the time of such termination, at 100% achievement of target, in any case, unless more-favorable acceleration terms are otherwise provided in the award agreement applicable to such performance-based award) shares subject to the equity award.

(c) Employee will be paid all of the Accrued Obligations on the Company's first payroll date after Employee's date of termination from employment or earlier if required by law. Employee shall receive the Severance Benefits pursuant to Section 6.1(b) of this Agreement if: (i) by the 60th day following the date of Employee's Separation from Service, he has signed and delivered to the Company a separation agreement containing an effective, general release of claims in favor of the Company and its affiliates and representatives, in the form presented by the Company (the "***Release***"), which will include a non-competition clause, which cannot be revoked in whole or part by such date (the date that the Release can no longer be revoked

is referred to as the "***Release Effective Date***"); (ii) if he holds any other positions with the Company or any Affiliate, including a position on the Board, he resigns such position(s) to be effective no later than the date of Employee's termination date (or such other date as requested by the Board); (iii) he returns all Company property; (iv) he complies with his post-termination obligations under this Agreement and the Confidential Information Agreement; and (v) he complies with the terms of the Release, including without limitation any non-disparagement and confidentiality provisions contained in the Release. To the extent that any severance payments are deferred compensation under Section 409A of the Code, and are not otherwise exempt from the application of Section 409A, then, if the period during which Employee may consider and sign the Release spans two calendar years, the payment of Severance will not be made or begin until the later calendar year.

(d) For purposes of this Agreement, "***Accrued Obligations***" are (i) Employee's accrued but unpaid salary through the date of termination, (ii) any unreimbursed business expenses incurred by Employee payable in accordance with the Company's standard expense reimbursement policies, and (iii) benefits owed to Employee under any qualified retirement plan or health and welfare benefit plan in which Employee was a participant in accordance with applicable law and the provisions of such plan.

(e) The Severance Benefits provided to Employee pursuant to this Section 6.1 are in lieu of, and not in addition to, any benefits to which Employee may otherwise be entitled under any Company severance plan, policy, program, or prior agreement with the Company.

(f) Any damages caused by the termination of Employee's employment without Cause would be difficult to ascertain; therefore, the Severance Benefits for which Employee is eligible pursuant to Section 6.1(b) above in exchange for the Release is agreed to by the parties as liquidated damages, to serve as full compensation, and not a penalty.

(g) For purposes of this Agreement, "***Good Reason***" shall mean the occurrence of any of the following events without Employee's consent: (i) a material reduction in Employee's Base Salary of at least 10%; (ii) a material reduction in Employee's duties, authority and responsibilities relative to Employee's duties, authority, and responsibilities in effect immediately prior to such reduction; (iii) the relocation of Employee's principal place of employment, without Employee's consent, in a manner that lengthens his one-way commute distance by fifty (50) or more miles from his then-current principal place of employment immediately prior to such relocation; or (iv) any material breach of this Agreement by Company; provided, however, that, any such termination by Employee shall only be deemed for Good Reason pursuant to this definition if: (1) Employee gives the Company written notice of his intent to terminate for Good Reason within thirty (30) days following the first occurrence of the condition(s) that he believes constitute(s) Good Reason, which notice shall describe such condition(s); (2) the Company fails to remedy such condition(s) within thirty (30) days following receipt of the written notice (the "***Cure Period***"); (3) the Company has not, prior to receiving such notice from Employee, already informed Employee that his employment with the Company is being terminated; and (4) Employee voluntarily terminates his employment within thirty (30) days following the end of the Cure Period. For the avoidance of doubt, Employee consented to the relocation of his principal place of employment from Gaithersburg, Maryland to the Boston, Massachusetts area and such relocation does not constitute Good Reason.

6.2 Termination by the Company for Cause.

Subject to Section 6.2(b) below, the Company shall have the right to terminate Employee's employment with the Company at any time for Cause by giving notice as described in Section 6.6 of this Agreement.

(a) "***Cause***" for termination shall mean that the Company has determined in its sole discretion that Employee has engaged in any of the following: (i) a material breach of any covenant or condition under this Agreement or any other agreement between the parties; (ii) any act constituting dishonesty, fraud, immoral or disreputable conduct; (iii) any conduct which constitutes a felony under applicable law; (iv) material violation of any Company policy or any act of misconduct; (v) refusal to follow or implement a clear and reasonable directive of the Company; (vi) negligence or incompetence in the performance of Employee's duties after the expiration of ten (10) days without cure after written notice of such failure; or (vii) breach of fiduciary duty.

(b) In the event Employee's employment is terminated at any time for Cause, Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, consistent with the Company's standard payroll policies, the Company shall provide to Employee the Accrued Obligations.

6.3 Resignation by the Employee (other than for Good Reason).

(a) Employee may resign for any reason from Employee's employment with the Company at any time by giving notice as described in Section 6.6.

(b) In the event Employee resigns from Employee's employment with the Company (other than for Good Reason), Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, consistent with the Company's standard payroll policies, the Company shall provide to Employee the Accrued Obligations.

6.4 Termination by Virtue of Death or Disability of the Employee.

(a) In the event of Employee's death while employed pursuant to this Agreement, all obligations of the parties hereunder shall terminate immediately, and the Company shall, pursuant to the Company's standard payroll policies, provide to Employee's legal representatives Employee's Accrued Obligations, but neither Employee nor his legal representatives will be eligible for the Severance Benefits.

(b) Subject to applicable state and federal law, the Company shall at all times have the right, upon written notice to the Employee, to terminate this Agreement based on the Employee's Disability (as defined below). Termination by the Company of the Employee's employment based on "***Disability***" shall mean termination because the Employee is unable due to a physical or mental condition to perform the essential functions of his position with or without reasonable accommodation for six (6) months in the aggregate during any twelve (12) month

period or based on the written certification by two licensed physicians of the likely continuation of such condition for such period. This definition shall be interpreted and applied consistent with the Americans with Disabilities Act, the Family and Medical Leave Act, and other applicable law. In the event Employee's employment is terminated based on the Employee's Disability, Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall provide to Employee the Accrued Obligations.

6.5 Termination Due to Discontinuance of Business. Anything in this Agreement to the contrary notwithstanding, in the event the Company's business is discontinued because rendered impracticable by substantial financial losses, lack of funding, legal decisions, administrative rulings, declaration of war, dissolution, national or local economic depression or crisis or any reasons beyond the control of the Company, then this Agreement shall terminate as of the day the Company determines to cease operation with the same force and effect as if such day of the month were originally set as the termination date hereof. In the event this Agreement is terminated pursuant to this Section 6.5, Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall provide to Employee the Accrued Obligations.

6.6 Notice; Effective Date of Termination.

(a) Termination of Employee's employment (the "***Separation Date***") pursuant to this Agreement shall be effective on the earliest of:

(i) immediately after the Company gives notice to Employee of Employee's termination, with or without Cause, unless pursuant to Section 6.2(b)(vi) in which case ten (10) days after notice if not cured, or unless the Company specifies a later date, in which case, termination shall be effective as of such later date;

(ii) immediately upon the Employee's death;

(iii) immediately after the Company gives written notice to Employee of Employee's termination on account of Employee's Disability, unless the Company specifies a later Separation Date, in which case, termination shall be effective as of such later Separation Date, provided that Employee has not returned to the full time performance of Employee's duties prior to such date;

(iv) except as addressed by Section 6.6(a)(v), thirty (30) days after the Employee gives written notice to the Company of Employee's resignation, provided that the Company may set a Separation Date at any time between the date of notice and the date of resignation, in which case the Employee's resignation shall be effective as of such other date. Employee will receive compensation through any required notice period; or

(v) for a termination for Good Reason, immediately upon Employee's full satisfaction of the requirements of Section 6.1(g).

(b) In the event notice of a termination under subsection 6.6(a)(i) is given orally, at the other party's request, the party giving notice must provide written confirmation of such notice within five (5) business days of the request in compliance with the requirement of Section 7.1 below. In the event of a termination for Cause, written confirmation shall specify the subsection(s) of the definition of Cause relied on to support the decision to terminate.

6.7 Cooperation With Company After Termination of Employment. Following termination of Employee's employment for any reason, Employee shall reasonably cooperate with the Company in all matters relating to the winding up of Employee's pending work including, but not limited to, any litigation in which the Company is involved, and the orderly transfer of any such pending work to such other employees as may be designated by the Company.

6.8 Effect of Termination. Employee agrees that should Employee's employment be terminated for any reason, Employee shall be deemed to have resigned from any and all positions with the Company and its subsidiaries.

6.9 Application of Section 409A. Notwithstanding anything to the contrary set forth herein, any payments and benefits provided under this Agreement that constitute "deferred compensation" within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended (the "***Code***") and the regulations and other guidance thereunder and any state law of similar effect (collectively, "***Section 409A***") shall not commence in connection with Employee's termination of employment unless and until Employee has also incurred a Separation from Service, unless the Company reasonably determines that such amounts may be provided to Employee without causing Employee to incur the additional 20% tax under Section 409A. It is intended that each installment of severance pay provided for in this Agreement is a separate "***payment***" for purposes of Treasury Regulation Section 1.409A-2(b)(2)(i). For the avoidance of doubt, it is intended that severance payments set forth in this Agreement satisfy, to the greatest extent possible, the exceptions from the application of Section 409A provided under Treasury Regulation Sections 1.409A-1(b)(4) and 1.409A-1(b)(9). If the Company (or, if applicable, the successor entity thereto) determines that any payments or benefits constitute "deferred compensation" under Section 409A and Employee is, on the termination of service, a "specified employee" of the Company or any successor entity thereto, as such term is defined in Section 409A(a)(2)(B)(i) of the Code, then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences under Section 409A, the timing of the payments and benefits shall be delayed until the earlier to occur of: (a) the date that is six months and one day after Employee's Separation From Service, or (b) the date of Employee's death (such applicable date, the "***Specified Employee Initial Payment Date***"). On the Specified Employee Initial Payment Date, the Company (or the successor entity thereto, as applicable) shall (i) pay to Employee a lump sum amount equal to the sum of the payments and benefits that Employee would otherwise have received through the Specified Employee Initial Payment Date if the commencement of the payment of such amounts had not been so delayed pursuant to this Section and (ii) commence paying the balance of the payments and benefits in accordance with the applicable payment schedules set forth in this Agreement. All reimbursements provided under this Agreement shall be subject to the following requirements: (i) the amount of in-kind benefits provided or reimbursable expenses incurred in one taxable year shall not affect the in-kind benefits to be provided or the expenses eligible for reimbursement in any other taxable year, (ii) all reimbursements shall be paid as soon as administratively practicable, but in no event shall any reimbursement be paid after the last day of the taxable year following the taxable year in which the expense was incurred, and (iii) the right to reimbursement or in-kind benefits is not subject to liquidation or exchange for any other benefit.

It is intended that all payments and benefits under this Agreement shall either comply with or be exempt from the requirements of Section 409A, and any ambiguity contained herein shall be interpreted in such manner so as to avoid adverse personal tax consequences under Section 409A. Notwithstanding the foregoing, the Company shall in no event be obligated to indemnify Employee for any taxes or interest that may be assessed by the Internal Revenue Service pursuant to Section 409A of the Code to payments made pursuant to this Agreement.

7. GENERAL PROVISIONS.

7.1 Notices. Any notices required hereunder to be in writing shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by electronic mail, telex or confirmed facsimile if sent during normal business hours of the recipient, and if not, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with a nationally-recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent to the Company at its primary office location and to Employee at Employee's address as listed on the Company payroll or Employee's company-provided email address, or at such other address as the Company or the Employee may designate by ten (10) days' advance written notice to the other.

7.2 Severability. Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision of any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

7.3 Waiver. If either party should waive any breach of any provisions of this Agreement, Employee or it shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement.

7.4 Complete Agreement. This Agreement constitutes the entire agreement between Employee and the Company with regard to the subject matter hereof. This Agreement is the complete, final, and exclusive embodiment of their agreement with regard to this subject matter and supersedes any prior oral discussions or written communications and agreements, including the Prior Agreement. This Agreement is entered into without reliance on any promise or representation other than those expressly contained herein, and it cannot be modified or amended except in writing signed by Employee and an authorized officer of the Company. The parties have entered into a separate Confidential Information Agreement and have or may enter into separate agreements related to equity awards. These separate agreements govern other aspects of the relationship between the parties, have or may have provisions that survive termination of the Employee's employment under this Agreement, may be amended or superseded by the parties without regard to this Agreement and are enforceable according to their terms without regard to the enforcement provision of this Agreement.

7.5 Counterparts. This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one party, but all of which taken together will constitute one and the same Agreement.

7.6 Headings. The headings of the sections hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

7.7 Successors and Assigns. The Company shall assign this Agreement and its rights and obligations hereunder in whole, but not in part, to any Company or other entity with or into which the Company may hereafter merge or consolidate or to which the Company may transfer all or substantially all of its assets, if in any such case said Company or other entity shall by operation of law or expressly in writing assume all obligations of the Company hereunder as fully as if it had been originally made a party hereto, but may not otherwise assign this Agreement or its rights and obligations hereunder. The Employee may not assign or transfer this Agreement or any rights or obligations hereunder, other than to his estate upon his death.

7.8 Choice of Law. All questions concerning the construction, validity and interpretation of this Agreement will be governed by the law of the Commonwealth of Massachusetts.

7.9 Resolution of Disputes. To ensure the timely and economical resolution of disputes that may arise in connection with Employee's employment with the Company, Employee and the Company agree that any and all disputes, claims, or causes of action arising from or relating to the enforcement, breach, performance, negotiation, execution, or interpretation of this Agreement, Confidential Information Agreement, or Employee's employment, or the termination of Employee's employment, including but not limited to all statutory claims, will be resolved pursuant to the Federal Arbitration Act, 9 U.S.C. §1-16, and to the fullest extent permitted by law, by final, binding and confidential arbitration by a single arbitrator conducted in ***Boston, Massachusetts*** by Judicial Arbitration and Mediation Services Inc. ("***JAMS***") under the then applicable JAMS rules (at the following web address: https://www.jamsadr.com/rules-employment-arbitration/); provided, however, this arbitration provision shall not apply to sexual harassment claims to the extent prohibited by applicable law. A hard copy of the rules will be provided to Employee upon request. **By agreeing to this arbitration procedure, both Employee and the Company waive the right to resolve any such dispute through a trial by jury or judge or administrative proceeding.** In addition, all claims, disputes, or causes of action under this Section, whether by Employee or the Company, must be brought in an individual capacity, and shall not be brought as a plaintiff (or claimant) or class member in any purported class or representative proceeding, nor joined or consolidated with the claims of any other person or entity. The Arbitrator may not consolidate the claims of more than one person or entity, and may not preside over any form of representative or class proceeding. To the extent that the preceding sentences regarding class claims or proceedings are found to violate applicable law or are otherwise found unenforceable, any claim(s) alleged or brought on behalf of a class shall proceed in a court of law rather than by arbitration. The Company acknowledges that Employee will have the right to be represented by legal counsel at any arbitration proceeding. Questions of whether a claim is subject to arbitration under this Agreement) shall be decided by the arbitrator. Likewise, procedural questions which grow out of the dispute and bear on the final disposition are also matters for the arbitrator. The arbitrator shall: (a) have the authority to compel adequate discovery

for the resolution of the dispute and to award such relief as would otherwise be permitted by law; (b) issue a written arbitration decision, to include the arbitrator's essential findings and conclusions and a statement of the award; and (c) be authorized to award any or all remedies that Employee or the Company would be entitled to seek in a court of law. Employee and the Company shall equally share all JAMS' arbitration fees. Except as modified in the Confidential Information Agreement, each party is responsible for its own attorneys' fees. Nothing in this Agreement is intended to prevent either Employee or the Company from obtaining injunctive relief in court to prevent irreparable harm pending the conclusion of any such arbitration. Any awards or orders in such arbitrations may be entered and enforced as judgments in the federal and state courts of any competent jurisdiction. To the extent applicable law prohibits mandatory arbitration of sexual harassment claims, in the event Employee intends to bring multiple claims, including a sexual harassment claim, the sexual harassment may be publicly filed with a court, while any other claims will remain subject to mandatory arbitration.

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Employment Agreement on the day and year first written above.

SENSEI BIOTHERAPEUTICS, INC., F/K/A PANACEA PHARMACEUTICALS, INC.

By: */s/ Bob Holmen*
Name: Bob Holmen
Title: Director and Chair of the Comp Committee

Employee:

/s/ John Celebi
John Celebi

Exhibit A

Employee Confidential Information and Inventions Assignment Agreement

AMENDED AND RESTATED EMPLOYMENT AGREEMENT

This **AMENDED AND RESTATED EMPLOYMENT AGREEMENT** (the "***Agreement***"), by and between Sensei Biotherapeutics, Inc. (the "***Company***") and Marie-Louise Fjaellskog, MD, PhD (the "***Employee***"), amends, restates, and supersedes in its entirety the Employment Agreement between the Company and the Employee that was effective May 11, 2020 (the "***Prior Agreement***"). This Agreement is entered into effective **December 4, 2020** (the "***Effective Date***").

The Company desires to continue to employ the Employee, in the capacity of full-time Chief Medical Officer pursuant to the terms of this Agreement and, in connection therewith, to compensate the Employee for Employee's personal services to the Company; and

The Employee wishes to continue to be employed by the Company and provide personal services to the Company in return for certain compensation.

Accordingly, in consideration of the mutual promises and covenants contained herein, the parties agree to the following:

1. EMPLOYMENT BY THE COMPANY.

1.1 At-Will Employment. Employee shall continue to be employed by the Company on an "at-will" basis, meaning either the Company or Employee may terminate Employee's employment at any time, with or without cause or advanced notice. Any contrary representations that may have been made to Employee shall be superseded by this Agreement. This Agreement shall constitute the full and complete agreement between Employee and the Company on the "at-will" nature of Employee's employment with the Company, which may be changed only in an express written agreement signed by Employee and a duly authorized officer of the Company. Employee's rights to any compensation following a termination shall be only as set forth in Section 6.

1.2 Position. Subject to the terms set forth herein, the Company agrees to continue to employ Employee in the position of Chief Medical Officer, and Employee hereby accepts such continued employment. During the term of Employee's employment with the Company, Employee will devote Employee's best efforts and substantially all of Employee's business time and attention to the business of the Company.

1.3 Duties. Employee will report to the President and Chief Executive Officer performing such duties as are normally associated with her then current position and such duties as are assigned to her from time to time, subject to the oversight and direction of the President and Chief Executive Officer. In general, and without limitation, Employee will: direct the development of clinical strategies and plans to integrate programs into the standard practice of oncology/hematology, orchestrate and manage clinical aspects of regulatory strategies and interactions with health authorities, oversee the analysis and interpretation of clinical trial data and the reporting of clinical trial results, lead interactions with academic thought leaders, investigators, cooperative groups, and other clinical stakeholders, provide clinical support and work with other members of the management team to develop and communicate the overall

corporate strategy, represent the Company and its programs to external audiences as needed, including the investment, medical and regulatory communities, as well as pharmaceutical or biotechnology industry collaborators/partners. Employee shall perform her duties under this Agreement principally out of the Company's research lab in the Boston area or such other location as assigned. In addition, Employee shall make such business trips to such places as may be necessary or advisable for the efficient operations of the Company.

1.4 Company Policies and Benefits. The employment relationship between the parties shall also continue to be subject to the Company's personnel policies and procedures as they may be interpreted, adopted, revised or deleted from time to time in the Company's sole discretion. Employee will be eligible to participate on the same basis as similarly situated employees in the Company's benefit plans in effect from time to time during her employment. All matters of eligibility for coverage or benefits under any benefit plan shall be determined in accordance with the provisions of such plan. The Company reserves the right to change, alter, or terminate any benefit plan in its sole discretion. Notwithstanding the foregoing, in the event that the terms of this Agreement differ from or are in conflict with the Company's general employment policies or practices, this Agreement shall control.

1.5 Insurance. While this Agreement is in effect, for actions within the scope of Employee's employment, the Company will include Employee as an insured at a level comparable to similarly-situated employees at the Company in its Directors and Officers Liability insurance policy in effect from time to time.

2. COMPENSATION.

2.1 Salary. Employee shall continue to initially receive for Employee's services to be rendered hereunder an initial annualized base salary of $380,000 ("***Base Salary***"). The Base Salary is subject to review and adjustment from time to time by the Company in its sole discretion. The Base Salary is payable subject to standard federal and state payroll withholding requirements in accordance with the Company's standard payroll practices.

2.2 Annual Bonus. Employee shall be eligible to earn an annual performance bonus of up to 30% (the "***Target Percentage***") of her then-current Base Salary ("***Annual Bonus***"). The Annual Bonus will be based upon the Company's assessment of the Employee's performance, the Company's attainment of targeted goals as set by the Company's Board of Directors (the "***Board***") in its sole discretion, overall economic conditions and forecasts, and related financial factors, all as determined by the Company in its sole discretion. The Annual Bonus, if any, will be subject to applicable payroll deductions and withholdings. Following the close of each calendar year, the Company will determine whether the Employee has earned the Annual Bonus, and the amount of any Annual Bonus (which can be less than the Target Percentage), based on the set criteria. No amount of the Annual Bonus is guaranteed, and the Employee must be an employee in good standing on the Annual Bonus payment date to be eligible to receive an Annual Bonus; no partial or prorated bonuses will be provided. For the avoidance of doubt, Employee's Annual Bonus for 2020 shall not be prorated, such that she will be eligible to earn an Annual Bonus for all of 2020, subject to the eligibility criteria in this Section 2.2. The Employee's eligibility for an Annual Bonus is subject to change in the discretion of the Board (or any authorized committee thereof).

2.3 Future Equity Awards. Employee remains eligible to be considered for future equity awards as may be determined by the Board or a committee of the Board in its discretion in accordance with the terms of any applicable equity plan or arrangement that may be in effect from time to time.

2.4 Expense Reimbursement. The Company will reimburse Employee for all reasonable, documented business expenses incurred in connection with her services hereunder, in accordance with the Company's business expense reimbursement policies and procedures as may be in effect from time to time. For the avoidance of doubt, to the extent that any reimbursements payable to Employee are subject to the provisions of Section 409A of the Internal Revenue Code of 1986, as amended (the "***Code***"): (a) any such reimbursements will be paid no later than December 31 of the year following the year in which the expense was incurred, (b) the amount of expenses reimbursed in one year will not affect the amount eligible for reimbursement in any subsequent year, and (c) the right to reimbursement under this Agreement will not be subject to liquidation or exchange for another benefit.

3. CONFIDENTIAL INFORMATION, INVENTIONS, NON-SOLICITATION, AND NON-COMPETITION OBLIGATIONS. As a condition of employment and in consideration of the benefits that Employee is eligible to receive under this Agreement, Employee agrees to sign and abide by the Employee Confidential Information and Inventions Assignment Agreement (the "***Confidential Information Agreement***") attached hereto as **Exhibit A**. The Confidential Information Agreement may be amended by the parties from time to time without regard to this Agreement. The Confidential Information Agreement contains provisions that are intended by the parties to survive and do survive termination or expiration of this Agreement.

4. OUTSIDE ACTIVITIES. Except with the prior written consent of the Company's Board, Employee will not, while employed by the Company, undertake or engage in any other employment, occupation or business enterprise that would interfere with Employee's responsibilities and the performance of Employee's duties hereunder except for (i) reasonable time devoted to volunteer services for or on behalf of such religious, educational, non-profit and/or other charitable organization as Employee may wish to serve; (ii) reasonable time devoted to activities in the non-profit and business communities consistent with Employee's duties; and (iii) such other activities as may be specifically approved by the Board. This restriction shall not, however, preclude Employee from owning less than one percent (1%) of the total outstanding shares of a publicly-traded company.

5. NO CONFLICT WITH EXISTING OBLIGATIONS. Employee represents that Employee's continued performance of all the terms of this Agreement and as an Employee of the Company do not and will not breach any agreement or obligation of any kind made prior to Employee's employment by the Company, including agreements or obligations Employee may have with prior employers or entities for which Employee has provided services. Employee has not entered into, and Employee agrees that Employee will not enter into, any agreement or obligation, either written or oral, in conflict herewith.

6. TERMINATION OF EMPLOYMENT. The parties acknowledge that Employee's employment relationship with the Company continues to be at-will. Either Employee or the Company may terminate the employment relationship at any time, with or without Cause. The provisions in this Section govern the amount of compensation, if any, to be provided to Employee upon termination of employment and do not alter this at-will status.

6.1 Termination by the Company Without Cause or Resignation by Employee for Good Reason.

(a) The Company shall have the right to terminate Employee's employment with the Company pursuant to this Section 6.1 at any time without "Cause" (as defined in Section 6.2(a) below) by giving notice as described in Section 6.6 of this Agreement. A termination pursuant to Section 6.4 or 6.5 below is not a termination without "Cause" for purposes of receiving the Severance Benefits described in (and as defined in) this Section 6.1.

(b) If the Company terminates Employee's employment at any time without Cause or Employee terminates her employment with the Company for "Good Reason" (as defined in Section 6.1(g) below), then Employee shall be entitled to receive the Accrued Obligations (defined in 6.1(d) below). If such termination without Cause or for Good Reason constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h), without regard to any alternative definition thereunder, a "***Separation from Service***"), and Employee complies with the obligations in Section 6.1(c) below, Employee shall also be eligible to receive the following "***Severance Benefits***":

(i) The Company will pay Employee an amount equal to Employee's then current Base Salary for nine (9) months, less all applicable withholdings and deductions ("***Severance***"), paid in equal installments beginning on the Company's first regularly scheduled payroll date following the Release Effective Date (as defined in Section 6.1(c) below), with the remaining installments occurring on the Company's regularly scheduled payroll dates thereafter.

(ii) If Employee timely elects continued coverage under COBRA, or state continuation coverage (as applicable), for herself and her covered dependents under the Company's group health plans following such termination, then the Company shall pay the portion of the COBRA, or state continuation coverage, premiums, which is equal to the cost of the coverage that the Company was paying as of the date of termination, necessary to continue Employee's and her covered dependents' health insurance coverage in effect for herself (and her covered dependents) on the termination date until the earliest of: (i) nine (9) months following the termination date; (ii) the date when Employee becomes eligible for substantially equivalent health insurance coverage in connection with new employment or self-employment; or (iii) the date Employee ceases to be eligible for COBRA continuation coverage for any reason, including plan termination (such period from the termination date through the earlier of (i)-(iii), (the "***COBRA Payment Period***"). Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA, or state continuation coverage, premiums on Employee's behalf would result in a violation of applicable law (including, but not limited to, the 2010 Patient Protection and Affordable Care Act, as amended by the 2010 Health Care and Education Reconciliation Act), then in lieu of paying such portion of the premiums pursuant to this Section, the Company shall pay Employee on the last day of each remaining month of the COBRA Payment Period, a fully taxable cash payment equal to the portion of such COBRA or state continuation coverage premium that would have been paid by the Company for such month, subject to applicable tax withholding, for the remainder of the COBRA Payment Period. Nothing in this Agreement shall deprive Employee of her rights under COBRA or ERISA for benefits under plans and policies arising under her employment by the Company.

(iii) Notwithstanding the terms of any equity plan or award agreement to the contrary, the unvested portion of all time-based equity awards outstanding on the date of Employee's termination that would have vested over the six (6) month period following the date of Employee's termination had she remained continuously employed by the Company during such period will be automatically vested and exercisable as of the Separation Date (as defined below). Notwithstanding the foregoing, in the event that such termination without Cause or resignation for Good Reason under this Section 6.1 occurs within twelve (12) months following the effective date of a Change in Control (as defined in the Company's 2018 Stock Incentive Plan), and provided that such termination without Cause constitutes a Separation from Service, and subject to Employee's full compliance with Section 6.1(c), then, effective as of Employee's date of termination, each of Employee's then outstanding options and equity awards that have been continued, assumed or substituted for by the Company or the surviving entity or acquirer in such Change in Control, including awards that would otherwise vest only upon satisfaction of performance criteria, shall accelerate and become vested and exercisable as to 100% of the then-unvested and, in the case of performance-based awards, then-unearned (at the actual performance level or, if the actual performance level has not been determined at the time of such termination, at 100% achievement of target, in any case, unless more-favorable acceleration terms are otherwise provided in the award agreement applicable to such performance-based award) shares subject to the equity award.

(c) Employee will be paid all of the Accrued Obligations on the Company's first payroll date after Employee's date of termination from employment or earlier if required by law. Employee shall receive the Severance Benefits pursuant to Section 6.1(b) of this Agreement if: (i) by the 60th day following the date of Employee's Separation from Service, she has signed and delivered to the Company a separation agreement containing an effective, general release of claims in favor of the Company and its affiliates and representatives, in the form presented by the Company (the "***Release***"), which will include a non-competition clause, which cannot be revoked in whole or part by such date (the date that the Release can no longer be revoked is referred to as the "***Release Effective Date***"); and (ii) if she holds any other positions with the Company or any Affiliate, including a position on the Board, she resigns such position(s) to be effective no later than the date of Employee's termination date (or such other date as requested by the Board); (iii) she returns all Company property; (iv) she complies with her post-termination obligations under this Agreement and the Confidential Information Agreement; and (v) she complies with the terms of the Release, including without limitation any non-disparagement and confidentiality provisions contained in Release. To the extent that any severance payments are deferred compensation under Section 409A of the Code, and are not otherwise exempt from the application of Section 409A, then, if the period during which Employee may consider and sign the Release spans two calendar years, the payment of Severance will not be made or begin until the later calendar year.

(d) For purposes of this Agreement, "***Accrued Obligations***" are (i) Employee's accrued but unpaid salary and accrued but unused vacation days, each through the date of termination, (ii) any unreimbursed business expenses incurred by Employee payable

in accordance with the Company's standard expense reimbursement policies, and (iii) benefits owed to Employee under any qualified retirement plan or health and welfare benefit plan in which Employee was a participant in accordance with applicable law and the provisions of such plan.

(e) The Severance Benefits provided to Employee pursuant to this Section 6.1 are in lieu of, and not in addition to, any benefits to which Employee may otherwise be entitled under any Company severance plan, policy, program, or prior agreement with the Company.

(f) Any damages caused by the termination of Employee's employment without Cause would be difficult to ascertain; therefore, the Severance Benefits for which Employee is eligible pursuant to Section 6.1(b) above in exchange for the Release is agreed to by the parties as liquidated damages, to serve as full compensation, and not a penalty.

(g) For purposes of this Agreement, "***Good Reason***" shall mean the occurrence of any of the following events without Employee's consent: (i) a material reduction in Employee's Base Salary of at least 10%; (ii) a material reduction in Employee's duties, authority and responsibilities relative to Employee's duties, authority, and responsibilities in effect immediately prior to such reduction; (iii) the relocation of Employee's principal place of employment, without Employee's consent, in a manner that lengthens her one-way commute distance by fifty (50) or more miles from her then-current principal place of employment immediately prior to such relocation; or (iv) any material breach of this Agreement by the Company; *provided, however,* that, any such termination by Employee shall only be deemed for Good Reason pursuant to this definition if: (1) Employee gives the Company written notice of her intent to terminate for Good Reason within thirty (30) days following the first occurrence of the condition(s) that she believes constitute(s) Good Reason, which notice shall describe such condition(s); (2) the Company fails to remedy such condition(s) within thirty (30) days following receipt of the written notice (the "***Cure Period***"); (3) the Company has not, prior to receiving such notice from Employee, already informed Employee that her employment with the Company is being terminated; and (4) Employee voluntarily terminates her employment within thirty (30) days following the end of the Cure Period.

6.2 <u>Termination by the Company for Cause</u>.

Subject to Section 6.2(b) below, the Company shall have the right to terminate Employee's employment with the Company at any time for Cause by giving notice as described in Section 6.6 of this Agreement.

(a) "***Cause***" for termination shall mean that the Company has determined in its sole discretion that Employee has engaged in any of the following: (i) a material breach of any covenant or condition under this Agreement or any other agreement between the parties; (ii) any act constituting dishonesty, fraud, immoral or disreputable conduct; (iii) any conduct which constitutes a felony under applicable law; (iv) material violation of any Company policy or any act of misconduct; (v) refusal to follow or implement a clear and reasonable directive of the Company; (vi) negligence or incompetence in the performance of Employee's duties after the expiration of ten (10) days without cure after written notice of such failure; or (vii) breach of fiduciary duty.

(b) In the event Employee's employment is terminated at any time for Cause, Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, consistent with the Company's standard payroll policies, the Company shall provide to Employee the Accrued Obligations.

6.3 Resignation by the Employee (other than for Good Reason).

(a) Employee may resign for any reason from Employee's employment with the Company at any time by giving notice as described in Section 6.6.

(b) In the event Employee resigns from Employee's employment with the Company (other than for Good Reason), Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, consistent with the Company's standard payroll policies, the Company shall provide to Employee the Accrued Obligations.

6.4 Termination by Virtue of Death or Disability of the Employee.

(a) In the event of Employee's death while employed pursuant to this Agreement, all obligations of the parties hereunder shall terminate immediately, and the Company shall, pursuant to the Company's standard payroll policies, provide to Employee's legal representatives Employee's Accrued Obligations, but neither Employee nor her legal representatives will be eligible for the Severance Benefits.

(b) Subject to applicable state and federal law, the Company shall at all times have the right, upon written notice to the Employee, to terminate this Agreement based on the Employee's Disability (as defined below). Termination by the Company of the Employee's employment based on "***Disability***" shall mean termination because the Employee is unable due to a physical or mental condition to perform the essential functions of her position with or without reasonable accommodation for six (6) months in the aggregate during any twelve (12) month period or based on the written certification by two licensed physicians of the likely continuation of such condition for such period. This definition shall be interpreted and applied consistent with the Americans with Disabilities Act, the Family and Medical Leave Act, and other applicable law. In the event Employee's employment is terminated based on the Employee's Disability, Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall provide to Employee the Accrued Obligations.

6.5 Termination Due to Discontinuance of Business. Anything in this Agreement to the contrary notwithstanding, in the event the Company's business is discontinued because rendered impracticable by substantial financial losses, lack of funding, legal decisions, administrative rulings, declaration of war, dissolution, national or local economic depression or crisis or any reasons beyond the control of the Company, then this Agreement shall terminate as of the day the Company determines to cease operation with the same force and effect as if such day of the month were originally set as the termination date hereof. In the event this Agreement is terminated pursuant to this Section 6.5, Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall provide to Employee the Accrued Obligations.

6.6 Notice; Effective Date of Termination.

(a) Termination of Employee's employment (the "***Separation Date***") pursuant to this Agreement shall be effective on the earliest of:

(i) immediately after the Company gives notice to Employee of Employee's termination, with or without Cause, unless pursuant to Section 6.2(b)(vi) in which case ten (10) days after notice if not cured, or unless the Company specifies a later date, in which case, termination shall be effective as of such later date;

(ii) immediately upon the Employee's death;

(iii) immediately after the Company gives written notice to Employee of Employee's termination on account of Employee's Disability, unless the Company specifies a later Separation Date, in which case, termination shall be effective as of such later Separation Date, *provided* that Employee has not returned to the full time performance of Employee's duties prior to such date;

(iv) except as addressed by Section 6.6(a)(v), forty-five (45) days (or such shorter period agreed to by the President and Chief Executive Officer and the Employee in writing) after the Employee gives written notice to the Company of Employee's resignation for any reason, *provided* that the Company may set a Separation Date at any time between the date of notice and the date of resignation, in which case the Employee's resignation shall be effective as of such other date. Employee will receive compensation through any required notice period; or

(v) for a termination for Good Reason, immediately upon Employee's full satisfaction of the requirements of Section 6.1(g).

(b) In the event notice of a termination under subsection (a)(i) is given orally, at the other party's request, the party giving notice must provide written confirmation of such notice within five (5) business days of the request in compliance with the requirement of Section 7.1 below. In the event of a termination for Cause, written confirmation shall specify the subsection(s) of the definition of Cause relied on to support the decision to terminate.

6.7 Cooperation With Company After Termination of Employment. Following termination of Employee's employment for any reason, Employee shall reasonably cooperate with the Company in all matters relating to the winding up of Employee's pending work including, but not limited to, any litigation in which the Company is involved, and the orderly transfer of any such pending work to such other employees as may be designated by the Company.

6.8 Effect of Termination. Employee agrees that should Employee's employment be terminated for any reason, Employee shall be deemed to have resigned from any and all positions with the Company and its subsidiaries.

6.9 Application of Section 409A. Notwithstanding anything to the contrary set forth herein, any payments and benefits provided under this Agreement that constitute "deferred compensation" within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended ("***Code***") and the regulations and other guidance thereunder and any state law of similar effect (collectively, "***Section 409A***") shall not commence in connection with Employee's termination of employment unless and until Employee has also incurred a Separation from Service, unless the Company reasonably determines that such amounts may be provided to Employee without causing Employee to incur the additional 20% tax under Section 409A. It is intended that each installment of severance pay provided for in this Agreement is a separate "payment" for purposes of Treasury Regulation Section 1.409A-2(b)(2)(i). For the avoidance of doubt, it is intended that severance payments set forth in this Agreement satisfy, to the greatest extent possible, the exceptions from the application of Section 409A provided under Treasury Regulation Sections 1.409A-1(b)(4) and 1.409A-1(b)(9). If the Company (or, if applicable, the successor entity thereto) determines that any payments or benefits constitute "deferred compensation" under Section 409A and Employee is, on the termination of service, a "specified employee" of the Company or any successor entity thereto, as such term is defined in Section 409A(a)(2)(B)(i) of the Code, then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences under Section 409A, the timing of the payments and benefits shall be delayed until the earlier to occur of: (a) the date that is six months and one day after Employee's Separation From Service, or (b) the date of Employee's death (such applicable date, the "***Specified Employee Initial Payment Date***"). On the Specified Employee Initial Payment Date, the Company (or the successor entity thereto, as applicable) shall (i) pay to Employee a lump sum amount equal to the sum of the payments and benefits that Employee would otherwise have received through the Specified Employee Initial Payment Date if the commencement of the payment of such amounts had not been so delayed pursuant to this Section and (ii) commence paying the balance of the payments and benefits in accordance with the applicable payment schedules set forth in this Agreement. All reimbursements provided under this Agreement shall be subject to the following requirements: (i) the amount of in-kind benefits provided or reimbursable expenses incurred in one taxable year shall not affect the in-kind benefits to be provided or the expenses eligible for reimbursement in any other taxable year, (ii) all reimbursements shall be paid as soon as administratively practicable, but in no event shall any reimbursement be paid after the last day of the taxable year following the taxable year in which the expense was incurred, and (iii) the right to reimbursement or in-kind benefits is not subject to liquidation or exchange for any other benefit. It is intended that all payments and benefits under this Agreement shall either comply with or be exempt from the requirements of Section 409A, and any ambiguity contained herein shall be interpreted in such manner so as to avoid adverse personal tax consequences under Section 409A. Notwithstanding the foregoing, the Company shall in no event be obligated to indemnify Employee for any taxes or interest that may be assessed by the Internal Revenue Service pursuant to Section 409A of the Code to payments made pursuant to this Agreement.

7. GENERAL PROVISIONS.

7.1 Notices. Any notices required hereunder to be in writing shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by electronic mail, telex or confirmed facsimile if sent during normal business hours of the recipient, and if not, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent to the Company at its primary office location and to Employee at Employee's address as listed on the Company payroll or Employee's company-provided email address, or at such other address as the Company or the Employee may designate by ten (10) days advance written notice to the other.

7.2 Severability. Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

7.3 Waiver. If either party should waive any breach of any provisions of this Agreement, Employee or it shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement.

7.4 Complete Agreement. This Agreement constitutes the entire agreement between Employee and the Company with regard to the subject matter hereof. This Agreement is the complete, final, and exclusive embodiment of their agreement with regard to this subject matter and supersedes any prior oral discussions or written communications and agreements, including the Prior Agreement. This Agreement is entered into without reliance on any promise or representation other than those expressly contained herein, and it cannot be modified or amended except in writing signed by Employee and an authorized officer of the Company. The parties are entering into a separate Confidential Information Agreement in connection herewith and have or may enter into separate agreements related to equity awards. These separate agreements govern other aspects of the relationship between the parties, have or may have provisions that survive termination of the Employee's employment under this Agreement, may be amended or superseded by the parties without regard to this Agreement and are enforceable according to their terms without regard to the enforcement provision of this Agreement.

7.5 Counterparts. This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one party, but all of which taken together will constitute one and the same Agreement.

7.6 Headings. The headings of the sections hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

7.7 Successors and Assigns. The Company shall assign this Agreement and its rights and obligations hereunder in whole, but not in part, to any Company or other entity with or into which the Company may hereafter merge or consolidate or to which the Company may transfer all or substantially all of its assets, if in any such case said Company or other entity shall by operation of law or expressly in writing assume all obligations of the Company hereunder as fully as if it had been originally made a party hereto, but may not otherwise assign this Agreement or its rights and obligations hereunder. The Employee may not assign or transfer this Agreement or any rights or obligations hereunder, other than to her estate upon her death.

7.8 Choice of Law. All questions concerning the construction, validity and interpretation of this Agreement will be governed by the law of the Commonwealth of Massachusetts.

7.9 Resolution of Disputes. To ensure the timely and economical resolution of disputes that may arise in connection with Employee's employment with the Company, Employee and the Company agree that any and all disputes, claims, or causes of action arising from or relating to the enforcement, breach, performance, negotiation, execution, or interpretation of this Agreement, Confidential Information Agreement, or Employee's employment, or the termination of Employee's employment, including but not limited to all statutory claims, will be resolved pursuant to the Federal Arbitration Act, 9 U.S.C. §1-16, and to the fullest extent permitted by law, by final, binding and confidential arbitration by a single arbitrator conducted in ***Boston, Massachusetts*** by Judicial Arbitration and Mediation Services Inc. ("**JAMS**") under the then applicable JAMS rules (at the following web address: https://www.jamsadr.com/rules-employment-arbitration/); provided, however, this arbitration provision shall not apply to sexual harassment claims to the extent prohibited by applicable law. A hard copy of the rules will be provided to Employee upon request. **By agreeing to this arbitration procedure, both Employee and the Company waive the right to resolve any such dispute through a trial by jury or judge or administrative proceeding**. In addition, all claims, disputes, or causes of action under this Section, whether by Employee or the Company, must be brought in an individual capacity, and shall not be brought as a plaintiff (or claimant) or class member in any purported class or representative proceeding, nor joined or consolidated with the claims of any other person or entity. The Arbitrator may not consolidate the claims of more than one person or entity, and may not preside over any form of representative or class proceeding. To the extent that the preceding sentences regarding class claims or proceedings are found to violate applicable law or are otherwise found unenforceable, any claim(s) alleged or brought on behalf of a class shall proceed in a court of law rather than by arbitration. The Company acknowledges that Employee will have the right to be represented by legal counsel at any arbitration proceeding. Questions of whether a claim is subject to arbitration under this Agreement) shall be decided by the arbitrator. Likewise, procedural questions which grow out of the dispute and bear on the final disposition are also matters for the arbitrator. The arbitrator shall: (a) have the authority to compel adequate discovery for the resolution of the dispute and to award such relief as would otherwise be permitted by law; (b) issue a written arbitration decision, to include the arbitrator's essential findings and conclusions and a statement of the award; and (c) be authorized to award any or all remedies that Employee or the Company would be entitled to seek in a court of law. Employee and the Company shall equally share all JAMS' arbitration fees. Except as modified in the Confidential Information Agreement, each party is responsible for its own attorneys' fees. Nothing in this Agreement is intended to prevent either

Employee or the Company from obtaining injunctive relief in court to prevent irreparable harm pending the conclusion of any such arbitration. Any awards or orders in such arbitrations may be entered and enforced as judgments in the federal and state courts of any competent jurisdiction. To the extent applicable law prohibits mandatory arbitration of sexual harassment claims, in the event Employee intends to bring multiple claims, including a sexual harassment claim, the sexual harassment may be publicly filed with a court, while any other claims will remain subject to mandatory arbitration.

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Employment Agreement on the day and year first written above.

SENSEI BIOTHERAPEUTICS, INC.

By: */s/ John Celebi*
Name: John Celebi
Title: President and Chief Executive Officer

Employee:

/s/ Marie-Louise Fjaellskog
Marie-Louise Fjaellskog, MD, PhD

Exhibit A

EMPLOYEE CONFIDENTIAL INFORMATION AND INVENTIONS ASSIGNMENT AGREEMENT

EMPLOYMENT AGREEMENT

This **EMPLOYMENT AGREEMENT** (the "***Agreement***") is entered into effective, by and between 9 Feb 2020 Sensei Biotherapeutics, Inc. (the "***Company***") and Robert Pierce, M.D. (the "***Employee***").

The Company desires to employ the Employee, in the capacity of full-time Chief Scientific Officer pursuant to the terms of this Agreement and, in connection therewith, to compensate the Employee for Employee's personal services to the Company; and

The Employee wishes to be employed by the Company and provide personal services to the Company in return for certain compensation.

Accordingly, in consideration of the mutual promises and covenants contained herein, the parties agree to the following:

1. EMPLOYMENT BY THE COMPANY.

1.1 At-Will Employment. Employee shall be employed by the Company on an "at-will" basis, meaning either the Company or Employee may terminate Employee's employment at any time, with or without cause or advanced notice. Any contrary representations that may have been made to Employee shall be superseded by this Agreement. This Agreement shall constitute the full and complete agreement between Employee and the Company on the "at - will" nature of Employee's employment with the Company, which may be changed only in an express written agreement signed by Employee and a duly authorized officer of the Company. Employee's rights to any compensation following a termination shall be only as set forth in Section 6.

1.2 Position. Subject to the terms set forth herein, the Company agrees to employ Employee, initially in the position of Chief Scientific Officer, and Employee hereby accepts such employment. During the term of Employee's employment with the Company, Employee will devote Employee's best efforts and substantially all of Employee's business time and attention to the business of the Company.

1.3 Start Date. Employee's employment with the Company shall commence on a date mutually agreed to in writing by Employee and the Company. The date Employee actually commences working for the Company is referred to as Employee's "***Start Date***." Prior to the Start Date or in the event that Employee does not commence employment with the Company under this Agreement, the Company shall have no obligation to provide Employee with compensation and benefits (including, but not limited to, the "Severance Benefits" stated in Section 6.1).

1.4 Duties. Employee will report to the President and Chief Executive Officer performing such duties as are normally associated with his then current position and such duties as are assigned to him from time to time, subject to the oversight and direction of the President and Chief Executive Officer. In general, and without limitation, Employee will: oversee the scientific functions of the Company, develop new technologies and products in line with the Company's mission, coordinate research activities by actively recruiting and retaining scientific staff, and represent the science of the Company in scientific forums and shareholder events. Employee shall perform his duties under this Agreement principally out of the Company's research lab to be established in the Cambridge, Massachusetts area or such other location as assigned. In addition, Employee shall make such business trips to such places as may be necessary or advisable for the efficient operations of the Company.

1.5 Level of Commitment. The Company and Employee agree that Employee is intended to serve in a full-time capacity in his role with the Company, but acknowledge that Employee may be required to provide a staged transition to his current employer, the Fred Hutchinson Cancer Research Center ("***FHCRC***"), between the Start Date and July 1, 2020 (the "***Transition Period***"). In the event that Employee is not able to perform his duties to the Company on a full-time basis during some or all of the Transition Period, then Employee agrees that his Base Salary (as defined below) and Annual Bonus (as defined below) shall be reduced commensurate with the reduced schedule he is working for the Company during the Transition Period. Employee agrees that he will be working for the Company in a full-time capacity no later than July 1, 2020.

1.6 Company Policies and Benefits. The employment relationship between the parties shall also be subject to the Company's personnel policies and procedures as they may be interpreted, adopted, revised or deleted from time to time in the Company's sole discretion. Employee will be eligible to participate on the same basis as similarly situated employees in the Company's benefit plans in effect from time to time during his employment. All matters of eligibility for coverage or benefits under any benefit plan shall be determined in accordance with the provisions of such plan. The Company reserves the right to change, alter, or terminate any benefit plan in its sole discretion. Notwithstanding the foregoing, in the event that the terms of this Agreement differ from or are in conflict with the Company's general employment policies or practices, this Agreement shall control.

1.7 Insurance. While this Agreement is in effect, for actions within the scope of Employee's employment, the Company will include Employee as an insured at a level comparable to similarly-situated employees at the Company in its Directors and Officers Liability insurance policy in effect from time to time.

2. COMPENSATION.

2.1 Salary. Employee shall initially receive for Employee's services to be rendered hereunder an initial annualized base salary of $340,000 ("Base Salary"). The Base Salary is subject to review and adjustment from time to time by the Company in its sole discretion. The Base Salary is payable subject to standard federal and state payroll withholding requirements in accordance with Company's standard payroll practices.

2.2 Bonus.

(a) ***Annual*** **Bonus**. Employee shall be eligible to earn an annual performance bonus of up to 30% (the "***Target Percentage***") of his then-current Base Salary ("Annual Bonus"). The Annual Bonus will be based upon the Company's assessment of the Employee's performance, the Company's attainment of targeted goals as set by the Company's Board of Directors (the "***Board***") in its sole discretion, overall economic conditions and forecasts, and related financial factors, all as determined by the Company in its sole discretion. The Annual Bonus, if any, will be subject to applicable payroll deductions and withholdings. Following the close of each calendar year, the Company will determine whether the Employee has earned the Annual Bonus, and the amount of any Annual Bonus (which can be less than the Target Percentage), based on the set criteria. No amount of the Annual Bonus is guaranteed, and the Employee must be an employee in good standing on the Annual Bonus payment date to be eligible to receive an Annual Bonus; no partial or prorated bonuses will be provided. Notwithstanding the foregoing, Employee will be eligible for a prorated Annual Bonus for 2020, subject to the eligibility criteria in this Section 2.2 and provided that such Annual Bonus for 2020 (if any) will be prorated based upon the number of days during which he was employed by the Company in 2020 (commencing on the Start Date). The Employee's eligibility for an Annual Bonus is subject to change in the discretion of the Board (or any authorized committee thereof).

(b) Loan Repayment Bonus. If Employee is required to repay a portion of the home loan forgiveness provided by FHCRC, then Employee shall be eligible to earn an additional one-time bonus equivalent to such amount that Employee is required to repay to FHCRC to a maximum of $20,000 (the "***Repayment Amount***"), subject to applicable payroll deductions and withholdings (the "***Loan Repayment Bonus***"). As a condition to earning the Loan Repayment Bonus, Employee must provide credible documentation to the Company of the Repayment Amount no later than one (1) month following the Start Date (the "***Documentation Requirement***"). The Loan Repayment Bonus will be paid in a lump sum on the Company's second ordinary payroll date after the date that Employee satisfies the Documentation Requirement, provided that Employee remains employed by the Company through such date of payment. If Employee resigns from the Company for any reason or if the Company terminates Employee's employment for Cause (as defined below) within eighteen (18) months following the Start Date, Employee must repay to the Company the Loan Repayment Bonus which was previously provided to Employee, on a pre-tax basis.

2.3 Stock Option. Subject to approval of the Board, Employee will be granted an option to purchase 10,000,000 shares of the Company's common stock (the "***Option***"), pursuant and subject to the Company's 2018 Stock Incentive Plan (the "***Plan***") and other documents issued in connection with the grant (the "***Option Documents***"), at an exercise price per share equal to the fair market value of a share of the Company's common stock on the date of grant, as determined by the Board in its sole discretion. The vesting commencement date of the Option will be the Start Date (the "***Vesting Commencement Date***"). The Option will vest according to the following schedule: four-year vesting with 25% of the shares subject to the Option vesting upon the one year anniversary of the Vesting Commencement Date and the balance of the shares vesting in equal installments each month thereafter over the thirty-six (36) month period to follow, subject to Employee being employed by the Company on such dates. The specific terms and conditions of the Option will be as set forth in the Plan, grant notice, option agreement and other applicable documents, which Employee may be required to sign.

2.4 Expense Reimbursement.

(a) General Expense Reimbursement. The Company will reimburse Employee for all reasonable, documented business expenses incurred in connection with his services hereunder, in accordance with the Company's business expense reimbursement policies and procedures as may be in effect from time to time.

(b) Contingent Relocation Expenses. If Employee relocates his primary residence to the Cambridge, Massachusetts area on or before the date that is twelve (12) months following the Start Date, then the Company will provide Employee with up to $25,000 (the "***Relocation Amount***") in connection with such relocation of Employee's principal residence. Acceptable uses of the Relocation Amount include (i) expenses related to moving household goods and personal effects including hiring professional movers or renting a moving vehicle and packing supplies; (ii) the cost paid for standard carrier insurance while in transit; (iii) mileage reimbursement at the federal mileage rate to drive Employee's personal vehicle(s) to the new location; (iv) travel costs, including airfare or other public transportation and lodging for Employee and his immediate family members between his old and new homes; and (v) offsetting Employee's closing costs for buying and/or selling a home (collectively "***Relocation Expenses***"). Appropriate supporting documentation (i.e., itemized receipts) of the Relocation Expenses must be submitted within sixty (60) days after the date that each such Relocation Expense is incurred and prior to reimbursement. Any Relocation Amount will be paid with respect to any Relocation Expense no later than thirty (30) days after the date Employee submits appropriate supporting documentation. The Company will withhold from any Relocation Amount any applicable income and employment tax withholdings, as determined in its reasonable, good faith judgment, and Employee will be responsible for paying any taxes on these reimbursements to the extent that they are taxable income under applicable tax law. If Employee

resigns from the Company for any reason or if the Company terminates Employee's employment for Cause (as defined below) within eighteen (18) months following the Start Date, Employee must repay to the Company the full Relocation Amount which was previously provided to Employee, on a pre-tax basis, and Employee will forfeit all rights to be paid any additional Relocation Amount not yet paid as of the date of termination.

(c) Contingent Down Payment. If Employee elects not to relocate his primary residence to the Cambridge, Massachusetts area (and therefore has not received any portion of the Relocation Amount), but nonetheless purchases a residence in the Cambridge, Massachusetts area on or before the date that is twelve (12) months following the Start Date, then, subject to submission to the Company of appropriate supporting documentation, the Company will reimburse Employee for up to $25,000 of the down payment for such additional residence (the "***Partial Down Payment Reimbursement***"). Appropriate supporting documentation of the Partial Down Payment Reimbursement must be submitted within sixty (60) days after date Employee makes such down payment. Any Partial Down Payment Reimbursement will be paid no later than thirty (30) days after the date Employee submits appropriate supporting documentation. The Company will withhold from the Partial Down Payment Reimbursement any applicable income and employment tax withholdings, as determined in its reasonable, good faith judgment, and Employee will be responsible for paying any taxes on these reimbursements to the extent that they are taxable income under applicable tax law. If Employee resigns from the Company for any reason or if the Company terminates Employee's employment for Cause (as defined below) within eighteen (18) months following the Start Date, Employee must repay to the Company the Partial Down Payment Reimbursement which was previously provided to Employee, on a pre-tax basis. For the avoidance of doubt, Employee is not eligible to receive both the Relocation Amount and the Partial Down Payment Reimbursement and receipt of one will foreclose receipt of the other.

(d) Travel Expenses. While this Agreement is in effect (commencing on the Start Date) and so long as Employee's primary residence remains in Washington State, the Company will reimburse Employee for reasonable travel expenses from his home in Washington State to the Cambridge, Massachusetts and Gaithersburg, Maryland areas, in a combined maximum gross amount of $1,250.00 per month (less any required withholding and/or deductions required by applicable law) ("***Travel Expenses***"). The Company shall reimburse such Travel Expenses within thirty (30) days of receipt of an invoice or other documentation that complies with Company policies, provided that Employee submits such receipts and other documentation within sixty (60) days following the date such Travel Expenses are incurred.

(e) Housing Expenses. While this Agreement is in effect and until the earliest of (i) such date that Employee relocates his primary residence to the Cambridge, Massachusetts area; (ii) such date that Employee purchases an additional residence in the Cambridge, Massachusetts area; or (iii) the date that is one (1) year following the Start Date, provided that the Company may, in its sole discretion, extend the date to two (2) years following the Start Date by written consent; the Company will reimburse Employee for reasonable corporate housing in the Cambridge, Massachusetts area in a maximum gross amount of $2,000 per month, less deductions and withholdings required by applicable law, if any (the "***Housing Expenses***"). The Company shall reimburse such Housing Expenses within thirty (30) days of receipt of an invoice or other documentation that complies with Company policies, provided that Employee submits such receipts and other documentation within sixty (60) days following the date such Housing Expenses are incurred.

(f) Professional Expenses. The Company agrees to reimburse Employee for reasonable expenses incurred in connection with his professional duties, including (i) expenses pertaining to the maintenance of Employee's one (1) active state medical license; (ii) expenses of Employee's attendance at continued medical education required to maintain licensure; and (iii) dues payable to the following critical professional societies: SITC, ASCO, AACR, and College of American Pathologists ((i)

through (iii) collectively, "***Professional Expenses***"). The Company shall reimburse such Professional Expenses within thirty (30) days of receipt of an invoice or other documentation that complies with Company policies, provided that Employee submits such receipts and other documentation within sixty (60) days following the date each such Professional Expense is incurred.

(g) 409A. For the avoidance of doubt, to the extent that any reimbursements payable to Employee are subject to the provisions of Section 409A of the Internal Revenue Code of 1986, as amended (the "***Code***"): (a) any such reimbursements will be paid no later than December 31 of the year following the year in which the expense was incurred, (b) the amount of expenses reimbursed in one year will not affect the amount eligible for reimbursement in any subsequent year, and (c) the right to reimbursement under this Agreement will not be subject to liquidation or exchange for another benefit.

3. CONFIDENTIAL INFORMATION, INVENTIONS, NON-SOLICITATION, AND NON-COMPETITION OBLIGATIONS. Contemporaneously with this Agreement and as a condition of employment, Employee agrees to sign and abide by the Employee Confidential Information and Inventions Assignment Agreement (the "***Confidential Information Agreement***") attached hereto as **Exhibit A**. The Confidential Information Agreement may be amended by the parties from time to time without regard to this Agreement. The Confidential Information Agreement contains provisions that are intended by the parties to survive and do survive termination or expiration of this Agreement.

4. OUTSIDE ACTIVITIES. Subject to Section 1.5 and except with the prior written consent of the Company's President and Chief Executive Officer, Employee will not, while employed by the Company, undertake or engage in any other employment, occupation or business enterprise that would interfere with Employee's responsibilities and the performance of Employee's duties hereunder except for (i) reasonable time devoted to volunteer services for or on behalf of such religious, educational, non-profit and/or other charitable organization as Employee may wish to serve; (ii) reasonable time devoted to activities in the non-profit and business communities consistent with Employee's duties; (iii) the consulting and other activities stated in **Exhibit B**, *provided that* such activities do not interfere with Employee's full performance of duties under this Agreement and do not pose a conflict of interest in the determination of the President and Chief Executive Officer; and (iv) such other activities as may be specifically approved by the President and Chief Executive Officer as activities that do not interfere with Employee's full performance of duties under this Agreement and do not pose a conflict of interest. For the avoidance of doubt, with respect to (iv) of this Section 4, Employee may enter into engagements to serve on advisory boards or to provide consulting services after the Start Date so long as Employee has first disclosed such proposed engagements to the President and Chief Executive Officer and obtained consent for such engagements. This restriction shall not, however, preclude Employee from owning less than one percent (1%) of the total outstanding shares of a publicly-traded company. Promptly following the Start Date, Employee agrees to terminate all existing outside activities that the President and Chief Executive Officer deem to pose an unresolvable conflict with the Company's interests. Likewise, Employee agrees to decline any engagements under (iv) of this Section 4 that the President and Chief Executive Officer deem to pose an unresolvable conflict with the Company's interests.

5. NO CONFLICT WITH EXISTING OBLIGATIONS. Employee represents that Employee's performance of all the terms of this Agreement and as an Employee of the Company do not and will not breach any agreement or obligation of any kind made prior to Employee's employment by the Company, including agreements or obligations Employee may have with prior employers or entities for which Employee has provided services. Employee has not entered into, and Employee agrees that Employee will not enter into, any agreement or obligation, either written or oral, in conflict herewith.

6. TERMINATION OF EMPLOYMENT. The parties acknowledge that Employee's employment relationship with the Company is at-will. Either Employee or the Company may terminate the employment relationship at any time, with or without Cause. The provisions in this Section govern the amount of compensation, if any, to be provided to Employee upon termination of employment and do not alter this at-will status.

6.1 Termination by the Company Without Cause or for Good Reason.

(a) The Company shall have the right to terminate Employee's employment with the Company pursuant to this Section 6.1 at any time without "Cause" (as defined in Section 6.2(a) below) by giving notice as described in Section 6.6 of this Agreement. A termination pursuant to Section 6.4 or 6.5 below is not a termination without " Cause" for purposes of receiving the benefits described in this Section 6.1.

(b) If the Company terminates Employee's employment at any time without Cause or Employee terminates his employment with the Company for "Good Reason" (as defined in Section 6.1(g) below), then Employee shall be entitled to receive the Accrued Obligations (defined in 6.1(d) below). If such termination without Cause constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h), without regard to any alternative definition thereunder, a "***Separation from Service***"), and Employee complies with the obligations in Section 6.1(c) below, Employee shall also be eligible to receive the following "***Severance Benefits***":

(i) The Company will pay Employee an amount equal to Employee's then current Base Salary for nine (9) months, less all applicable withholdings and deductions ("***Severance***"), paid in equal installments beginning on the Company's first regularly scheduled payroll date following the Release Effective Date (as defined in Section 6.1(c) below), with the remaining installments occurring on the Company's regularly scheduled payroll dates thereafter.

(ii) If Employee timely elects continued coverage under COBRA, or state continuation coverage (as applicable), for himself and his covered dependents under the Company's group health plans following such termination, then the Company shall pay the portion of the COBRA, or state continuation coverage, premiums, which is equal to the cost of the coverage that the Company was paying as of the date of termination, necessary to continue Employee's and his covered dependents' health insurance coverage in effect for himself (and his covered dependents) on the termination date until the earliest of: (i) nine (9) months following the termination date; (ii) the date when Employee becomes eligible for substantially equivalent health insurance coverage in connection with new employment or self-employment; or (iii) the date Employee ceases to be eligible for COBRA continuation coverage for any reason, including plan termination (such period from the termination date through the earlier of (i)-(iii), (the "***COBRA Payment Period***"). Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA, or state continuation coverage, premiums on Employee's behalf would result in a violation of applicable law (including, but not limited to, the 2010 Patient Protection and Affordable Care Act, as amended by the 2010 Health Care and Education Reconciliation Act), then in lieu of paying such portion of the premiums pursuant to this Section, the Company shall pay Employee on the last day of each remaining month of the COBRA Payment Period, a fully taxable cash payment equal to the portion of such COBRA or state continuation coverage premium that would have been paid by the Company for such month, subject to applicable tax withholding, for the remainder of the COBRA Payment Period. Nothing in this Agreement shall deprive Employee of his rights under COBRA or ERISA for benefits under plans and policies arising under his employment by the Company.

(iii) Notwithstanding the terms of any equity plan or award agreement to the contrary, the unvested portion of all time-based equity awards outstanding on the date of Employee's termination that would have vested over the six (6) month period following the date of Employee's termination had he remained continuously employed by the Company during such period will be automatically vested and exercisable as of the Separation Date (as defined below).

(c) Employee will be paid all of the Accrued Obligations on the Company's first payroll date after Employee's date of termination from employment or earlier if required by law. Employee shall receive the Severance Benefits pursuant to Section 6.1(b) of this Agreement if: (i) by the 60th day following the date of Employee's Separation from Service, he has signed and delivered to the Company a separation agreement containing an effective, general release of claims in favor of the Company and its affiliates and representatives, in the form presented by the Company (the "***Release***"), which will include a non-competition clause, which cannot be revoked in whole or part by such date (the date that the Release can no longer be revoked is referred to as the "***Release Effective Date***"); and (ii) if he holds any other positions with the Company or any Affiliate, including a position on the Board, he resigns such position(s) to be effective no later than the date of Employee's termination date (or such other date as requested by the Board); (iii) he returns all Company property; (iv) he complies with his post-termination obligations under this Agreement and the Confidential Information Agreement; and (v) he complies with the terms of the Release, including without limitation any non-disparagement and confidentiality provisions contained in Release. To the extent that any severance payments are deferred compensation under Section 409A of the Code, and are not otherwise exempt from the application of Section 409A, then, if the period during which Employee may consider and sign the Release spans two calendar years, the payment of Severance will not be made or begin until the later calendar year.

(d) For purposes of this Agreement, "***Accrued Obligations***" are Employee's accrued but unpaid salary and accrued but unused vacation days, each through the date of termination, (ii) any unreimbursed business expenses incurred by Employee payable in accordance with the Company's standard expense reimbursement policies, and (iii) benefits owed to Employee under any qualified retirement plan or health and welfare benefit plan in which Employee was a participant in accordance with applicable law and the provisions of such plan.

(e) The Severance Benefits provided to Employee pursuant to this Section 6.1 are in lieu of, and not in addition to, any benefits to which Employee may otherwise be entitled under any Company severance plan, policy, program, or prior agreement with the Company.

(f) Any damages caused by the termination of Employee's employment without Cause would be difficult to ascertain; therefore, the Severance Benefits for which Employee is eligible pursuant to Section 6.1(b) above in exchange for the Release is agreed to by the parties as liquidated damages, to serve as full compensation, and not a penalty.

(g) For purposes of this Agreement, "***Good Reason***" shall mean the occurrence of any of the following events without Employee's consent: (i) a material reduction in Employee's Base Salary of at least 10%;(ii) a material reduction in Employee's duties, authority and responsibilities relative to Employee's duties, authority, and responsibilities in effect immediately prior to such reduction; (iii) the relocation of Employee's principal place of employment, without Employee's consent, in a manner that lengthens his one-way commute distance by fifty (50) or more miles from his then-current principal place of employment immediately prior to such relocation, provided, however, that Employee's relocation to the Cambridge, Massachusetts area shall not constitute Good Reason; or (iv) any material breach of this Agreement by Company; provided, however, that, any such termination by Employee shall only be deemed for Good Reason pursuant to this definition if: (1) Employee gives the Company written notice of his intent to terminate for Good Reason within thirty (30) days following the first occurrence of the condition(s) that he believes constitute(s) Good Reason, which notice shall describe such condition(s); (2) the Company fails to remedy such condition(s) within thirty (30) days following receipt of the written notice (the "Cure Period"); (3) the Company has not, prior to receiving such notice from Employee, already informed Employee that his employment with the Company is being terminated; and (4) Employee voluntarily terminates his employment within thirty (30) days following the end of the Cure Period.

6.2 Termination by the Company for Cause.

Subject to Section 6.2(b) below, the Company shall have the right to terminate Employee's employment with the Company at any time for Cause by giving notice as described in Section 6.6 of this Agreement.

(a) "***Cause***" for termination shall mean that the Company has determined in its sole discretion that Employee has engaged in any of the following: (i) a material breach of any covenant or condition under this Agreement or any other agreement between the parties; (ii) any act constituting dishonesty, fraud, immoral or disreputable conduct; (iii) any conduct which constitutes a felony under applicable law; (iv) material violation of any Company policy or any act of misconduct; (v) refusal to follow or implement a clear and reasonable directive of the Company; (vi) negligence or incompetence in the performance of Employee's duties after the expiration of ten (10) days without cure after written notice of such failure; or (vii) breach of fiduciary duty.

(b) In the event Employee's employment is terminated at any time for Cause, Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, consistent with the Company's standard payroll policies, the Company shall provide to Employee the Accrued Obligations.

6.3 Resignation by the Employee (other than for Good Reason)

(a) Employee may resign for any reason from Employee's employment with the Company at any time by giving notice as described in Section 6.6.

(b) In the event Employee resigns from Employee's employment with the Company (other than for Good Reason), Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, consistent with the Company's standard payroll policies, the Company shall provide to Employee the Accrued Obligations.

6.4 Termination by Virtue of Death or Disability of the Employee.

(a) In the event of Employee's death while employed pursuant to this Agreement, all obligations of the parties hereunder shall terminate immediately, and the Company shall, pursuant to the Company's standard payroll policies, provide to Employee's legal representatives Employee's Accrued Obligations. In the event Employee's employment is terminated based on Employee's death, neither Employee nor his legal representatives will be eligible for the Severance Benefits; *provided, however*, if Employee's legal representative comply with the Release requirement stated in Section 6.1(c) above, then Employee's Option may be exercised as to any vested shares subject to the Option through the earlier of: (i) the twelve (12) month anniversary of Employee's death, or (ii) the original expiration date applicable to the Option, unless terminated earlier in accordance with the terms of the Plan and Option Documents. Except as provided in this Agreement, all terms, conditions and limitations applicable to the Option will remain in full force and effect pursuant to the Plan and Option Documents; provided however, Employee acknowledge that this Section 6.4(a) sets forth the full agreement between the parties as to the extension of the exercise period of Employee's Option as of the date of this Agreement. The Company makes no representations or guarantees regarding the status of Employee's Option as an incentive stock option ("***ISO***"). Employee understands and agrees that a modification of an option that is an ISO (including

an extension of the exercise period) may result in such option becoming a non-qualified stock option ("***NSO***") for federal tax purposes, which may be less favorable to Employee (or Employee's legal representative for the purpose of this Section 6.4(a)) from a tax standpoint. Likewise, to the extent any option granted as an ISO (and which has retained its ISO status) is exercised with respect to any vested shares later than the date that is three (3) months following the termination date, such option will be treated as an NSO for federal tax purposes, and Employee (or Employee's legal representative for the purpose of this Section 6.4(a)) will be obligated to satisfy tax obligations that arise when exercising the Option. No shares of the Company's common stock will be issued in respect of the exercise of any option unless and until Employee (or Employee's legal representative for the purpose of this Section 6.4(a)) satisfies all applicable tax obligations. Employee acknowledges that the Company is not providing tax advice to Employee and that Employee has been advised by the Company to seek independent tax advice with respect to the exercise of the Option.

(b) Subject to applicable state and federal law, the Company shall at all times have the right, upon written notice to the Employee, to terminate this Agreement based on the Employee's Disability (as defined below). Termination by the Company of the Employee's employment based on "***Disability***" shall mean termination because the Employee is unable due to a physical or mental condition to perform the essential functions of his position with or without reasonable accommodation for six (6) months in the aggregate during any twelve (12) month period or based on the written certification by two licensed physicians of the likely continuation of such condition for such period. This definition shall be interpreted and applied consistent with the Americans with Disabilities Act, the Family and Medical Leave Act, and other applicable law. In the event Employee's employment is terminated based on the Employee's Disability, Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall provide to Employee the Accrued Obligations.

6.5 Termination Due to Discontinuance of Business. Anything in this Agreement to the contrary notwithstanding, in the event the Company's business is discontinued because rendered impracticable by substantial financial losses, lack of funding, legal decisions, administrative rulings, declaration of war, dissolution, national or local economic depression or crisis or any reasons beyond the control of the Company, then this Agreement shall terminate as of the day the Company determines to cease operation with the same force and effect as if such day of the month were originally set as the termination date hereof. In the event this Agreement is terminated pursuant to this Section 6.5, Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall provide to Employee the Accrued Obligations.

6.6 Notice; Effective Date of Termination.

(a) Termination of Employee's employment (the "***Separation Date***") pursuant to this Agreement shall be effective on the earliest of:

(i) immediately after the Company gives notice to Employee of Employee's termination, with or without Cause, unless pursuant to Section 6.2(b)(vi) in which case ten (10) days after notice if not cured, or unless the Company specifies a later date, in which case, termination shall be effective as of such later date;

(ii) immediately upon the Employee's death;

(iii) immediately after the Company gives written notice to Employee of Employee's termination on account of Employee's Disability, unless the Company specifies a later Separation Date, in which case, termination shall be effective as of such later Separation Date, provided that Employee has not returned to the full time performance of Employee's duties prior to such date;

(iv) except as addressed by Section 6.6(a)(v), forty-five (45) days after the Employee gives written notice to the Company of Employee's resignation, *provided* that the Company may set a Separation Date at any time between the date of notice and the date of resignation, in which case the Employee's resignation shall be effective as of such other date. Employee will receive compensation through any required notice period; or

(v) for a termination for Good Reason, immediately upon Employee's full satisfaction of the requirements of Section 6.1(g).

(b) In the event notice of a termination under subsection (a)(i) is given orally, at the other party's request, the party giving notice must provide written confirmation of such notice within five (5) business days of the request in compliance with the requirement of Section 7.1 below. In the event of a termination for Cause, written confirmation shall specify the subsection(s) of the definition of Cause relied on to support the decision to terminate.

6.7 Cooperation With Company After Termination of Employment. Following termination of Employee's employment for any reason, Employee shall reasonably cooperate with the Company in all matters relating to the winding up of Employee's pending work including, but not limited to, any litigation in which the Company is involved, and the orderly transfer of any such pending work to such other employees as may be designated by the Company.

6.8 Effect of Termination. Employee agrees that should Employee's employment be terminated for any reason, Employee shall be deemed to have resigned from any and all positions with the Company and its subsidiaries.

6.9 Application of Section 409A. Notwithstanding anything to the contrary set forth herein, any payments and benefits provided under this Agreement that constitute "deferred compensation" within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended ("***Code***") and the regulations and other guidance thereunder and any state law of similar effect (collectively, "***Section 409A***") shall not commence in connection with Employee's termination of employment unless and until Employee has also incurred a "separation from service" (as such term is defined in Treasury Regulation Section 1.409A-1(h) ("***Separation From Service***"), unless the Company reasonably determines that such amounts may be provided to Employee without causing Employee to incur the additional 20% tax under Section 409A. It is intended that each installment of severance pay provided for in this Agreement is a separate "payment" for purposes of Treasury Regulation Section 1.409A-2(b)(2)(i). For the avoidance of doubt, it is intended that severance payments set forth in this Agreement satisfy, to the greatest extent possible, the exceptions from the application of Section 409A provided under Treasury Regulation Sections 1.409A-1(b)(4) and 1.409A-1(b)(9). If the Company (or, if applicable, the successor entity thereto) determines that any payments or benefits constitute "deferred compensation" under Section 409A and Employee is, on the termination of service, a "specified employee" of the Company or any successor entity thereto, as such term is defined in Section 409A(a)(2)(B)(i) of the Code, then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences under Section 409A, the timing of the payments and benefits shall be delayed until the earlier to occur of: (a) the date that is six months and one day after Employee's Separation From Service, or (b) the date of Employee's death (such applicable date, the "***Specified Employee Initial Payment Date***"). On the Specified Employee Initial Payment Date, the Company (or the successor entity thereto, as applicable) shall (i) pay to Employee a lump sum amount equal to the sum of the payments and benefits that Employee would otherwise have received through the Specified Employee Initial Payment Date if the commencement of the payment of such amounts had not been so

delayed pursuant to this Section and (ii) commence paying the balance of the payments and benefits in accordance with the applicable payment schedules set forth in this Agreement. All reimbursements provided under this Agreement shall be subject to the following requirements: (i) the amount of in-kind benefits provided or reimbursable expenses incurred in one taxable year shall not affect the in-kind benefits to be provided or the expenses eligible for reimbursement in any other taxable year, (ii) all reimbursements shall be paid as soon as administratively practicable, but in no event shall any reimbursement be paid after the last day of the taxable year following the taxable year in which the expense was incurred, and (iii) the right to reimbursement or in-kind benefits is not subject to liquidation or exchange for any other benefit. It is intended that all payments and benefits under this Agreement shall either comply with or be exempt from the requirements of Section 409A, and any ambiguity contained herein shall be interpreted in such manner so as to avoid adverse personal tax consequences under Section 409A. Notwithstanding the foregoing, the Company shall in no event be obligated to indemnify Employee for any taxes or interest that may be assessed by the Internal Revenue Service pursuant to Section 409A of the Code to payments made pursuant to this Agreement.

7. GENERAL PROVISIONS.

7.1 Notices. Any notices required hereunder to be in writing shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by electronic mail, telex or confirmed facsimile if sent during normal business hours of the recipient, and if not, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent to the Company at its primary office location and to Employee at Employee's address as listed on the Company payroll or Employee's company-provided email address, or at such other address as the Company or the Employee may designate by ten (10) days advance written notice to the other.

7.2 Severability. Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

7.3 Waiver. If either party should waive any breach of any provisions of this Agreement, Employee or it shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement.

7.4 Complete Agreement. This Agreement constitutes the entire agreement between Employee and the Company with regard to the subject matter hereof. This Agreement is the complete, final, and exclusive embodiment of their agreement with regard to this subject matter and supersedes any prior oral discussions or written communications and agreements. This Agreement is entered into without reliance on any promise or representation other than those expressly contained herein, and it cannot be modified or amended except in writing signed by Employee and an authorized officer of the Company. The parties have entered into a separate Confidential Information Agreement and may enter into separate agreements related to equity awards. These separate agreements govern other aspects of the relationship between the parties, have or may have provisions that survive termination of the Employee's employment under this Agreement, may be amended or superseded by the parties without regard to this Agreement and are enforceable according to their terms without regard to the enforcement provision of this Agreement.

7.5 Counterparts. This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one party, but all of which taken together will constitute one and the same Agreement.

7.6 Headings. The headings of the sections hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

7.7 Successors and Assigns. The Company shall assign this Agreement and its rights and obligations hereunder in whole, but not in part, to any Company or other entity with or into which the Company may hereafter merge or consolidate or to which the Company may transfer all or substantially all of its assets, if in any such case said Company or other entity shall by operation of law or expressly in writing assume all obligations of the Company hereunder as fully as if it had been originally made a party hereto, but may not otherwise assign this Agreement or its rights and obligations hereunder. The Employee may not assign or transfer this Agreement or any rights or obligations hereunder, other than to his estate upon his death.

7.8 Choice of Law. All questions concerning the construction, validity and interpretation of this Agreement will be governed by the law of the Commonwealth of Massachusetts.

7.9 Resolution of Disputes. To ensure the timely and economical resolution of disputes that may arise in connection with Employee 's employment with the Company, Employee and the Company agree that any and all disputes, claims, or causes of action arising from or relating to the enforcement, breach, performance, negotiation, execution, or interpretation of this Agreement, Confidential Information Agreement, or Employee's employment, or the termination of Employee's employment, including but not limited to all statutory claims, will be resolved pursuant to the Federal Arbitration Act, 9 U.S.C. §1-16, and to the fullest extent permitted by law, by final, binding and confidential arbitration by a single arbitrator conducted in Boston, Massachusetts by Judicial Arbitration and Mediation Services Inc. ("**JAMS**") under the then applicable JAMS rules (at the following web address: https://www.jamsadr.com/rules-employment-arbitration/); provided, however, this arbitration provision shall not apply to sexual harassment claims to the extent prohibited by applicable law. A hard copy of the rules will be provided to Employee upon request. **By agreeing to this arbitration procedure, both Employee and the Company waive the right to resolve any such dispute through a trial by jury or judge or administrative proceeding**. In addition, all claims, disputes, or causes of action under this section, whether by Employee or the Company, must be brought in an individual capacity, and shall not be brought as a plaintiff (or claimant) or class member in any purported class or representative proceeding, nor joined or consolidated with the claims of any other person or entity. The Arbitrator may not consolidate the claims of more than one person or entity, and may not preside over any form of representative or class proceeding. To the extent that the preceding sentences regarding class claims or proceedings are found to violate applicable law or are otherwise found unenforceable, any claim(s) alleged or brought on behalf of a class shall proceed in a court of law rather than by arbitration. The Company acknowledges that Employee will have the right to be represented by legal counsel at any arbitration proceeding. Questions of whether a claim is subject to arbitration under this Agreement) shall be decided by the arbitrator. Likewise, procedural questions which grow out of the dispute and bear on the final disposition are also matters for the arbitrator. The arbitrator shall: (a) have the authority to compel adequate discovery for the resolution of the dispute and to award such relief as would otherwise be permitted by law; (b) issue a written arbitration decision, to include the arbitrator's essential findings and conclusions and a statement of the award; and (c) be authorized to award any or all remedies that Employee or the Company would be entitled to seek in a court of law. Employee and the Company shall equally share all JAMS' arbitration fees. Except as modified in the Confidential Information Agreement, each party is responsible for its own attorneys' fees. Nothing in this Agreement is intended to prevent either Employee or the Company from obtaining injunctive relief in court to prevent irreparable harm pending the conclusion of any such arbitration. Any awards or orders in

such arbitrations may be entered and enforced as judgments in the federal and state courts of any competent jurisdiction. To the extent applicable law prohibits mandatory arbitration of sexual harassment claims, in the event Employee intends to bring multiple claims, including a sexual harassment claim, the sexual harassment may be publicly filed with a court, while any other claims will remain subject to mandatory arbitration.

IN WITNESS WHEREOF, the parties have executed this Employment Agreement on the day and year first written above.

SENSEI BIOTHERAPEUTICS, INC.

By: */s/ John Celebi*
Name: John Celebi
Title: President and Chief Executive Officer

Employee:

/s/ Robert Pierce, M.D.
Robert Pierce, M.D.

Exhibit A

EMPLOYEE CONFIDENTIAL INFORMATION AND INVENTIONS ASSIGNMENT AGREEMENT

Exhibit B

OUTSIDE ACTIVITIES

OncoSec Medical
Apros Therapeutics, Inc.
IgM Biosciences, Inc.
Immunomic Therapeutics, Inc. (resigning)
Juno Therapeutics, Inc.
Pulse Biosciences
Abbvie
Calithera Biosciences
Minerva Biosciences
AstraZeneca
Exicure Therapeutics
X4-Pharma
Incyte Pharmaceuticals
Neoleukin Therapeutics
Alvaxa Biosciences
Hope Farms, LLC

Exhibit 10.8

INDEPENDENT CONTRACTOR AND STRATEGIC ADVISORY SERVICES AGREEMENT

THIS INDEPENDENT CONTRACTOR AND STRATEGIC ADVISORY SERVICES AGREEMENT (together with Exhibit A, the "Agreement") made as of May 8, 2018 (the "Effective Date") is between Samuel Broder, M.D., having an address at 8612 Honeybee Lane, Bethesda, Maryland 20817 ("Consultant") and Sensei Biotherapeutics, Inc., a corporation having an address at 620 Professional Drive, Gaithersburg, Maryland 20879 ("Client"). Client desires to have the benefit of Consultant's knowledge and experience, and Consultant desires to provide Consulting Services (defined below) to Client, all as provided in this Agreement.

1. **Consulting Services**. Client retains Consultant and Consultant agrees to provide consulting services to Client as it may from time to time reasonably request and as further specified in the Exhibit A ("Business Terms Exhibit") attached hereto (the "Consulting Services"). Any changes to the Consulting Services and/or any compensation adjustments in respect of the Consulting Services must be agreed upon in writing between Consultant and Client.

1.1 **Performance**. Consultant will render the Consulting Services (a) at such reasonably convenient times and places as Client and Consultant may agree, (b) under the general supervision of Client and (c) on a best efforts basis. In performing the Consulting Services, Consultant will comply with all business conduct, regulatory and health and safety guidelines or regulations established by Client or any governmental authority with respect to the business of Client.

1.2 **Obligations to Third Parties**. Consultant will not use or disclose any confidential information of any other third party in connection with any of the Consulting Services. Further, Consultant represents and warrants that the performance of the Consulting Services does not and will not breach any agreement which obligates Consultant to keep in confidence any confidential information of any third party or to refrain from competing with the business of any third party.

1.3 **No Conflicts**. Consultant is under no contractual or other obligation or restriction which is inconsistent with Consultant's execution of this Agreement or the performance of the Consulting Services. During the term of this Agreement, Consultant will not enter into any agreement, either written or oral, in conflict with Consultant's obligations under this Agreement. Consultant will arrange to provide the Consulting Services in such manner and at such times that the Consulting Services will not conflict with Consultant's responsibilities under any other agreement, arrangement or understanding or pursuant to any employment relationship Consultant has at any time with any third party. Consultant represents and warrants to Client that the Developments (as defined in Section 3.1) do not violate the intellectual property rights of any third party.

1.4 **Absence of Debarment**. Consultant represents that Consultant has not been suspended, debarred or subject to temporary denial of approval, and to the best of Consultant's knowledge, is not under consideration to be suspended, debarred or subject to temporary denial of approval, by the Food and Drug Administration from working in or providing services, directly or indirectly, to any applicant for approval of a drug product or any pharmaceutical or biotechnology company under the Generic Drug Enforcement Act of 1992.

2. **Compensation**. In consideration of the Consulting Services rendered by Consultant to Client, Client agrees to pay Consultant as set forth in the Business Terms Exhibit. All undisputed payments will be made by Client within thirty (30) days from Client's receipt of Consultant's invoice. Invoices will contain such detail as Client may reasonably require and will be payable in U.S. Dollars. Client will reimburse Consultant for reasonable business expenses incurred by Consultant in the performance of the Consulting Services, provided that they are pre-approved by Client.

3. **Proprietary Rights**.

3.1 **Developments**. "Developments" means ideas, concepts, discoveries, inventions, developments, improvements, know-how, trade secrets, designs, processes, methodologies, materials, products, formulations, data, documentation, reports, algorithms, notation systems, computer programs, works of authorship, databases, mask works, devices, equipment and any other creations (whether or not patentable or subject to copyright or trade secret protection) that are developed or conceived or reduced to practice by Consultant, either alone or jointly with others, and that result from or relate to the performance of the Consulting Services.

3.2 **Ownership**. All Developments will be the exclusive property of Client. Consultant hereby assigns and, to the extent any such assignment cannot be made at present, hereby assigns to Client, without further compensation, all right, title and interest in and to all Developments and any and all related patents, patent applications, copyrights, copyright applications, trademarks, trade names, trade secrets and other proprietary rights in the United States and throughout the world. During and after the term of this Agreement, Consultant will cooperate fully in obtaining patent and other proprietary protection for the Developments, all in the name of Client and at Client's cost and expense, and, without limitation, will execute and deliver all requested applications, assignments and other documents, and take such other measures as Client may reasonably request, in order to perfect and enforce Client's rights in the Developments. Consultant appoints Client its attorney to execute and deliver any such documents on Consultant's behalf in the event Consultant fails to do so. Consultant acknowledges that all copyrightable materials developed or produced by Consultant during the performance of the Consulting Services constitute "works made for hire" pursuant to the United States Copyright Act (17 U.S.C. Section 101).

3.3 **Records and Reporting**. Consultant shall make and maintain adequate and current written records of all Developments. Such records shall be furnished to Client as and when requested by Client and will be the exclusive property of Client. Consultant will promptly disclose all Developments to Client.

3.4 **Work at Third Party Facilities**. Consultant will not make any use of any funds, personnel, equipment, facilities or other resources of any third party in performing the Consulting Services nor to take any other action that would result in a third party owning or having a right in any Developments.

4. **Confidential Information and Materials**.

4.1 **Definitions**. "Confidential Information" means any and all non-public information of Client, including that of third parties that Client has an obligation to maintain as confidential and that developed by Consultant in the performance of the Consulting Services, pertaining to Client's technologies, products, intellectual property, finances,

operations and/or business, and whether or not labeled as being confidential information of Client. “Materials” means any biological, chemical or similar materials of Client which are furnished by Client to Consultant in order to perform the Consulting Services. If the provision of Materials is contemplated under this Agreement, the Materials to be provided are so identified in the Business Terms Exhibit.

4.2 **Obligations of Confidentiality**. During the term of this Agreement and thereafter, Consultant will not directly or indirectly (a) publish, disseminate or otherwise disclose, (b) use for Consultant’s own benefit or for the benefit of a third party or (c) deliver or make available to any third party, any Confidential Information or Materials, other than in furtherance of the purposes of this Agreement and only then with the prior written consent of Client. Consultant will exercise all reasonable precautions to physically protect the integrity and confidentiality of the Confidential Information and Materials and will not remove any Confidential Information or Materials from Client’s premises, other than in furtherance of the purposes of this Agreement and then only with Client’s prior written consent.

4.3 **Exceptions**. Consultant will have no obligations of confidentiality and non-use with respect to any portion of the Confidential Information which:

(a) is or becomes available to the public by use, publication or the like, through no breach of this Agreement by, or act or omission of, Consultant;

(b) is obtained from a third party who had no obligation of confidentiality and the legal right to disclose the same to Consultant; or

(c) Consultant already possesses, as evidenced by its written records that predate the receipt thereof from Client.

In the event that Consultant is required (by oral questions, interrogatories, request for information or documents, subpoena, civil investigative demand or similar process) to disclose any Confidential Information, Consultant will give Client prompt notice thereof so that Client may seek an appropriate protective order. Consultant will reasonably cooperate with Client at Client’s expense, in its efforts to seek such a protective order.

4.4 **Remedies**. It is understood and agreed that Client will be irreparably injured by a breach of this Section 4; that money damages will not be an adequate remedy for any such breach; and that Client will be entitled to seek equitable relief, including injunctive relief and specific performance, without having to post a bond, as a remedy for any such breach, and such remedy will not be Client’s exclusive remedy for any breach of this Section 4.

4.5 **Disclaimer of Warranties**. Other than as set forth in this Agreement, Consultant makes no representations or warranties, express or implied, about the Services. Other than as set forth in this Agreement, Consultant disclaims any and all warranties, including the warranty of merchantability or fitness for a particular purpose. Consultant makes no representations or warranties that the Services provided hereunder will produce the intended result, including but not limited to any representations or warranties that a particular drug or treatment study or effect will work as intended or be capable of securing regulatory approval

5. Term and Termination.

5.1 Term. This Agreement will commence on the Effective Date and continue for the term specified on the Business Terms Exhibit, unless sooner terminated pursuant to the express terms of this Section 6 or extended by mutual written agreement of the parties.

5.2 Termination by Either Party. Either party may terminate this Agreement at any time without cause upon not less than sixty (60) days prior written notice to the other party.

5.3 Termination for Breach. Client may immediately terminate this Agreement at any time upon written notice to Consultant in the event of a breach of this Agreement by Consultant which cannot be cured (e.g., a breach of Section 4) or in the event that Consultant is accused of a crime or unethical conduct. In addition, Client may terminate this Agreement for cause at any time upon three (3) days prior written notice to Consultant. "Cause" shall mean (a) a breach by Consultant of this Agreement where such breach can be cured and is not remedied within such three (3) day period, (b) the physical or mental inability of Consultant to perform the Consulting Services or (c) the unsatisfactory performance of the Consulting Services which unsatisfactory performance is not remedied within such three (3) day period.

5.4 Effect of Expiration/Termination. Upon any expiration or termination of this Agreement, for any reason, neither Consultant nor Client will have any further obligations under this Agreement, except that (a) Consultant will terminate all Consulting Services in progress in an orderly manner and as otherwise requested by Client, (b) Client will pay Consultant any monies due and owing Consultant for Consulting Services actually performed up to the time of expiration or termination of this Agreement, (c) Consultant will immediately return to Client all Confidential Information provided to Consultant under this Agreement except for one (1) copy which Consultant may retain solely for legal archival purposes, (d) Consultant will immediately return to Client all unused Materials provided to Consultant under this Agreement, (e) Consultant will immediately deliver to Client all Developments and records of Developments, and (f) the terms and conditions of Sections 1.3, 1.4, 3, 4, 5.4, 6 and 7 will survive expiration or termination of this Agreement, each in accordance with their respective terms.

6. Indemnification. Consultant will indemnify and hold Client harmless from and against any claim, loss, damage, cost or expense including, without limitation, reasonable attorneys' fees, arising from or relating to any breach of this Agreement including, without limitation, Section 1.3, Section 7.1 and Section 7.2. In the event of litigation, arbitration, or other legal or regulatory process or investigation (a "Legal Process"), Consultant will reasonably cooperate with the Company's requests that Consultant assist the Company with any investigation in or defense of such process. It is expressly acknowledged and agreed that any time spent by Consultant working on a Legal Process on behalf or at the request of the Company shall be considered outside the Services set forth herein, and Consultant shall be compensated accordingly at Consultant's standard hourly rate.

7. Miscellaneous.

7.1 Independent Contractor. All Consulting Services will be rendered by Consultant as an independent contractor and this Agreement does not create an employer-employee, principal-agent, joint venture or partnership relationship between Consultant and Client. Consultant will have no right to receive any employee benefits, such as health and accident insurance, sick leave or vacation which are accorded to employees of Client. Consultant will not in any way represent Consultant to be an employee, partner, joint venturer or agent of Client.

7.2 **Taxes**. Consultant will pay all required taxes on Consultant's income from Client under this Agreement. Consultant shall provide Client with all required tax information, including without limitation, an IRS Form W-9 "Request for Taxpayer Identification Number and Certification." Failure to provide such information may result in withholding of payments to Consultant.

7.3 **Use of Name**. Each party consents to the use by the other party of such party's name in written materials and oral presentations to current or prospective business partners, investors or other third parties, provided that such materials or presentations accurately describe the nature of the relationship, including as a "Strategic Advisor" to the Company.

7.4 **Assignability and Binding Effect**. The Consulting Services to be rendered by Consultant are personal in nature. Neither party may assign or transfer this Agreement or any of such party's rights or obligations hereunder, provided that (i) Client shall have the right to assign this Agreement to an affiliated company or in connection with the merger, consolidation, sale or transfer of all or substantially all of the business to which this Agreement relates. In no event will Consultant assign or delegate responsibility for actual performance of the Services to any other natural person. This Agreement will be binding upon and inure to the benefit of the parties and their respective legal representatives, heirs, successors and permitted assigns.

7.5 **Notices**. Any notices from one party to the other will be in writing and will be given by addressing the same to the other at the address set forth in this Agreement. Notices to Client will be marked "CEO". Notice will be deemed to have been duly given when (a) deposited in the United States mail with proper postage for first class registered or certified mail, return receipt requested, (b) sent by any reputable commercial courier, or (c) delivered personally.

7.6 **Headings**. The section headings are included solely for convenience of reference and will not control or affect the meaning or interpretation of any of the provisions of this Agreement.

7.7 **No Modification**. This Agreement may be changed only by a writing signed by authorized representatives of both parties.

7.8 **Severability**. In the event that any one or more of the provisions contained in this Agreement shall, for any reason, be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability will not affect any other provisions of this Agreement, and all other provisions will remain in full force and effect. If any provision of this Agreement is held to be excessively broad, it will be reformed and construed by limiting and reducing it so as to be enforceable to the maximum extent permitted by law.

7.9 **Entire Agreement**. This Agreement constitutes the entire agreement of the parties with regard to its subject matter, and supersedes all previous written or oral representations, agreements and understandings between the parties.

7.10 Governing Law. This Agreement will be governed by, and construed and enforced in accordance with, the laws of the Commonwealth of Massachusetts applicable to contracts made and to be performed therein, without giving effect to the principles thereof relating to the conflict of laws.

7.11 Counterparts. This Agreement may be executed in any number of counterparts, each of which will be deemed an original, but all of which together will constitute one and the same instrument.

[Signature page follows]

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the Effective Date.

SENSEI BIOTHERAPEUTICS, INC.	**SAMUEL BRODER, M.D.**
By: */s/ John Celebi*	*/s/ Samuel Broder*
Name: John Celebi	
Title: President and CEO	

EXHIBIT A

BUSINESS TERMS EXHIBIT

Independent Contractor Agreement with Sensei Biotherapeutics

1. **Consulting Services**: As part of the Consulting Services, Consultant shall in general:
   a. Provide strategic guidance and with respect to the clinical development, science, and regulatory pathways of the Company's therapeutic development programs.
   b. Review the Company's scientific and clinical plans and provide feedback to management.
   c. Attend the company's Immuno-Oncology Advisory Board meetings as convenient and report to the Board of Directors on the summary recommendations of such meetings.
   d. Consult with the Company's Chief Executive Officer on strategic matters.
   e. From time to time, and as mutually agreed, participate in discussions with third parties on the company's behalf, including due diligence discussions as needed.
   f. Perform such other duties as agreed in the capacity of a special advisor to the company.
2. **Compensation**: $7,000 per month, payable on the first of the month.
3. **Term**: One year, renewable by mutual written agreement.

AMENDMENT NO. 1 TO
THE INDEPENDENT CONTRACTOR AND STRATEGIC ADVISORY SERVICES AGREEMENT

THIS AMENDMENT NO. 1, effective as of April 5, 2020 (the "Effective Date"), is to that certain Independent Contractor and Strategic Advisory Services Agreement, dated as of April 5, 2019, by and between **Sensei Biotherapeutics, Inc.** (the "Company"), with offices at 620 Professional Drive, Gaithersburg, Maryland 20879, and **Samuel Broder, M.D.** ("Consultant"), having an address at 8612 Honeybee Lane, Bethesda, Maryland 20817 (the "Agreement").

WHEREAS, pursuant to the terms of the Agreement, Consultant has been performing Consulting Services for Client under the terms of the Agreement and under Exhibit A; and

WHEREAS Client and Consultant desire to renew the Term of the Agreement beyond the initial Term, which expired on April 5, 2020.

NOW THEREFORE, for and in exchange of the mutual promises contained herein and for other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, the parties hereto agree as follows:

1. Company and Consultant acknowledge that, despite the expiration of the initial Term of the Agreement, the parties have continued to perform in accordance with the terms of the Agreement as if it was in full force and effect.
2. The Term of the Agreement is hereby renewed and shall expire on April 30, 2021 unless the parties agree in writing to renew the term in accordance with Section 3 of Exhibit A of the Agreement.
3. The parties acknowledge and agree that the Consulting Services under the invoices submitted to Company have been completed and Company has paid in full for such Consulting Services. Consultant represents and warrants that the Consulting Services described in such invoices have been performed by Consultant in accordance with the terms of the Agreement and Exhibit A, and the parties agree that such invoices shall be made a part of the Agreement and the terms and conditions of the Agreement shall govern over such invoices.
4. Exhibit A is appended hereto for ease of reference.
5. Each capitalized term used herein. if not otherwise defined, shall have the same meaning assigned to it in the Agreement.
6. Except as modified herein. all other terms of the Agreement remain unchanged.

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be executed by their duly authorized representatives as of the Effective Date.

SENSEI BIOTHERAPEUTICS, INC.

By: */s/ John K. Celebi*

John K. Celebi
Name

President and CEO
Title

May 1, 2020
Date

SAMUEL BRODER, M.D.

By: */s/ Samuel Broder*

May 1, 2020
Date

EXHIBIT A

BUSINESS TERMS EXHIBIT

Independent Contractor Agreement with Sensei Biotherapeutics

1. **Consulting Services:** As part of the Consulting Services. Consultant shall in general:
    a. Provide strategic guidance and with respect to the clinical development, science, and regulatory pathways of the Company's therapeutic development programs.
    b. Review the Company's scientific and clinical plans and provide feedback to management.
    c. Attend the company's Immuno-Oncology Advisory Board meetings as convenient and report to the Board of Directors on the summary recommendations of such meetings.
    d. Consult with the Company's Chief Executive Officer on strategic matters.
    e. From time to time, and as mutually agreed. participate in discussions with third parties on the company's behalf, including due diligence discussions as needed.
    f. Perform such other duties as agreed in the capacity of a special advisor to the company.
2. **Compensation:** $7,000 per month. payable on the first of the month.
3. **Term:** One year, renewable by mutual written agreement.

LEASE AGREEMENT

THIS LEASE AGREEMENT ("this Lease") is made as of this ***22nd*** day of October, 2020, between **ARE-MARYLAND NO. 8 CORP.,** a Maryland corporation **("Landlord"),** and **SENSEI BIOTHERAPEUTICS, INC.,** a Delaware corporation **("Tenant").**

BASIC LEASE PROVISIONS

Address: Suite 125, 1405 Research Boulevard, Rockville, Maryland 20850.

Premises: That portion of the Project, containing approximately 7,643 rentable square feet, as determined by Landlord, as shown on **Exhibit A.** The area of the Premises has been measured pursuant to Method A of the *BOMA 2017 for Office Buildings: Standard Methods of Measurement* as adopted by the Building Owners and Managers Association International (ANSI/BOMA Z65.1-2017).

Project: The real property on which the building **("Building")** in which the Premises are located, together with all improvements thereon and appurtenances thereto as described on **Exhibit B**.

Base Rent: $24,839.75, per month

Rentable Area of Premises: 7,643 sq. ft.

Rentable Area of Project: 72,170 sq. ft.

Tenant's Share of Operating Expenses: 10.59%

Security Deposit: $49,679.50

Target Commencement Date: November 1, 2020

Rent Adjustment Percentage: 3%

Base Term: Beginning on the Commencement Date and ending 76 months from the first day of the first full month following the Rent Commencement Date. For clarity, if the Rent Commencement Date occurs on the first day of a month, the Base Term will be measured from that date. If the Rent Commencement Date occurs on a day other than the first day of a month, the Base Term will be measured from the first day of the following month.

Permitted Use: general office, research and development laboratory, bio-manufacturing, and other related uses consistent with the character of the Project and otherwise in compliance with the provisions of Section 7 hereof.

Address for Rent Payment:
For check payments remit to:
Truist Bank
P.O. Box 79840
Baltimore, MD 21279-0840

For wire/ACH payments:
On request, Landlord will provide information to Tenant via a secure format.

Landlord's Notice Address:
26 North Euclid Avenue
Pasadena, CA 91101
Attn: Corporate Secretary

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Tenant's Notice Address (before Rent Commencement Date):
620 Professional Drive
Gaithersburg, MD 20879

Tenant's Notice Address (from and after Rent Commencement Date):
Suite 125
1405 Research Boulevard
Rockville, MD 20850

The following Exhibits and Addenda are attached hereto and incorporated herein by this reference:

[X] **EXHIBIT A** - PREMISES DESCRIPTION
[X] **EXHIBIT B** - DESCRIPTION OF PROJECT
(X] **EXHIBIT C** – RESERVED
[X] **EXHIBIT D** - COMMENCEMENT DATE
[X] **EXHIBIT E** - RULES AND REGULATIONS
[X] **EXHIBIT F** - TENANT'S PERSONAL PROPERTY
[X] **EXHIBIT G** - PARKING PLAN

1. **Lease of Premises.** Upon and subject to all of the terms and conditions hereof, Landlord hereby leases the Premises to Tenant and Tenant hereby leases the Premises from Landlord. The portions of the Project that are for the non-exclusive use of tenants of the Project are collectively referred to herein as the **"Common Areas."** Tenant shall have the non-exclusive right during the Term to use the Common Areas along with others having the right to use the Common Areas. Landlord reserves the right to modify Common Areas, provided that such modifications do not materially adversely affect Tenant's use of the Premises for the Permitted Use. Subject to Force Majeure (as defined in Section 34), a Taking (as defined in Section 19), the provisions of the preceding sentence, and Section 2 below, Tenant shall have access to and egress from the Building, the Premises, the Common Areas, and the parking spaces provided by Landlord to Tenant pursuant to the terms of this Lease, 24 hours a day, 7 days a week.

2. **Delivery; Acceptance of Premises; Commencement Date.** Landlord shall deliver the Premises to Tenant on or before the Target Commencement Date **("Delivery" or "Deliver").** If Landlord fails to timely Deliver the Premises, Landlord shall not be liable to Tenant for any loss or damage resulting therefrom, and this Lease shall not be void or voidable except as provided herein. If Landlord does not Deliver the Premises within 60 days of the Target Commencement Date for any reason other than Force Majeure Delays (as defined below), this Lease may be terminated by Tenant by written notice to Landlord, and if so terminated by Tenant: (a) the advanced Base Rent payment and the Security Deposit shall be returned to Tenant, and (b) neither Landlord nor Tenant shall have any further rights, duties or obligations under this Lease, except with respect to provisions that expressly survive termination of this Lease. If Tenant elects not to void this Lease within 5 business days of the lapse of such 60 day period, such right to void this Lease shall be waived and this Lease shall remain in full force and effect.

Within 180 days after the Rent Commencement Date (subject to Force Majeure Delays and Tenant Delays, the **"Target Completion Date"),** Landlord shall use commercially reasonable efforts to Substantially Complete Landlord's Work (each as defined below). Tenant acknowledges that Landlord's performance of Landlord's Work after Delivery may entail typical noise, dust, and inconvenience associated with the buildout of commercial space and that Tenant shall have no claim or cause of action against Landlord or any Landlord Party (as defined below) arising out of, or related to, the performance of Landlord's Work. Landlord shall have the right to perform Landlord's Work during business hours pursuant to a mutually agreeable schedule with Tenant, provided that Landlord shall use commercially reasonable efforts to cause any hammering, core drilling, and other work generating loud noises to be performed after normal business hours. If Landlord fails to Substantially Complete Landlord's Work by the date that is 90 days after the Target Completion Date **("Late Delivery Rent Abatement Date")** for reasons other than Force Majeure Delays and Tenant Delays, Tenant's obligation to pay Base Rent shall abate from the Late Delivery Rent Abatement Date until Substantial Completion of Landlord's Work. If, due to the on-going conduct of Landlord's Work, Tenant is prohibited by the applicable Governmental Authority (as defined below) from using all or a material portion of the Premises that is not the subject of Landlord's Work, Tenant shall receive one additional day of Base Rent abatement for each day that

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Tenant is prohibited from using all or a material portion of the Premises that is not the subject of Landlord's Work; provided, however, that the abatement described in this sentence is conditioned on Tenant first obtaining a use and occupancy permit issued by the applicable Governmental Authority for the Premises before Landlord obtains a building permit for Landlord's Work. As used herein, (i) **"Landlord's Work"** means the work of constructing the improvements to the Premises described or shown on **Exhibit C** attached hereto **("Work Letter"),** (ii) **"Force Majeure Delays"** means delays arising by reason of any Force Majeure, (iii) **"Substantially Completed"** or variations thereof has the meaning set forth in the Work Letter, and (iv) **"Tenant Delays"** has the meaning set forth in the Work Letter.

The **"Commencement Date"** shall mean the date of this lease. The **"Rent Commencement Date"** shall be the later of (i) the date Landlord shall have Delivered the Premises to Tenant, (ii) November 1, 2020, and (iii) the date Tenant delivers to Landlord a use and occupancy permit issued by the applicable Governmental Authority for the Premises. Upon request of Landlord, Tenant shall execute and deliver a written acknowledgment of the Commencement Date, the Rent Commencement Date, and the expiration date of the Term when such are established in the form of the "Acknowledgement of Commencement Date" attached to this Lease as **Exhibit D:** provided, however, Tenant's failure to execute and deliver such acknowledgment shall not affect Landlord's rights hereunder. The **"Term"** of this Lease shall be the Base Term, as defined above in the Basic Lease Provisions and the Extension Term that Tenant may elect pursuant to Section 40 hereof.

Except as set forth in the Work Letter and the provisions of this Section 2: (i) Tenant shall accept the Premises in their condition as of the Rent Commencement Date, subject to all applicable Legal Requirements (as defined in Section 7 hereof); (ii) Landlord shall have no obligation for any defects in the Premises; and (iii) Tenant's taking possession of the Premises shall be conclusive evidence that Tenant accepts the Premises and that the Premises were in good condition at the time possession was taken. Any occupancy of the Premises by Tenant before the Rent Commencement Date shall be subject to all of the terms and conditions of this Lease.

Tenant agrees and acknowledges that neither Landlord nor any agent of Landlord has made any representation or warranty with respect to the condition of all or any portion of the Premises or the Project, and/or the suitability of the Premises or the Project for the conduct of Tenant's business, and Tenant waives any implied warranty that the Premises or the Project are suitable for the Permitted Use. This Lease constitutes the complete agreement of Landlord and Tenant with respect to the subject matter hereof and supersedes any and all prior representations, inducements, promises, agreements, understandings and negotiations that are not contained herein. Landlord in executing this Lease does so in reliance upon Tenant's representations, warranties, acknowledgments and agreements contained herein.

As of the Rent Commencement Date, the Building Systems (as defined below) as well as the HVAC system, mechanical, electrical (including any electrical panels serving the Premises), lighting, life safety, water service plumbing fixtures and plumbing systems within the Premises and the Building shall be in good operating order and condition.

3. **Rent.**

(a) **Base Rent.** The first month's Base Rent and the Security Deposit shall be due and payable on delivery of an executed copy of this Lease to Landlord. Beginning on the Rent Commencement Date (but subject to the abatement of Base Rent described in Section 4(a)), Tenant shall pay to Landlord in advance, without demand, abatement, deduction or set-off, monthly installments of Base Rent on or before the first day of each calendar month during the Term hereof, in lawful money of the United States of America, at the office of Landlord for payment of Rent set forth above, or to such other person or at such other place as Landlord may from time to time designate in writing. Payments of Base Rent for any fractional calendar month shall be prorated. The obligation of Tenant to pay Base Rent and other sums to Landlord and the obligations of Landlord under this Lease are independent obligations. Tenant shall have no right at any time to abate, reduce, or set-off any Rent (as defined in Section 5) due hereunder except for any abatement as may be expressly provided in this Lease.

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(b) **Additional Rent.** In addition to Base Rent, Tenant agrees to pay to Landlord as additional rent **("Additional Rent"):** (i) Tenant's Share of "Operating Expenses" (as defined in Section 5), and (ii) any and all other amounts Tenant assumes or agrees to pay under the provisions of this Lease, including, without limitation, any and all other sums that may become due by reason of any default of Tenant or failure to comply with the agreements, terms, covenants and conditions of this Lease to be performed by Tenant, after any applicable notice and cure period.

4. **Base Rent Adjustments.** Base Rent shall be increased (i) as of the date or dates on which Tenant uses the Additional Tenant Improvement Allowance pursuant to Section 5 of the Work Letter (such increase to be calculated based on the amount of the Additional Tenant Improvement Allowance [i.e.,$134,748], such amount to be amortized over the Base Term based on an interest rate of 8.5% per annum; the resulting amount so amortized shall be added to the monthly installments of Base Rent), and (ii) on each anniversary of the first day of the first full month during the Term of this Lease (each an **"Adjustment Date")** by multiplying the Base Rent payable immediately before such Adjustment Date by the Rent Adjustment Percentage and adding the resulting amount to the Base Rent payable immediately before such Adjustment Date. For the avoidance of doubt, the amount described in clause (i) above shall not be subject to the adjustment in Base Rent described in clause (ii) above, Base Rent, as so adjusted, shall thereafter be due as provided herein. Base Rent adjustments for any fractional calendar month shall be prorated.

(a) **Base Rent Abatement.** Notwithstanding anything to the contrary contained in this Lease, but provided Tenant is not then in Default hereunder, Landlord hereby grants Tenant an abatement of the Base Rent payable during the period beginning on the Rent Commencement Date and ending 4 months after the Rent Commencement Date **("Base Rent Abatement").** For the avoidance of doubt, if the Rent Commencement Date occurs on the first day of a month, the Base Rent Abatement will be measured from that date. If the Rent Commencement Date occurs on a day other than the first day of a month, the Base Rent Abatement will be measured from the first day of the following month. Except as provided in the preceding sentences, Tenant shall pay the full amount of Base Rent due in accordance with the provisions of this Lease. The administration rent set forth in Section 5 below shall not be abated and shall be based on the amount of Base Rent that would have been payable but for the Base Rent Abatement. Notwithstanding anything to the contrary in this Section 4(a). the adjustment in the Base Rent as set forth in this Section 4 shall be based on the full and unabated amount of Base Rent payable for the first 12 month period from and after the Rent Commencement Date.

5. **Operating Expense Payments.** Landlord shall deliver to Tenant a written estimate of Operating Expenses for each calendar year during the Term **("Annual Estimate"),** which may be revised by Landlord from time to time during such calendar year. Beginning on the Rent Commencement Date, Tenant shall pay Landlord on or before the first day of each calendar month during the Term hereof an amount equal to 1/12th of Tenant's Share of the Annual Estimate. Payments for any fractional calendar month shall be prorated.

The term **"Operating Expenses"** means all costs and expenses of any kind or description whatsoever incurred or accrued each calendar year by Landlord with respect to the Project (including, without duplication, Taxes (as defined in Section 9), capital repairs and improvements amortized over the useful life of such capital items in accordance with generally accepted accounting principles consistently applied **("GAAP"),** the cost of upgrades to the Building or Project or enhanced services provided at the Building and/or Project that are intended to encourage social distancing (also referred to as physical distancing), promote and protect health and physical well-being and/or intended to prevent or limit the spread or transmission of communicable diseases and/or viruses of any kind or nature (collectively, **"Infectious Conditions")** that, with regard to such upgrades that are capital in nature, shall be amortized

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over the useful life of any such upgrades in accordance with GAAP, and the costs of Landlord's third party property manager or, if there is no third party property manager, administration rent in the amount of 4% of Base Rent), excluding only:

(a) the original demolition, entitlement, design and construction costs of any portion of the Project and renovation prior to the date of this Lease and costs of correcting defects in such original construction or renovation;

(b) capital expenditures for expansion of the Project;

(c) interest, principal payments of Mortgage (as defined in Section 27) debts of Landlord, financing costs and amortization of funds borrowed by Landlord, whether secured or unsecured and all payments of base rent (but not taxes or operating expenses) under any ground lease or other underlying lease of all or any portion of the Project;

(d) depreciation of the Project (except for capital improvements, the cost of which are includable in Operating Expenses);

(e) advertising, legal and space planning expenses and leasing commissions and other costs and expenses incurred in procuring and leasing space to tenants for the Project, including any leasing office maintained in the Project, free rent and construction allowances for tenants;

(f) legal and other expenses incurred in the negotiation or enforcement of leases;

(g) completing, fixturing, improving, renovating, painting, redecorating or other work, which Landlord pays for or performs for other tenants within their premises, and costs of correcting defects in such work;

(h) costs of utilities outside normal business hours sold to tenants of the Project;

(i) costs to be reimbursed by other tenants of the Project or Taxes to be paid directly by Tenant or other tenants of the Project, or that are covered by a warranty to the extent of reimbursement for such coverage, or for which Landlord is otherwise reimbursed or credited, or Taxes to be paid directly by other tenants of the Project, whether or not actually paid;

(j) salaries, wages, benefits and other compensation paid to officers and employees of Landlord who are not assigned in whole or in part to the operation, management, maintenance or repair of the Project;

(k) general organizational, administrative and overhead costs relating to maintaining Landlord's existence, either as a corporation, partnership, or other entity, including general corporate, legal and accounting expenses;

(l) costs (including attorneys' fees and costs of settlement, judgments and payments in lieu thereof) incurred in connection with disputes with tenants, other occupants, or prospective tenants, and costs and expenses, including legal fees, incurred in connection with negotiations or disputes with employees, consultants, management agents, leasing agents, purchasers or mortgagees of the Building;

(m) costs incurred by Landlord due to the violation by Landlord, its employees, agents or contractors or any tenant of the terms and conditions of any lease of space in the Project or any Legal Requirement (as defined in Section 7);

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(n) penalties, fines or interest incurred as a result of Landlord's inability or failure to make payment of Taxes and/or to file any tax or informational returns when due, or from Landlord's failure to make any payment of Taxes required to be made by Landlord hereunder before delinquency;

(o) overhead and profit increment paid to Landlord or to subsidiaries or affiliates of Landlord for goods and/or services in or to the Project to the extent the same exceeds the costs of such goods and/or services rendered by unaffiliated third parties on a competitive basis;

(p) costs of Landlord's charitable or political contributions, or of fine art maintained at the Project;

(q) costs in connection with services (including electricity), items or other benefits of a type that are not standard for the Project and that are not available to Tenant without specific charges therefor, but which are provided to another tenant or occupant of the Project, whether or not such other tenant or occupant is specifically charged therefor by Landlord;

(r) costs incurred in the sale or refinancing of the Project;

(s) net income taxes of Landlord or the owner of any interest in the Project (except to the extent such net income taxes are in substitution for any Taxes payable hereunder), franchise, capital stock, gift, estate or inheritance taxes or any federal, state or local documentary taxes imposed against the Project or any portion thereof or interest therein;

(t) any expenses otherwise includable within Operating Expenses to the extent actually reimbursed by persons other than tenants of the Project under leases for space in the Project;

(u) any expenses otherwise includable within Operating Expenses to the extent actually reimbursed by insurance;

(v) reserves of any kind, including but not limited to replacement reserves, and reserves for bad debts or lost rent or any similar charge not involving the payment of money to third parties; and

(w) costs incurred in connection with environmental clean up, response action, or remediation on, in or under or about the Project, to the extent such costs relate to matters existing before the Commencement Date.

In addition, notwithstanding anything to the contrary contained in this Lease, Operating Expenses incurred or accrued by Landlord for any capital improvements that are reasonably expected by Landlord to reduce overall Operating Expenses (for example, without limitation, by reducing energy usage at the Project) **("Energy Savings Costs")** shall be amortized over a period of years equal to the least of (A) 7 years, (B) the useful life of such capital items, and (C) the quotient of (i) the Energy Savings Costs, divided by (ii) the annual amount of Operating Expenses reasonably expected by Landlord to be saved as a result of such capital improvements.

Notwithstanding any contrary provision contained in this Section 5, each line item of the Controllable Operating Expenses (as defined below) shall be capped so that no increase in any calendar year, on a line-item basis, exceeds 5% over the prior year's line-item amount on a non-cumulative (and non-compounding) basis. As a result, the actual annual increase in each line item of Controllable Operating Expenses in any given calendar year from and after the calendar year in which the Commencement Date occurs may be less than or equal to 5% (but shall not exceed 5% in any such year). For purposes of this Lease, **"Controllable Operating Expenses"** means all Operating Expenses except real estate taxes, utilities, snow and ice removal, and insurance premiums (provided that the insurance coverage costs are competitively bid annually) (such exceptions collectively referred to herein as the "**Non-Controllable Operating Expenses**").

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Within 90 days after the end of each calendar year (or such longer period as may be reasonably required), Landlord shall furnish to Tenant a statement (an **"Annual Statement")** showing in reasonable detail: (a) the total and Tenant's Share of actual Operating Expenses for the previous calendar year, and (b) the total of Tenant's payments in respect of Operating Expenses for such year. If Tenant's Share of actual Operating Expenses for such year exceeds Tenant's payments of Operating Expenses for such year, the excess shall be due and payable by Tenant as Rent within 30 days after delivery of such Annual Statement to Tenant. If Tenant's payments of Operating Expenses for such year exceed Tenant's Share of actual Operating Expenses for such year Landlord shall pay the excess to Tenant within 30 days after delivery of such Annual Statement, except that after the expiration, or earlier termination of the Term or if Tenant is delinquent in its obligation to pay Rent, Landlord shall pay the excess to Tenant after deducting all other amounts due Landlord.

The Annual Statement shall be final and binding upon Tenant unless Tenant, within 60 days after Tenant's receipt thereof, shall contest any item therein by giving written notice to Landlord, specifying each item contested and the reason therefor. If, during such 60 day period, Tenant reasonably and in good faith questions or contests the accuracy of Landlord's statement of Tenant's Share of Operating Expenses, Landlord will provide Tenant with access to Landlord's books and records relating to the operation of the Project and such information as Landlord reasonably determines to be responsive to Tenant's questions **("Expense Information").** If after Tenant's review of such Expense Information, Landlord and Tenant cannot agree upon the amount of Tenant's Share of Operating Expenses, then Tenant shall have the right to have an independent public accounting firm selected by Tenant from among the 4 largest in the United States, working pursuant to a fee arrangement other than a contingent fee (at Tenant's sole cost and expense) and approved by Landlord (which approval shall not be unreasonably withheld or delayed), audit and/or review the Expense Information for the year in question **("Independent Review").** The results of any such Independent Review shall be binding on Landlord and Tenant. If the Independent Review shows that the payments actually made by Tenant with respect to Operating Expenses for the calendar year in question exceeded Tenant's Share of Operating Expenses for such calendar year, Landlord shall at Landlord's option either (i) credit the excess amount to the next succeeding Installments of estimated Operating Expenses or (ii) pay the excess to Tenant within 30 days after delivery of such statement, except that after the expiration or earlier termination of this Lease or if Tenant is delinquent in its obligation to pay Rent, Landlord shall pay the excess to Tenant after deducting all other amounts due Landlord. If the Independent Review shows that Tenant's payments with respect to Operating Expenses for such calendar year were less than Tenant's Share of Operating Expenses for the calendar year, Tenant shall pay the deficiency to Landlord within 30 days after delivery of such statement. If the Independent Review shows that Tenant has overpaid with respect to Operating Expenses by more than 5% then Landlord shall reimburse Tenant for all costs incurred by Tenant for the Independent Review. Operating Expenses for the calendar years in which Tenant's obligation to share therein begins and ends shall be prorated. Notwithstanding anything set forth herein to the contrary, if the Project is not at least 95% occupied on average during any year of the Term, Tenant's Share of Operating Expenses for such year shall be computed as though the Project had been 95% occupied on average during such year; provided, however, that in no event shall Landlord collect and retain more than 100% of the Operating Expenses actually incurred by Landlord.

"**Tenant's Share**" shall be the percentage set forth in the Basic Lease Provisions as Tenant's Share as reasonably adjusted by Landlord for changes in the physical size of the Premises or the Project occurring thereafter, provided that Landlord may not adjust Tenant's Share due solely to a remeasurement of the Premises or Project by the Landlord. Landlord may equitably increase Tenant's Share for any item of expense or cost reimbursable by Tenant that relates to a repair, replacement, or service that benefits only the Premises or only a portion of the Project that includes the Premises or that varies with occupancy or use. Base Rent, Tenant's Share of Operating Expenses and all other amounts payable by Tenant to Landlord hereunder are collectively referred to herein as "**Rent**."

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6. **Security Deposit.** Tenant shall deposit with Landlord, upon delivery of an executed copy of this Lease to Landlord, a security deposit **("Security Deposit")** for the performance of all of Tenant's obligations hereunder in the amount set forth in the Basic Lease Provisions, which Security Deposit shall be in the form of an unconditional and irrevocable letter of credit **("Letter of Credit"):** (i) in form and substance satisfactory to Landlord, (ii) naming Landlord as beneficiary, (iii) expressly allowing Landlord to draw upon it at any time from time to time by delivering to the issuer notice that Landlord is entitled to draw thereunder, (iv) issued by an FDIC-insured financial institution satisfactory to Landlord, and (v) redeemable by presentation of a sight draft in the state of Maryland. If Tenant does not provide Landlord with a substitute Letter of Credit complying with all of the requirements hereof at least 10 days before the stated expiration date of any then current Letter of Credit, Landlord shall have the right to draw the full amount of the current Letter of Credit and hold the funds drawn in cash without obligation for interest thereon as the Security Deposit. The Security Deposit shall be held by Landlord as security for the performance of Tenant's obligations under this Lease. Upon each occurrence of a Default (as defined in Section 20), Landlord may use all or any part of the Security Deposit to pay delinquent payments due under this Lease, and the cost of any damage, injury, expense or liability caused by such Default, without prejudice to any other remedy provided herein or provided by law. Upon any such use of all or any portion of the Security Deposit, Tenant shall pay Landlord on demand the amount that will restore the Security Deposit to the amount set forth in the Basic Lease Provisions. Tenant hereby waives the provisions of any law, now or hereafter in force, which provide that Landlord may claim from a security deposit only those sums reasonably necessary to remedy defaults in the payment of Rent, to repair damage caused by Tenant or to clean the Premises, it being agreed that Landlord may, in addition, claim those sums reasonably necessary to compensate Landlord for any other loss or damage, foreseeable or unforeseeable, caused by the act or omission of Tenant or any officer, employee, agent or invitee of Tenant. Upon bankruptcy or other debtor-creditor proceedings involving Tenant, the Security Deposit shall be deemed to be applied first to the payment of Rent and other charges due Landlord for periods prior to the filing of such proceedings. Upon any such use of all or any portion of the Security Deposit, Tenant shall, within 5 days after demand from Landlord, restore the Security Deposit to its original amount. Provided Tenant is not then in default of this Lease, the Security Deposit, or any balance thereof (i.e., after deducting therefrom all amounts to which Landlord is entitled under the provisions of this Lease), shall be returned to Tenant (or, at Landlord's option, to the last assignee of Tenant's interest hereunder) within 90 days after the expiration or earlier termination of this Lease.

a. **Transfer.** If Landlord transfers its interest in the Project or this Lease, Landlord shall either (i) transfer any Security Deposit then held by Landlord to a person or entity assuming Landlord's obligations under this Section 6 and provide Tenant with written notice of such transfer, or (ii) return to Tenant any Security Deposit then held by Landlord and remaining after the deductions permitted herein. Upon such transfer to such transferee and written notice thereof to Tenant or the return of the Security Deposit to Tenant, Landlord shall have no further obligation with respect to the Security Deposit, and Tenant's right to the return of the Security Deposit shall apply solely against Landlord's transferee. The Security Deposit is not an advance rental deposit or a measure of Landlord's damages in case of Tenant's default. Landlord's obligation respecting the Security Deposit is that of a debtor, not a trustee, and no interest shall accrue thereon.

7. **Use.** The Premises shall be used solely for the Permitted Use set forth in the Basic Lease Provisions, and in compliance with all laws, orders, judgments, ordinances, regulations, codes, directives, permits, licenses, covenants and restrictions now or hereafter applicable to the Premises, and to the use and occupancy thereof, including, without limitation, the Americans With Disabilities Act, 42 U. S.C. § 12101, et seq. (together with the regulations promulgated pursuant thereto, **"ADA")** (collectively, **"Legal Requirements"** and each, a **"Legal Requirement").** Tenant shall, upon 5 days' written notice from Landlord, discontinue any use of the Premises that is declared by any Governmental Authority having jurisdiction to be a violation of a Legal Requirement. Tenant will not use or permit the Premises to be used for any purpose or in any manner that would void Tenant's or Landlord's insurance, increase the insurance risk, or cause the disallowance of any sprinkler or other credits. Tenant shall not permit any part of the Premises to be used as a ''place of public accommodation", as defined in the ADA or any

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similar legal requirement. Tenant shall reimburse Landlord promptly upon demand for any additional premium charged for any such insurance policy by reason of Tenant's failure to comply with the provisions of this Section or otherwise caused by Tenant's use and/or occupancy of the Premises. Tenant will use the Premises in a careful, safe and proper manner and will not commit or permit waste, overload the floor or structure of the Premises, subject the Premises to use that would damage the Premises or obstruct or interfere with the rights of Landlord or other tenants or occupants of the Project, including conducting or giving notice of any auction, liquidation, or going out of business sale on the Premises, or using or allowing the Premises to be used for any unlawful purpose. Tenant shall cause any equipment or machinery to be installed in the Premises so as to reasonably prevent sounds or vibrations from the Premises from extending into Common Areas, or other space in the Project. Tenant shall not place any machinery or equipment weighing 500 pounds or more in or upon the Premises or transport or move such items through the Common Areas of the Project or in the Project elevators without the prior written consent of Landlord, which consent shall not be unreasonably withheld, delayed, or conditioned. Except as may be provided under the Work Letter, Tenant shall not, without the prior written consent of Landlord, use the Premises in any manner that will require ventilation, air exchange, heating, gas, steam, electricity or water beyond the existing capacity of the Project as proportionately allocated to the Premises based upon Tenant's Share as usually furnished for the Permitted Use.

(a) **Modifications to Common Areas.** Landlord shall, as an Operating Expense (to the extent such Legal Requirement is generally applicable to similar buildings in the area in which the Project is located and is first applicable to the Building after the Commencement Date) or at Tenant's expense (to the extent such Legal Requirement is applicable solely by reason of Tenant's, as compared to other tenants of the Project, particular use of the Premises) make any alterations or modifications to the Common Areas or the exterior of the Building that are required by Legal Requirements, including the ADA. Except as included in Landlord's Work, Tenant, at its sole expense, shall make any alterations or modifications to the interior of the Premises that are required by Legal Requirements (including, without limitation, compliance of the Premises with the ADA). Notwithstanding any other provision herein to the contrary, and except as set forth in the Work Letter, Tenant shall be responsible for any and all demands, claims, liabilities, losses, costs, expenses, actions, causes of action, damages or judgments, and all reasonable expenses incurred In investigating or resisting the same (including, without limitation, reasonable attorneys' fees, charges and disbursements and costs of suit) (collectively, **"Claims")** arising out of or in connection with Legal Requirements within the Premises, and Tenant shall Indemnify, defend, hold and save Landlord harmless from and against any and all Claims arising out of or in connection with any failure of the Premises to comply with any Legal Requirement.

(b) **Prohibited Leasing.** Landlord shall not lease the balance of any space in the Building to an entity that intends to (i) use such space for any vivarium use or (ii) engage in phage research.

(c) **Alexandria FitLab.** As long as Tenant is not in Default, Tenant's on-site employees shall have a non-exclusive license to use on a complimentary basis the Alexandria FitLab located at 910 Clopper Road, Gaithersburg, Maryland that is owned by an affiliate of Landlord **("910 Clopper Landlord").** Although the Alexandria FitLab does not form a part of the Premises, the provisions of this Lease (i) governing Tenant's use, operation, and enjoyment of the Premises, (ii) imposing obligations on Tenant for matters occurring in, on, within, or about the Premises or arising out of the use or occupancy of the Premises (including, but not limited to, those obligations relating to insurance and indemnification), or (iii) limiting Landlord's liability, shall apply with equal force to Tenant's use of the Alexandria FitLab. Landlord shall have the right at any time and from time to time in the exercise of its sole and absolute subjective discretion to eliminate, reconfigure, relocate, or modify the Alexandria FitLab or modify its hours of availability for Tenant's use, it being understood and agreed that Landlord makes no guaranty, assurance, or representation to Tenant that the Alexandria FitLab will remain available for use by Tenant during all or any part of the Term. Landlord or its designee may specifically condition the use of the Alexandria FitLab by any employee of Tenant upon such employee's execution and delivery of the standard license, indemnification, and waiver agreement required by Landlord or, if applicable, any operator of the Alexandria FitLab. Tenant and its employees shall be required to comply with all of the

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rules, regulations, conditions, and scheduling procedures of the 910 Clopper Landlord in connection with the use of the Alexandria FitLab. As of the Commencement Date, Tenant shall cause the 910 Clopper Landlord to be named as an additional insured under the commercial general liability policy of insurance that Tenant is required to maintain under this Lease. If Tenant Defaults in its obligations under this Section 7(c), Landlord shall have the right, in addition to any other rights and remedies available to Landlord for a Default by Tenant, to terminate immediately Tenant's license to use the Alexandria FitLab. The expiration or earlier termination of this Lease shall automatically terminate the license hereby granted to Tenant to so use the Alexandria FitLab.

8. **Holding Over.** If, with Landlord's express written consent, Tenant retains possession of the Premises after the termination of the Term, (i) unless otherwise agreed in such written consent, such possession shall be subject to immediate termination by Landlord at any time, (ii) all of the other terms and provisions of this Lease (including, without limitation, the adjustment of Base Rent pursuant to Section 4 hereof) shall remain in full force and effect (excluding any expansion or renewal option or other similar right or option) during such holdover period, (iii) Tenant shall continue to pay Base Rent in the amount payable upon the date of the expiration or earlier termination of this Lease or such other amount as Landlord may indicate, in Landlord's sole and absolute discretion, in such written consent, and (iv) all other payments shall continue under the terms of this Lease. If Tenant remains in possession of the Premises after the expiration or earlier termination of the Term without the express written consent of Landlord, (A) Tenant shall become a tenant at sufferance upon the terms of this Lease except that the monthly rental shall, for the first 30 days of any such holdover be equal to 150% of the Rent in effect during the last 30 days of the Term and shall thereafter be 200% of Rent in effect during the last 30 days of the Term, and (B) Tenant shall be responsible for all damages suffered by Landlord resulting from or occasioned by Tenant's holding over (including consequential damages if Landlord has advised Tenant in advance of any particular consequential damages that Landlord may incur or suffer as a result of Tenant's holding over, including, without limitation, consequential damages that Landlord may incur or suffer by reason of Landlord's inability to lease the Premises or deliver occupancy to a particular tenant). No holding over by Tenant, whether with or without consent of Landlord, shall operate to extend this Lease except as otherwise expressly provided, and this Section 8 shall not be construed as consent for Tenant to retain possession of the Premises. Acceptance by Landlord of Rent after the expiration of the Term or earlier termination of this Lease shall not result in a renewal or reinstatement of this Lease.

9. **Taxes.** Landlord shall pay, as part of Operating Expenses, all taxes, levies, fees, assessments and governmental charges of any kind, existing as of the Commencement Date or thereafter enacted (collectively referred to as **"Taxes"),** imposed by any federal, state, regional, municipal, local or other governmental authority or agency, including, without limitation, quasi-public agencies (collectively, **"Governmental Authority")** during the Term, including, without limitation, all Taxes: (i) imposed on or measured by or based, in whole or in part, on rent payable to (or gross receipts received by) Landlord under this Lease and/or from the rental by Landlord of the Project or any portion thereof, or (ii) based on the square footage, assessed value or other measure or evaluation of any kind of the Premises or the Project, or (iii) assessed or Imposed by or on the operation or maintenance of any portion of the Premises or the Project, including parking, or (iv) assessed or imposed by, or at the direction of, or resulting from Legal Requirements, or interpretations thereof, promulgated by any Governmental Authority, or (v) imposed as a license or other fee, charge, tax, or assessment on Landlord's business or occupation of leasing space in the Project. Landlord may contest by appropriate legal proceedings the amount, validity, or application of any Taxes or liens securing Taxes. If Landlord receives a refund of any portion of Taxes that were included in the Taxes paid by Tenant, then Landlord shall credit against the next estimated payment or payments due under this Section 9 an amount equal to Tenant's pro rata share of the refunded Taxes, less any expenses that Landlord incurred to obtain the refund or if the Term has expired, Landlord shall refund such amount to Tenant less any amounts owed by Tenant to Landlord. Taxes shall not include any net income taxes imposed on Landlord except to the extent such net income taxes are in substitution for any Taxes payable hereunder. If any such Tax is levied or assessed directly against Tenant, then Tenant shall be responsible for and shall pay the same at such times and in such manner as the taxing authority shall require. Tenant shall pay, prior to

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delinquency, any and all Taxes levied or assessed against any personal property or trade fixtures placed by Tenant in the Premises, whether levied or assessed against Landlord or Tenant. If any Taxes on Tenant's personal property or trade fixtures are levied against Landlord or Landlord's property, or if the assessed valuation of the Project is increased by a value attributable to improvements in or alterations to the Premises, whether owned by Landlord or Tenant and whether or not affixed to the real property so as to become a part thereof, higher than the base valuation on which Landlord from time-to-time allocates Taxes to all tenants in the Project, Landlord shall have the right, but not the obligation, to pay such Taxes. Landlord's determination of any excess assessed valuation shall be binding and conclusive, absent manifest error. The amount of any such payment by Landlord shall constitute Additional Rent due from Tenant to Landlord immediately upon demand.

10. **Parking.** Subject to all Legal Requirements, Force Majeure, a Taking and the exercise by Landlord of its rights hereunder, Tenant shall have the right, free of charge and in common with other tenants of the Project, to use 3 standard sized parking spaces per 1,000 leased rentable square feet of the Premises, which spaces shall be in those areas designated for non-reserved parking, subject in each case to Landlord's reasonable rules and regulations. Landlord shall not be responsible for enforcing Tenant's parking rights against any third parties, including other tenants of the Project. Attached hereto as **Exhibit G** is the parking plan for the Project.

11. **Utilities, Services.**

(a) **General.** Landlord shall provide, subject to the terms of this Section 11, janitorial services to the Common Areas, water, electricity, heat, light, power, telephone, sewer, and other utilities (including gas and fire sprinklers to the extent the Project is plumbed for such services), and refuse and trash collection (collectively, **"Utilities").** Landlord shall pay, as Operating Expenses or subject to Tenant's reimbursement obligation, for all Utilities used on the Premises, all maintenance charges for Utilities, and any storm sewer charges or other similar charges for Utilities imposed by any Governmental Authority or Utility provider, and any taxes, penalties, surcharges or similar charges thereon. Landlord may cause, at Tenant's expense, any Utilities to be separately metered or charged directly to Tenant by the provider. Tenant shall pay directly to the Utility provider, prior to delinquency, any separately metered Utilities and services that may be furnished to Tenant or the Premises during the Term. Tenant shall pay, as part of Operating Expenses, its share of all charges for jointly metered Utilities based upon consumption, as reasonably determined by Landlord. No interruption or failure of Utilities from any cause whatsoever shall result in eviction or constructive eviction of Tenant, termination of this Lease or the abatement of Rent. Tenant agrees to limit use of water and sewer with respect to Common Areas to normal restroom use.

(b) **Service Interruption.** Notwithstanding anything to the contrary set forth herein, if (i) a stoppage of an Essential Service (as defined below) to the Premises shall occur and such stoppage is due solely to the gross negligence or willful misconduct of Landlord and not due in any part to any act or omission on the part of Tenant or any Tenant Party or any matter beyond Landlord's reasonable control (any such stoppage of an Essential Service being hereinafter referred to as a **"Service Interruption"),** and (ii) such Service Interruption continues for more than 5 consecutive business days after Landlord shall have received written notice thereof from Tenant, and (iii) as a result of such Service Interruption, the conduct of Tenant's normal operations in the Premises are materially and adversely affected, then, to the extent that such Service Interruption is covered by rent loss insurance that Landlord is required to carry pursuant to Section 17 of this Lease, there shall be an abatement of 1 day's Base Rent for each day during which such Service Interruption continues after such 5 business day period; provided, however, that if any part of the Premises is reasonably useable for Tenant's normal business operations or if Tenant conducts all or any part of its operations in any portion of the Premises notwithstanding such Service Interruption, then the amount of each daily abatement of Base Rent shall only be proportionate to the nature and extent of the interruption of Tenant's normal operations or ability to use the Premises. The rights granted to Tenant under this paragraph shall be Tenant's sole and exclusive remedy resulting from a failure of Landlord to provide services, and Landlord shall not otherwise be liable for any loss or

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damage suffered or sustained by Tenant resulting from any failure or cessation of services. For purposes hereof, the term **"Essential Services"** shall mean the following services: HVAC service, water, sewer, and electricity, but in each case only to the extent that Landlord has an obligation to provide same to Tenant under this Lease. The provisions of this paragraph shall only apply as long as the original Tenant is the tenant occupying the Premises under this Lease and shall not apply to any assignee or sublessee, other than an assignee or a sublessee pursuant to a Permitted Assignment (as defined below).

(c) **Generator.** Landlord's sole obligation for either providing emergency generators or providing emergency back-up power to Tenant shall be: (i) to provide emergency generators with not less than the stated capacity of the emergency generators located in the Building as of the Commencement Date, (ii) to provide Tenant with its pro rata share usage of such generators, and (iii) to contract with a third party to maintain the emergency generators as per the manufacturer's standard maintenance guidelines. Except as otherwise set forth above, Landlord shall have no obligation to provide Tenant with operational emergency generators or back-up power or to supervise, oversee or confirm that the third party maintaining the emergency generators is maintaining the generators as per the manufacturer's standard guidelines or otherwise. During any period of replacement, repair or maintenance of the emergency generators when the emergency generators are not operational, including any delays thereto due to the inability to obtain parts or replacement equipment, Landlord shall have no obligation to provide Tenant with an alternative back-up generator or generators or alternative sources of back-up power; provided, however, that Landlord shall, except in case of emergency, make a commercially reasonable effort to give Tenant 24 hours advance notice of any period during which the emergency generators shall be non-operational due to routine maintenance, repairs, alterations, or improvements. Tenant expressly acknowledges and agrees that Landlord does not guaranty that such emergency generators will be operational at all times or that emergency power will be available to the Premises when needed.

(d) **Water/Energy Data.** Tenant agrees to provide Landlord with access to Tenant's water and/or energy usage data on a monthly basis, either by providing Tenant's applicable utility login credentials to Landlord's designated online portal, or by another delivery method reasonably agreed to by Landlord and Tenant. The costs and expenses incurred by Landlord in connection with receiving and analyzing such water and/or energy usage data (including, without limitation, as may be required pursuant to applicable Legal Requirements) shall be included as part of Operating Expenses.

12. **Alterations and Tenant's Property.** Any alterations, additions, or improvements made to the Premises by or on behalf of Tenant, including additional locks or bolts of any kind or nature upon any doors or windows in the Premises, but excluding installation, removal or realignment of furniture systems (other than removal of furniture systems owned or paid for by Landlord) not involving any modifications to the structure or connections (other than by ordinary plugs or jacks) to Building Systems (as defined in Section 13) **("Alterations")** shall be subject to Landlord's prior written consent, which may be given or withheld in Landlord's sole discretion if any such Alteration affects the structure or Building Systems, but which shall otherwise not be unreasonably withheld, conditioned, or delayed. Tenant may construct nonstructural Alterations in the Premises without Landlord's prior approval if the aggregate cost of all such work in any 12 month period does not exceed $25,000 (a **"Notice-Only Alteration"),** provided Tenant notifies Landlord in writing of such intended Notice-Only Alteration, and such notice shall be accompanied by plans, specifications, work contracts and such other information concerning the nature and cost of the Notice-Only Alteration as may be reasonably requested by Landlord, which notice and accompanying materials shall be delivered to Landlord not less than 15 business days in advance of any proposed construction. If Landlord approves any Alterations, Landlord may impose such conditions on Tenant in connection with the commencement, performance and completion of such Alterations as Landlord may deem appropriate in Landlord's reasonable discretion. Any request for approval shall be in writing, delivered not less than 15 business days in advance of any proposed construction, and accompanied by plans, specifications, bid proposals, work contracts and such other information concerning the nature and cost of the alterations as may be reasonably requested by Landlord, including the identities and mailing addresses of all persons performing work or supplying materials. Landlord's

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right to review plans and specifications and to monitor construction shall be solely for its own benefit, and Landlord shall have no duty to ensure that such plans and specifications or construction comply with applicable Legal Requirements. Tenant shall cause, at its sole cost and expense, all Alterations to comply with insurance requirements and with Legal Requirements and shall implement at its sole cost and expense any alteration or modification required by Legal Requirements as a result of any Alterations. Tenant shall pay to Landlord, as Additional Rent, on demand an amount equal to 5% of all hard construction costs Incurred by Tenant or its contractors or agents In connection with any Alteration to cover Landlord's overhead and expenses for plan review, coordination, scheduling and supervision. Before Tenant begins any Alteration, Landlord may post on and about the Premises notices of non-responsibility pursuant to applicable law. Tenant shall reimburse Landlord for, and indemnify and hold Landlord harmless from, any expense incurred by Landlord by reason of faulty work done by Tenant or its contractors, delays caused by such work, or inadequate cleanup.

Tenant shall furnish security or make other arrangements reasonably satisfactory to Landlord to assure payment for the completion of all Alterations work free and clear of liens (but Tenant shall be obligated to furnish such security only for those Alterations having a completion cost of $100,000 or more), and for all Alterations, Tenant shall provide (and cause each contractor or subcontractor to provide) certificates of insurance (in form and substance satisfactory to Landlord; form ACORD 28 (2006/07) is not satisfactory to Landlord) for workers' compensation and other coverage in amounts and from an insurance company satisfactory to Landlord protecting Landlord against liability for personal injury or property damage during construction. Upon completion of any Alterations, Tenant shall deliver to Landlord: (i) sworn statements setting forth the names of all contractors and subcontractors who did the work and final lien waivers from all such contractors and subcontractors; and (ii) "as built" plans for any such Alteration.

Other than (i) the items, if any, listed on **Exhibit F** attached hereto, (Ii) any items agreed by Landlord in writing to be included on **Exhibit F** in the future, and (iii) any trade fixtures, machinery, equipment and other personal property not paid for by Landlord that may be removed without material damage to the Premises, which damage shall be repaired (including capping or terminating utility hookups behind walls) by Tenant during the Term (collectively, **"Tenant's Property"),** all property of any kind paid for by Landlord, all Alterations, real property fixtures, built-in machinery and equipment, built-in casework and cabinets and other similar additions and improvements built into the Premises so as to become an Integral part of the Premises such as fume hoods that penetrate the roof or plenum area, built-in cold rooms, built-in warm rooms, walk-in cold rooms, walk-in warm rooms, deionized water systems, glass washing equipment, autoclaves, chillers, built-in plumbing, electrical and mechanical equipment and systems, and any power generator and transfer switch (collectively, **"Installations")** shall be and shall remain the property of Landlord during the Term and following the expiration or earlier termination of the Term, shall not be removed by Tenant at any time during the Term and shall remain upon and be surrendered with the Premises as a part thereof in accordance with Section 28 following the expiration or earlier termination of this Lease; provided, however, that Landlord shall, at the time its approval of such Installation is requested or at the time it receives notice of a Notice-Only Alteration, notify Tenant if it has elected to cause Tenant to remove such Installation upon the expiration or earlier termination of this Lease. If Landlord so elects, Tenant shall remove such Installation upon the expiration or earlier termination of this Lease and restore any damage caused by or occasioned as a result of such removal, including, when removing any of Tenant's Property that was plumbed, wired or otherwise connected to any of the Building Systems, capping off all such connections behind the walls of the Premises and repairing any holes. During any such restoration period, Tenant shall pay Rent to Landlord as provided herein as if such space were otherwise occupied by Tenant. Notwithstanding anything contained herein to the contrary, Tenant shall not be required to remove any of the improvements existing in the Premises as of the Commencement Date at the expiration or earlier termination of the Term.

13. **Landlord's Repairs.** Landlord, as an Operating Expense, shall maintain all of the structural, exterior, parking and other Common Areas of the Project, including HVAC, electrical, mechanical, plumbing, fire sprinklers, life safety, Building perimeter security, elevators and all other

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building systems serving the Premises and other portions of the Project **("Building Systems"),** in good repair, reasonable wear and tear and uninsured losses and damages caused by Tenant, or by any of Tenant's agents, servants, employees, invitees and contractors (collectively, **"Tenant Parties")** excluded. Losses and damages caused by Tenant or any Tenant Party shall be repaired by Landlord, to the extent not covered by insurance, at Tenant's sole cost and expense. Landlord reserves the right to stop Building Systems services when necessary (i) by reason of accident or emergency, or (ii) for planned repairs, alterations or improvements, which are, in the judgment of Landlord, desirable or necessary to be made, until such repairs, alterations or improvements shall have been completed. Landlord shall have no responsibility or liability for failure to supply Building Systems services during any such period of interruption; provided, however, that Landlord shall, except in case of emergency, make a commercially reasonable effort to give Tenant 48 hours advance notice of any planned stoppage of Building Systems services for routine maintenance, repairs, alterations or improvements. Tenant shall promptly give Landlord written notice of any repair required by Landlord pursuant to this Section, after which Landlord shall have a reasonable opportunity to effect such repair. Landlord shall not be liable for any failure to make any repairs or to perform any maintenance unless such failure shall persist for an unreasonable time after Tenant's written notice of the need for such repairs or maintenance. Tenant waives its rights under any state or local law to terminate this Lease or to make such repairs at Landlord's expense and agrees that the parties' respective rights with respect to such matters shall be solely as set forth herein. Repairs required as the result of fire, earthquake, flood, vandalism, war, or similar cause of damage or destruction shall be controlled by Section 18.

14. **Tenant's Repairs.** Subject to Section 13 hereof, Tenant, at its expense, shall repair, replace and maintain in good condition all portions of the Premises, including, without limitation, entries, doors, ceilings, interior windows, interior walls, and the interior side of demising walls. Such repair and replacement may include capital expenditures and repairs whose benefit may extend beyond the Term. Should Tenant fail to make any such repair or replacement or fail to maintain the Premises, Landlord shall give Tenant notice of such failure. If Tenant fails to commence cure of such failure within 10 days of Landlord's notice, and thereafter diligently prosecute such cure to completion, Landlord may perform such work and shall be reimbursed by Tenant within 10 days after demand therefor; provided, however, that if such failure by Tenant creates or could create an emergency, Landlord may immediately commence cure of such failure and shall thereafter be entitled to recover the costs of such cure from Tenant. Subject to Sections 17 and 18, Tenant shall bear the full uninsured cost of any repair or replacement to any part of the Project that results from damage caused by Tenant or any Tenant Party and any repair that benefits only the Premises.

15. **Mechanic's Liens.** Tenant shall discharge, by bond or otherwise, any mechanic's lien filed against the Premises or against the Project for work claimed to have been done for, or materials claimed to have been furnished to, Tenant within 10 days after Tenant receives notice of the filing thereof, at Tenant's sole cost and shall otherwise keep the Premises and the Project free from any liens arising out of work performed, materials furnished or obligations incurred by Tenant. Should Tenant fail to discharge any lien described herein, Landlord shall have the right, but not the obligation, to pay such claim or post a bond or otherwise provide security to eliminate the lien as a claim against title to the Project and the cost thereof shall be immediately due from Tenant as Additional Rent. If Tenant shall lease or finance the acquisition of office equipment, furnishings, or other personal property of a removable nature utilized by Tenant in the operation of Tenant's business, Tenant warrants that any Uniform Commercial Code Financing Statement filed as a matter of public record by any lessor or creditor of Tenant will upon its face or by exhibit thereto indicate that such Financing Statement is applicable only to removable personal property of Tenant located within the Premises. In no event shall the address of the Project be furnished on the statement without qualifying language as to applicability of the lien only to removable personal property, located in an identified suite held by Tenant.

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16. **Indemnification.**

(a) **By Tenant.** Tenant hereby indemnifies and agrees to defend, save and hold Landlord harmless from and against any and all Claims for injury or death to persons or damage to property occurring within or about the Premises, arising directly or indirectly out of use or occupancy of the Premises or a breach or default by Tenant in the performance of any of its obligations hereunder, unless caused solely by the willful misconduct or gross negligence of Landlord. Landlord shall not be liable to Tenant for, and Tenant assumes all risk of damage to, personal property (including, without limitation, loss of records kept within the Premises). Tenant further waives any and all Claims for injury to Tenant's business or loss of income relating to any such damage or destruction of personal property (including, without limitation, any loss of records). Landlord shall not be liable for any damages arising from any act, omission or neglect of any tenant in the Project or of any other third party.

(b) **By Landlord.** Landlord hereby indemnifies and agrees to defend, save, and hold Tenant harmless from and against any and all Claims for injury or death to persons or damage to property occurring within or about the Common Area caused by Landlord's willful misconduct or gross negligence, except to the extent caused by the willful misconduct or negligence of Tenant or any Tenant Party.

17. **Insurance.** Landlord shall maintain all risk property and, if applicable, sprinkler damage insurance covering the full replacement cost of the Project as well as rent loss insurance. Landlord shall further procure and maintain commercial general liability insurance with a single loss limit of not less than $2,000,000 for bodily injury and property damage with respect to the Project. Landlord may, but is not obligated to, maintain such other insurance and additional coverages as it may deem necessary, including, but not limited to, flood, environmental hazard and earthquake, loss or failure of building equipment, errors and omissions, rental loss during the period of repair or rebuilding (except as provided in the first sentence above), workers' compensation insurance and fidelity bonds for employees employed to perform services and insurance for any improvements installed by Tenant or that are in addition to the standard improvements customarily furnished by Landlord without regard to whether or not such are made a part of the Project. All such insurance shall be included as part of the Operating Expenses. The Project may be included in a blanket policy (in which case the cost of such insurance allocable to the Project will be determined by Landlord based upon the insurer's cost calculations). Tenant shall also reimburse Landlord for any increased premiums or additional insurance that Landlord reasonably deems necessary as a result of Tenant's use of the Premises.

Tenant, at its sole cost and expense, shall maintain during the Term: all risk property insurance with business interruption and extra expense coverage, covering the full replacement cost of all property and improvements installed or placed in the Premises by Tenant at Tenant's expense; workers' compensation insurance with no less than the minimum limits required by law; employer's liability insurance with such limits as required by law; and commercial general liability insurance, with a minimum limit of not less than $2,000,000 per occurrence for bodily injury and property damage with respect to the Premises. The commercial general liability insurance policy shall name Landlord and Alexandria Real Estate Equities, Inc., and its and their respective members, officers, directors, employees, managers, and agents (collectively, **"Landlord Parties"),** as additional insureds; insure on an occurrence and not a claims-made basis; be issued by insurance companies that have a rating of not less than policyholder rating of A and financial category rating of at least Class X in "Best's Insurance Guide"; shall not be cancelable for nonpayment of premium unless 30 days prior written notice shall have been given to Landlord from the insurer; contain a hostile fire endorsement and a contractual liability endorsement; and provide primary coverage to Landlord (any policy issued to Landlord providing duplicate or similar coverage shall be deemed excess over Tenant's policies). Copies of such policies (if requested by Landlord), or certificates of insurance (in form and substance satisfactory to Landlord; form ACORD 28 [2006/07] is not satisfactory to Landlord) showing the limits of coverage required hereunder and showing Landlord as an additional insured, along with reasonable evidence of the payment of premiums for the applicable period, shall be delivered to Landlord by Tenant upon Tenant's execution and delivery of this Lease and upon each renewal of such insurance. Tenant's policy may be a "blanket policy" with an aggregate per location endorsement that specifically provides that the amount of insurance shall not be prejudiced by other losses covered by the policy. Tenant shall, at least 5 days prior to the expiration of such policies, furnish Landlord with renewal certificates.

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In each instance where insurance is to name Landlord as an additional insured, Tenant shall upon written request of Landlord also designate and furnish certificates so evidencing Landlord as additional insured to: (i) any lender of Landlord holding a security interest in the Project or any portion thereof, (Ii) the landlord under any lease wherein Landlord is tenant of the real property on which the Project is located, if the interest of Landlord is or shall become that of a tenant under a ground or other underlying lease rather than that of a fee owner, and/or (iii) any management company retained by Landlord to manage the Project.

The property insurance obtained by Landlord and Tenant shall include a waiver of subrogation by the insurers and all rights based upon an assignment from its insured, against Landlord or Tenant, and their respective officers, directors, employees, managers, agents, invitees and contractors **("Related Parties"},** in connection with any loss or damage thereby insured against. Neither party nor its respective Related Parties shall be liable to the other for loss or damage caused by any risk insured against under property insurance required to be maintained hereunder, and each party waives any claims against the other party, and its respective Related Parties, for such loss or damage. The failure of a party to Insure its property shall not void this waiver. Landlord and its respective Related Parties shall not be liable for, and Tenant hereby waives all claims against such parties for, business interruption and losses occasioned thereby sustained by Tenant or any person claiming through Tenant resulting from any accident or occurrence in or upon the Premises or the Project from any cause whatsoever. If the foregoing waivers shall contravene any law with respect to exculpatory agreements, the liability of Landlord or Tenant shall be deemed not released but shall be secondary to the other's insurer.

Landlord may require insurance policy limits to be raised to conform with requirements of Landlord's lender and/or, not more frequently than one time every 3 years during the Term, to bring coverage limits to levels then being generally required of new tenants within the Project.

18. **Restoration.** If, at any time during the Term, the Project or the Premises are damaged or destroyed by a fire or other insured casualty, Landlord shall notify Tenant within 60 days after discovery of such damage as to the amount of time Landlord reasonably estimates it will take to restore the Project or the Premises, as applicable **("Restoration Period"}.** If the Restoration Period is estimated to exceed 12 months **("Maximum Restoration Period"),** Landlord may, in such notice, elect to terminate this Lease as of the date that is 75 days after the date of discovery of such damage or destruction. Unless Landlord so elects to terminate this Lease, Landlord shall, subject to receipt of sufficient insurance proceeds (with any deductible to be treated as a current Operating Expense), promptly restore the Premises (excluding the improvements installed by Tenant or by Landlord and paid for by Tenant), subject to delays arising from the collection of insurance proceeds, from Force Majeure events or as needed to obtain any license, clearance or other authorization of any kind required to enter into and restore the Premises issued by any Governmental Authority having jurisdiction over the use, storage, handling, treatment, generation, release, disposal, removal or remediation of Hazardous Materials (as defined in Section 30) in, on or about the Premises (collectively referred to herein as **"Hazardous Materials Clearances");** provided, however, that if repair or restoration of the Premises is not substantially complete as of the end of the Maximum Restoration Period or, if longer, the Restoration Period, Landlord may, in its sole and absolute discretion, elect not to proceed with such repair and restoration, in which event Landlord shall be relieved of its obligation to make such repairs or restoration and this Lease shall terminate as of the date that is 75 days after the later of: (i) discovery of such damage or destruction, or (ii) the date all required Hazardous Materials Clearances are obtained, but Landlord shall retain any Rent paid and the right to any Rent payable by Tenant prior to such election by Landlord or Tenant.

Tenant, at its expense, shall promptly perform, subject to delays arising from the collection of insurance proceeds, from Force Majeure (as defined in Section 34) events or to obtain Hazardous

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Material Clearances, all repairs or restoration not required to be done by Landlord and shall promptly reenter the Premises and commence doing business in accordance with this Lease. Notwithstanding the foregoing, Landlord may terminate this Lease if the Premises are damaged during the last year of the Term and Landlord reasonably estimates that it will take more than 2 months to repair such damage, or if insurance proceeds are not available for such restoration. Rent shall be abated from the date all required Hazardous Material Clearances are obtained until the Premises are repaired and restored, in the proportion that the area of the Premises, if any, that is not usable by Tenant bears to the total area of the Premises, unless Landlord provides Tenant with other space during the period of repair that is suitable for the temporary conduct of Tenant's business. Such abatement shall be the sole remedy of Tenant, and except as provided in this Section 18, Tenant waives any right to terminate this Lease by reason of damage or casualty loss.

The provisions of this Lease, including this Section 18, constitute an express agreement between Landlord and Tenant with respect to any and all damage to, or destruction of, all or any part of the Premises, or any other portion of the Project, and any statute or regulation that is now or may hereafter be in effect shall have no application to this Lease or any damage or destruction to all or any part of the Premises or any other portion of the Project, the parties hereto expressly agreeing that this Section 18 sets forth their entire understanding and agreement with respect to such matters.

19. **Condemnation.** If the whole or any material part of the Premises or the Project is taken for any public or quasi-public use under governmental law, ordinance, or regulation, or by right of eminent domain, or by private purchase in lieu thereof (a **"Taking" or "Taken"),** and the Taking would in Landlord's reasonable judgment either prevent or materially interfere with Tenant's use of the Premises or materially interfere with or impair Landlord's ownership or operation of the Project, then upon written notice by Landlord this Lease shall terminate and Rent shall be apportioned as of such date. If part of the Premises shall be Taken, and this Lease is not terminated as provided above, Landlord shall promptly restore the Premises and the Project as nearly as is commercially reasonable under the circumstances to their condition prior to such partial Taking and the rentable square footage of the Building, the rentable square footage of the Premises, Tenant's Share of Operating Expenses and the Rent payable hereunder during the unexpired Term shall be reduced to such extent as may be fair and reasonable under the circumstances. Upon any such Taking, Landlord shall be entitled to receive the entire price or award from any such Taking without any payment to Tenant, and Tenant hereby assigns to Landlord Tenant's interest, if any, in such award. Tenant shall have the right, to the extent that same shall not diminish Landlord's award, to make a separate claim against the condemning authority (but not Landlord) for such compensation as may be separately awarded or recoverable by Tenant for moving expenses and damage to Tenant's trade fixtures, if a separate award for such items is made to Tenant. Tenant hereby waives any and all rights it might otherwise have pursuant to any provision of state law to terminate this Lease upon a partial Taking of the Premises or the Project.

20. **Events of Default.** Each of the following events shall be a default **("Default")** by Tenant under this Lease:

(a) **Payment Defaults.** Tenant shall fail to pay any installment of Rent or any other payment hereunder when due: provided, however, that Landlord will give Tenant notice and an opportunity to cure any failure to pay Rent within 3 days of any such notice not more than once in any 12 month period and Tenant agrees that such notice shall be in lieu of and not in addition to, or shall be deemed to be, any notice required by law.

(b) **Insurance.** Any insurance required to be maintained by Tenant pursuant to this Lease shall be canceled or terminated or shall expire or shall be reduced or materially changed, or Landlord shall receive a notice of nonrenewal of any such insurance and Tenant shall fail to obtain replacement insurance at least 20 days before the expiration of the current coverage.

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(c) **Abandonment.** Tenant shall abandon the Premises without (i) the release of the Premises of all Hazardous Materials Clearances and free of any residual impact from the Tenant HazMat Operations, and (ii) complying with the provisions of Section 28.

(d) **Improper Transfer.** Tenant shall assign, sublease or otherwise transfer or attempt to transfer all or any portion of Tenant's interest in this Lease or the Premises except as expressly permitted herein, or Tenant's interest in this Lease shall be attached, executed upon, or otherwise judicially seized and such action is not released within 90 days of the action.

(e) **Liens.** Tenant shall fail to discharge or otherwise obtain the release of any lien placed upon the Premises in violation of this Lease within 10 days after Tenant receives notice that any such lien is filed against the Premises.

(f) **Insolvency Events.** Tenant or any guarantor or surety of Tenant's obligations hereunder shall: (A) make a general assignment for the benefit of creditors; (B) commence any case, proceeding or other action seeking to have an order for relief entered on its behalf as a debtor or to adjudicate it a bankrupt or insolvent, or seeking reorganization, arrangement, adjustment, liquidation, dissolution or composition of it or its debts or seeking appointment of a receiver, trustee, custodian or other similar official for it or for all or of any substantial part of its property (collectively a **"Proceeding for Relief');** (C) become the subject of any Proceeding for Relief that is not dismissed within 90 days of its filing or entry; or (D) die or suffer a legal disability (if Tenant, guarantor, or surety is an individual) or be dissolved or otherwise fail to maintain its legal existence (if Tenant, guarantor or surety is a corporation, partnership or other entity).

(g) **Estoppel Certificate or Subordination Agreement.** Tenant fails to execute any document required from Tenant under Sections 23 or 27 within 5 days after a second notice requesting such document.

(h) **Other Defaults.** Tenant shall fail to comply with any provision of this Lease other than those specifically referred to in this Section 20, and, except as otherwise expressly provided herein, such failure shall continue for a period of 10 days after written notice thereof from Landlord to Tenant.

Any notice given under Section 20(h) hereof shall: (i) specify the alleged default, (ii) demand that Tenant cure such default, (iii) be in lieu of, and not in addition to, or shall be deemed to be, any notice required under any provision of applicable law, and (iv) not be deemed a forfeiture or a termination of this Lease unless Landlord elects otherwise in such notice; provided that if the nature of Tenant's default pursuant to Section 20(h) is such that it cannot be cured by the payment of money and reasonably requires more than 10 days to cure, then Tenant shall not be deemed to be in default if Tenant commences such cure within such 10 day period and thereafter diligently prosecutes the same to completion; provided, however, that such cure shall be completed no later than 30 days from the date of Landlord's notice.

21. **Landlord's Remedies.**

(a) **Interest.** Upon a Default by Tenant hereunder, Landlord may, without waiving or releasing any obligation of Tenant hereunder, make such payment or perform such act. All sums so paid or incurred by Landlord, together with interest thereon, from the date such sums were paid or incurred, at the annual rate equal to 12% per annum or the highest rate permitted by law **("Default Rate"),** whichever is less, shall be payable to Landlord on demand as Additional Rent. Nothing herein shall be construed to create or impose a duty on Landlord to mitigate any damages resulting from Tenant's Default hereunder.

(b) **Late Payment Rent.** Late payment by Tenant to Landlord of Rent and other sums due will cause Landlord to incur costs not contemplated by this Lease, the exact amount of which will be extremely difficult and impracticable to ascertain. Such costs include, but are not limited to, processing

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and accounting charges and late charges that may be imposed on Landlord under any Mortgage covering the Premises. Therefore, if any installment of Rent due from Tenant is not received by Landlord within 5 days after the date such payment is due, Tenant shall pay to Landlord an additional sum of 6% of the overdue Rent as a late charge (provided that Tenant shall not be required to pay such late charge upon the first occurrence of a late payment by Tenant of Rent). The parties agree that this late charge represents a fair and reasonable estimate of the costs Landlord will incur by reason of late payment by Tenant. In addition to the late charge, Rent not paid when due shall bear interest at the Default Rate from the 5th day after the date due until paid.

(c) **Re-Entry.** Landlord shall have the right, immediately or at any time thereafter, without further notice to Tenant (unless otherwise provided herein), to enter the Premises, without terminating this Lease or being guilty of trespass, and do any and all acts as Landlord may deem necessary, proper or convenient to cure such default, for the account and at the expense of Tenant, any notice to quit or notice of Landlord's intention to re-enter being hereby expressly waived, and Tenant agrees to pay to Landlord as Additional Rent all damage and/or expense incurred by landlord in so doing, including interest at the Default Rate, from the due date until the date payment is received by Landlord.

(d) **Termination.** Landlord shall have the right to terminate this Lease and Tenant's right to possession of the Premises and, with or without legal process, take possession of the Premises and remove Tenant, any occupant and any property therefrom, using such force as may be necessary, without being guilty of trespass and without relinquishing any rights of Landlord against Tenant, any notice to quit, or notice of Landlord's intention to re-enter being hereby expressly waived. Landlord shall be entitled to recover damages from Tenant for all amounts covenanted to be paid during the remainder of the Term (except for the period of any holdover by Ten ant, in which case the monthly rental rate stated at Section 8 herein shall apply), which may be accelerated by Landlord at its option, together with (i) all expenses of any proceedings (including, but not limited to, the expenses set forth in Section 22(f) below) that may be necessary in order for Landlord to recover possession of the Premises, (ii) the expenses of the re-renting of the Premises (including, but not limited to, any commissions paid to any real estate agent, advertising expense and the costs of such alterations, repairs, replacements or modifications that Landlord, in its sole judgment, considers advisable and necessary for the purpose of re-renting), and (iii) interest computed at the Default Rate from the due date until paid: provided, however, that there shall be credited against the amount of such damages all amounts received by Landlord from such re-renting of the Premises, with any overage being refunded to Tenant. Landlord shall in no event be liable in any way whatsoever for failure to re-rent the Premises or, in the event that the Premises are re-rented, for failure to collect the rent thereof under such re-renting and Tenant expressly waives any duty of the Landlord to mitigate damages. No act or thing done by Landlord shall be deemed to be an acceptance of a surrender of the Premises, unless Landlord shall execute a written agreement of surrender with Tenant. Tenant's liability hereunder shall not be terminated by the execution of a new lease of the Premises by Landlord, unless that new lease expressly so states. In the event Landlord does not exercise its option to accelerate the payment of amounts owed as provided hereinabove, then Tenant agrees to pay to Landlord, upon demand, the amount of damages herein provided after the amount of such damages for any month shall have been ascertained; provided, however, that any expenses incurred by Landlord shall be deemed to be a part of the damages for the month in which they were incurred. Separate actions may be maintained each month or at other times by Landlord against Tenant to recover the damages then due, without waiting until the end of the term of this Lease to determine the aggregate amount of such damages. Tenant hereby expressly waives any and all rights of redemption granted by or under any present or future laws in the event of Tenant being evicted or being dispossessed for any cause, or in the event of Landlord obtaining possession of the Premises by reason of the violation by Tenant of any of the covenants and conditions of this Lease.

(e) **Lien for Rent.** Upon any default by Tenant in the payment of Rent or other amounts owed hereunder, Landlord shall have a lien upon the property of Tenant in the Premises for the amount of such unpaid amounts, and Tenant hereby specifically waives any and all exemptions allowed by law. In such event, Tenant shall not remove any of Tenant's property from the Premises except with the prior

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written consent of Landlord, and Landlord shall have the right and privilege, at its option, to take possession of all Tenant's property in the Premises, to store the same on the Premises, or to remove it and store it in such place as may be selected by Landlord, at Tenant's risk and expense. If Tenant fails to redeem the personal property so seized, by payment of whatever sum may be due Landlord hereunder (including all storage costs), Landlord shall have the right, after 20 days written notice to Tenant of its intention to do so, to sell such personal property so seized at public or private sale and upon such terms and conditions as may appear advantageous to Landlord, and after the payment of all proper charges incident to such sale, apply the proceeds thereof to the payment of any balance due to Landlord on account of rent or other obligations of Tenant pursuant to this Lease. In the event there shall then remain in the hands of Landlord any balance realized from the sale of such personal property, the same shall be paid over to Tenant. The exercise of the foregoing remedy by Landlord shall not relieve or discharge Tenant from any deficiency owed to Landlord that Landlord has the right to enforce pursuant to any of the provisions of this Lease. Tenant shall also be liable for all expenses incident to the foregoing process, including any auctioneer or attorney's fees or commissions. At Tenant's request, Landlord shall subordinate its lien rights as set forth in this paragraph to the lien, operation, and effect of any bona fide third party equipment financing pursuant to a subordination agreement in form and substance reasonably acceptable to Landlord. Such subordination shall be limited to specific items of equipment and shall not be in the form of a blanket lien subordination.

(f) **Expenses.** Tenant shall pay, as Additional Rent and immediately upon written demand from Landlord, all costs and expenses Incurred by Landlord, including, but not limited to, attorneys' fees, expert witness fees, paralegal fees, other litigation expenses (such as expenses for photocopying, electronic legal research, and deposition transcripts), and court costs in connection with or arising out of any Default by Tenant under this Lease, including, but not limited to, any action or proceeding brought by Landlord to enforce any obligation of Tenant under this Lease or the right of Landlord in or to the Premises. Such expenses are recoverable at all levels, including appeals and post-judgment actions or proceedings. The giving of a notice of Default by Landlord shall constitute part of an action or proceeding under this Lease, entitling Landlord to reimbursement of such fees and expenses, even if an action or proceeding Is not commenced in a court of law and regardless of whether the Default is cured.

(g) **Suspension of Funding/Performance.** Upon a Default by Tenant hereunder and during the continuance thereof, Landlord shall have the right to suspend funding of any Tl Allowances and the performance of Landlord's Work (and such suspension shall constitute a Tenant Delay).

(h) **Other Remedies.** Upon a Default by Tenant hereunder and in addition to any other remedy available to Landlord under this Lease or otherwise, Landlord shall be entitled to recover damages from Tenant the amount of the Base Rent Abatement. In addition to the remedies set forth in this Section 21, Landlord, at its option, without further notice or demand to Tenant, shall have all other rights and remedies provided at law or in equity.

22. **Assignment and Subletting.**

(a) **General Prohibition.** Without Landlord's prior written consent subject to and on the conditions described in this Section 22, Tenant shall not, directly or indirectly, voluntarily or by operation of law, assign this Lease or sublease the Premises or any part thereof or mortgage, pledge, or hypothecate its leasehold interest or grant any concession or license within the Premises, and any attempt to do any of the foregoing shall be void and of no effect. If Tenant is a corporation, partnership or limited liability company, the shares or other ownership interests thereof that are not actively traded upon a stock exchange or in the over-the-counter market, a transfer or series of transfers whereby 25% or more of the issued and outstanding shares or other ownership interests of such corporation are, or voting control is, transferred (but excepting transfers upon deaths of individual owners) from a person or persons or entity or entities that were owners thereof at time of execution of this Lease to persons or entities who were not owners of shares or other ownership interests of the corporation, partnership or limited liability company at time of execution of this Lease, shall be deemed an assignment of this Lease requiring the consent of Landlord as provided in this Section 22.

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(b) **Permitted Transfers**. If Tenant desires to assign, sublease, hypothecate or otherwise transfer this Lease or sublet the Premises other than pursuant to a Permitted Assignment (as defined below), then at least 15 business days, but not more than 45 business days, before the date Tenant desires the assignment or sublease to be effective ("**Assignment Date**"), Tenant shall give Landlord a notice ("**Assignment Notice**") containing such information about the proposed assignee or sublessee, including the proposed use of the Premises and any Hazardous Materials proposed to be used, stored handled, treated, generated in or released or disposed of from the Premises, the Assignment Date, any relationship between Tenant and the proposed assignee or sublessee, and all material terms and conditions of the proposed assignment or sublease, including a copy of any proposed assignment or sublease in its final form, and such other information as Landlord may deem reasonably necessary or appropriate to its consideration whether to grant its consent. Landlord may, by giving written notice to Tenant within 15 business days after receipt of the Assignment Notice: (i) grant such consent, or (ii) refuse such consent, in its reasonable discretion (provided that Landlord shall further have the right to review and approve or disapprove the proposed form of sublease prior to the effective date of any such subletting). Tenant shall pay to Landlord a fee equal to $1,500 in connection with its consideration of any Assignment Notice and/or its preparation or review of any consent documents.

Tenant shall have the right, upon 10 days prior written notice to Landlord but without obtaining Landlord's prior written consent, to (i) assign this Lease or sublet any portion of the Premises to a corporation or other entity that is a successor-in-interest to Tenant, by way of merger, consolidation or corporate reorganization, or by the purchase of all *or* substantially all of the assets *or* the ownership interests of Tenant provided that (A} such merger or consolidation, or such acquisition or assumption, as the case may be, is for a good business purpose and not principally for the purpose of transferring this Lease, and (8) the net worth (as determined in accordance with generally accepted accounting principles ("**GAAP**")) of the assignee is not less than the net worth (as determined in accordance with GMP) of Tenant as of the Commencement Date, and (C) such assignee shall agree in writing to assume all of the terms, covenants and conditions of this Lease arising after the effective date of the assignment (a "**Permitted Assignment**"), provided that Landlord shall have the right to reasonably approve the form of any such sublease or assignment, and (ii) permit a business entity that is a subsidiary, affiliate, contractor, client, customer, or collaborator of Tenant, or otherwise has a business relationship with Tenant, and is providing Tenant services in the course of Tenant's business operations at the Premises or is occupying the Building in furtherance of such business relationship with Tenant (a "**Collaborator**") to use a portion of the Premises for any Permitted Use; provided, however, that (A) Tenant receives no compensation for such Collaborator use, (8) the entity remains a Collaborator for the entire duration of such use and the entity is not indicated on the Building directory or any signage on the Premises, and (C) the entity occupies no more than 25% of the rentable area of the Premises ("**Collaborator Occupancy**"). Such Collaborator Occupancy shall not be deemed a sublease or assignment hereunder, nor shall it vest in any such Collaborator any right, title, or interest in this Lease or the Premises nor shall it relieve, release, impair, or discharge any of Tenant's obligations hereunder. Tenant shall ensure that the Collaborator complies with the terms of this Lease, including, but not limited to, the obligation to obtain and maintain the insurance coverages as more fully described in Section 17 (Insurance). In connection with a Permitted Assignment or a Collaborator Occupancy, Tenant shall not be required to share Excess Rents (as defined below) with Landlord.

(c) **Additional Conditions**. As a condition to any such assignment or subletting, whether or not Landlord's consent is required, Landlord may require:

(i) that any assignee or subtenant agree, in writing at the time of such assignment or subletting, that if Landlord gives such party notice that Tenant is in default under this Lease, such party shall thereafter make all payments otherwise due Tenant directly to Landlord, which payments will be received by Landlord without any liability except to credit

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such payment against those due under this Lease, and any such third party shall agree to attorn to Landlord or its successors and assigns should this Lease be terminated for any reason; provided, however, in no event shall Landlord or its successors or assigns be obligated to accept such attornment; and

(ii) A list of Hazardous Materials, certified by the proposed assignee or sublessee to be true and correct, which the proposed assignee or sublessee intends to use, store, handle, treat, generate in or release or dispose of from the Premises, together with copies of all documents relating to such use, storage, handling, treatment, generation, release or disposal of Hazardous Materials by the proposed assignee or subtenant in the Premises or on the Project, prior to the proposed assignment or subletting, including, without limitation: permits; approvals; reports and correspondence; storage and management plans; plans relating to the installation of any storage tanks to be installed in or under the Project (provided, such installation of tanks shall only be permitted after Landlord has given its written consent to do so, which consent may be withheld in Landlord's sole and absolute discretion); and all closure plans or any other documents required by any and all federal, state and local Governmental Authorities for any storage tanks installed in, on or under the Project for the closure of any such tanks. Neither Tenant nor any such proposed assignee or subtenant is required, however, to provide Landlord with any portion(s) of the such documents containing information of a proprietary nature that, in and of themselves, do not contain a reference to any Hazardous Materials or hazardous activities.

(d) **No Release of Tenant, Sharing of Excess Rents**. Notwithstanding any assignment or subletting, Tenant and any guarantor *or* surety of Tenant's obligations under this Lease shall at all times remain fully and primarily responsible and liable for the payment of Rent and for compliance with all of Tenant's other obligations under this Lease. Other than in connection with a Permitted Assignment, if the Rent due and payable by a sublessee or assignee (or a combination of the rental payable under such sublease or assignment plus any bonus or other consideration therefor or incident thereto in any form) exceeds the sum of the rental payable under this Lease (excluding however, any Rent payable under this Section) and actual and reasonable brokerage fees, marketing expenses, legal costs and any design or construction fees directly related to and required pursuant to the terms of any such sublease) **("Excess Rent"),** then Tenant shall be bound and obligated to pay Landlord as Additional Rent hereunder 50% of such Excess Rent within 10 days following receipt thereof by Tenant. lf Tenant shall sublet the Premises or any part thereof, Tenant hereby immediately and irrevocably assigns to Landlord, as security for Tenant's obligations under this Lease, all rent from any such subletting, and Landlord as assignee and as attorney-in-fact for Tenant, or a receiver for Tenant appointed on Landlord's application, may collect such rent and apply it toward Tenant's obligations under this Lease; except that, until the occurrence of a Default, Tenant shall have the right to collect such rent.

(e) **No Waiver**. The consent by Landlord to an assignment or subletting shall not relieve Tenant or any assignees of this Lease or any sublessees of the Premises from obtaining the consent of Landlord to any further assignment or subletting nor shall it release Tenant or any assignee or sub lessee of Tenant from full and primary liability under this Lease. The acceptance of Rent hereunder, or the acceptance of performance of any other term, covenant, or condition thereof, from any other person or entity shall not be deemed to be a waiver of any of the provisions of this Lease or a consent to any subletting, assignment or other transfer of the Premises.

(f) **Prior Conduct of Proposed Transferee**. Notwithstanding any other provision of this Section 22, if (i) the proposed assignee or sublessee of Tenant has been required by any prior landlord, lender or Governmental Authority to take remedial action in connection with Hazardous Materials contaminating a property, where the contamination resulted from such party's action or use of the property in question, (ii) the proposed assignee or sublessee is subject to an enforcement order issued by any Governmental Authority in connection with the use, storage, handling, treatment, generation, release or disposal of Hazardous Materials (including, without limitation, any order related to the failure to make a

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required reporting to any Governmental Authority), or (iii) because of the existence of a pre-existing environmental condition in the vicinity of or underlying the Project, the risk that Landlord would be targeted as a responsible party in connection with the remediation of such pre-existing environmental condition would be materially increased or exacerbated by the proposed use of Hazardous Materials by such proposed assignee or sublessee, Landlord shall have the absolute right to refuse to consent to any assignment or subletting to any such party.

23. **Estoppel Certificate**. Tenant shall, within 10 business days of written notice from Landlord, execute, acknowledge and deliver a statement in writing in any form reasonably requested by a proposed lender or purchaser, (i) certifying that this Lease is unmodified and in full force and effect (or, if modified, stating the nature of such modification and certifying that this Lease as so modified is in full force and effect) and the dates to which the rental and other charges are paid in advance, if any, (ii) acknowledging that there are not any uncured defaults on the part of Landlord hereunder. or specifying such defaults if any are claimed, and (iii) setting forth such further information with respect to the status of this Lease or the Premises as may be reasonably requested thereon. Any such statement may be relied upon by any prospective purchaser or encumbrancer of all or any portion of the real property of which the Premises are a part. Tenant's failure to deliver such statement within such time shall, at the option of Landlord, be conclusive upon Tenant that this Lease is in full force and effect and without modification except as may be represented by Landlord in any certificate prepared by Landlord and delivered to Tenant for execution.

24. **Quiet Enjoyment**. So long as Tenant shall perform all of the covenants and agreements herein required to be performed by Tenant, Tenant shall, subject to the terms of this Lease, at all times during the Term, have peaceful and quiet enjoyment of the Premises against any person claiming by, through or under Landlord.

25. **Prorations**. All prorations required or permitted to be made hereunder shall be made on the basis of a 360 day year and 30 day months.

26. **Rules and Regulations**. Tenant shall, at all times during the Term and any extension thereof, comply with all reasonable rules and regulations at any time or from time to time established by Landlord (and of which Tenant has been provided written notice) covering use of the Premises and the Project. The current rules and regulations are attached hereto as **Exhibit E**. If there is any conflict between such rules and regulations and other provisions of this Lease, the terms and provisions of this Lease shall control. Landlord shall not have any liability or obligation for the breach of any rules or regulations by other tenants in the Project and shall not enforce such rules and regulations in a discriminatory manner. Such rules and regulations may include, without limitation, rules and regulations relating to the use of the Project amenities and/or rules and regulations that are intended to encourage social distancing, promote and protect health and physical well-being within the Building and the Project and/or intended to prevent or limit the spread or transmission of Infectious Conditions.

27. **Subordination**. This Lease and Tenant's interest and rights hereunder are hereby made and shall be subject and subordinate at all times to the lien of any Mortgage now existing or hereafter created on or against the Project or the Premises, and all amendments, restatements, renewals, modifications, consolidations, refinancing, assignments and extensions thereof, without the necessity of any further instrument or act on the part of Tenant: provided, however that so long as there is no Default hereunder, Tenant's right to possession of the Premises shall not be disturbed by the Holder of any such Mortgage. Tenant agrees, at the election of the Holder of any such Mortgage, to attorn to any such Holder. Tenant agrees upon demand to execute, acknowledge and deliver such instruments, confirming such subordination, and such instruments of attornment as shall be requested by any such Holder, provided any such instruments contain appropriate non-disturbance provisions assuring Tenant's quiet enjoyment of the Premises as set forth in Section 24 hereof. Notwithstanding the foregoing, any such Holder may at any time subordinate its Mortgage to this Lease, without Tenant's consent, by notice in writing to Tenant, and thereupon this Lease shall be deemed prior to such Mortgage without regard to

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their respective dates of execution, delivery or recording and in that event such Holder shall have the same rights with respect to this Lease as though this Lease had been executed prior to the execution, delivery and recording of such Mortgage and had been assigned to such Holder. On Tenant's written request, Landlord shall use its commercially reasonable efforts (but with no obligation to pay any out-of-pocket fees or sums) to obtain from any Holder of a first lien Mortgage at any time during the Term covering any or all of the Project or the Premises a non-disturbance agreement on Holder's standard form (with mutually agreed upon reasonable modifications) in favor of Tenant assuring Tenant's quiet enjoyment of the Premises as set forth in Section 24 hereof. As of the Commencement Dale, no Mortgage created by Landlord encumbers the Project. The term "**Mortgage**" whenever used in this Lease shall be deemed to include deeds of trust, security assignments and any other encumbrances, and any reference to the "**Holder**" of a Mortgage shall be deemed to include the beneficiary under a deed of trust.

28. **Surrender**. Upon the expiration of the Term or earlier termination of Tenant's right of possession, Tenant shall surrender the Premises to Landlord in the same condition as received, subject to any Alterations or Installations permitted by Landlord or by the terms of this Lease to remain in the Premises, free of Hazardous Materials brought upon, kept, used, stored, handled, treated, generated in, or released or disposed of from, the Premises by any person other than a Landlord Party (collectively, "**Tenant HazMat Operations**") and released of all Hazardous Materials Clearances, broom clean, ordinary wear and tear and casualty loss and condemnation covered by Sections 18 and 19 excepted. At least 3 months prior to the surrender of the Premises, Tenant shall deliver to Landlord a narrative description of the actions proposed (or required by any Governmental Authority) to be taken by Tenant in order to surrender the Premises (including any Installations permitted by Landlord to remain ln the Premises) at the expiration or earlier termination of the Term, free from any residual impact from the Tenant HazMat Operations and otherwise released for unrestricted use and occupancy ("**Surrender Plan**"). Such Surrender Plan shall be accompanied by a current listing of (i) all Hazardous Materials licenses and permits held by or on behalf of any Tenant Party with respect to the Premises, and (ii) all Hazardous Materials used, stored, handled, treated, generated, released or disposed of from the Premises, and shall be subject to the review and approval of Landlord's environmental consultant. In connection with the review and approval of the Surrender Plan, upon the request of Landlord, Tenant shall deliver to Landlord or its consultant such additional non-proprietary information concerning Tenant HazMat Operations as Landlord shall reasonably request. On or before such surrender, Tenant shall deliver to Landlord evidence that the approved Surrender Plan shall have been satisfactorily completed and Landlord shall have the right, subject to reimbursement at Tenant's expense as set forth below, to cause Landlord's environmental consultant to inspect the Premises and perform such additional procedures as may be deemed reasonably necessary to confirm that the Premises are, as of the effective date of such surrender or early termination of this Lease, free from any residual impact from Tenant HazMat Operations. Tenant shall reimburse Landlord, as Additional Rent, for the reasonable, actual out-of-pocket expense incurred by Landlord for Landlord's environmental consultant to review and approve the Surrender Plan and to visit the Premises and verify satisfactory completion of the same, which cost shall not exceed $2,500. Landlord shall have the unrestricted right to deliver such Surrender Plan and any report by Landlord's environmental consultant with respect to the surrender of the Premises to third parties.

If Tenant shall fail to prepare or submit a Surrender Plan approved by Landlord, or if Tenant shall fail to complete the approved Surrender Plan, or if such Surrender Plan, whether or not approved by Landlord, shall fail to adequately address any residual effect of Tenant HazMat Operations in, on or about the Premises, Landlord shall have the right to take such actions as Landlord may deem reasonable or appropriate to assure that the Premises and the Project are surrendered free from any residual impact from Tenant HazMat Operations, the cost of which actions shall be reimbursed by Tenant as Additional Rent, without regard to the limitation set forth in the first paragraph of this Section 28.

Upon the expiration or earlier termination of this Lease, Tenant shall immediately return to Landlord all keys and/or access cards to parking, the Project, restrooms or all or any portion of the Premises furnished to or otherwise procured by Tenant. If any such access card or key is lost, Tenant

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shall pay to Landlord, at Landlord's election, either the cost of replacing such lost access card or key or the cost of reprogramming the access security system in which such access card was used or changing the lock or locks opened by such lost key. Any Tenant's Property, Alterations and property not so removed by Tenant as permitted or required herein shall be deemed abandoned and may be stored, removed, and disposed of by Landlord at Tenant's expense, and Tenant waives all claims against Landlord for any damages resulting from Landlord's retention and/or disposition of such property. All obligations of Tenant hereunder not fully performed as of the termination of the Term, including the obligations of Tenant under Section 30 hereof, shall survive the expiration or earlier termination of the Term, including, without limitation, indemnity obligations, payment obligations with respect to Rent and obligations concerning the condition and repair of the Premises.

29. **Waiver of Jury Trial**. TENANT AND LANDLORD WAIVE ANY RIGHT TO TRIAL BY JURY OR TO HAVE A JURY PARTICIPATE IN RESOLVING ANY DISPUTE, WHETHER SOUNDING IN CONTRACT, TORT, OR OTHERWISE, BETWEEN LANDLORD AND TENANT ARISING OUT OF THIS LEASE OR ANY OTHER INSTRUMENT, DOCUMENT, OR AGREEMENT EXECUTED OR DELIVERED IN CONNECTION HEREWITH OR THE TRANSACTIONS RELATED HERETO.

30. **Environmental Requirements**.

(a) **Prohibition/Compliance/Indemnity**. Tenant shall not cause or permit any Hazardous Materials (as hereinafter defined) to be brought upon, kept, used, stored, handled, treated, generated in or about, or released or disposed of from, the Premises or the Project in violation of applicable Environmental Requirements (as hereinafter defined) by Tenant or any Tenant Party. If Tenant breaches the obligation stated in the preceding sentence, or if the presence of Hazardous Materials In the Premises during the Term or any holding over results in contamination of the Premises, the Project or any adjacent property or if contamination of the Premises, the Project or any adjacent property by Hazardous Materials brought into, kept, used, stored, handled, treated, generated in or about, or released or disposed of from, the Premises by anyone other than Landlord and Landlord's employees, agents and contractors otherwise occurs during the Term or any holding over, Tenant hereby indemnifies and shall defend and hold Landlord, its officers, directors, employees, agents and contractors harmless from any and all actions (including, without limitation, remedial or enforcement actions of any kind, administrative or judicial proceedings, and orders or judgments arising out of or resulting therefrom), costs, claims, damages (including, without limitation, punitive damages and damages based upon diminution in value of the Premises or the Project, or the loss of, or restriction on, use of the Premises or any portion of the Project), expenses (including, without limitation, attorneys', consultants' and experts' fees, court costs and amounts paid in settlement of any claims or actions), fines, forfeitures or other civil, administrative or criminal penalties, injunctive or other relief (whether or not based upon personal injury, property damage, or contamination of, or adverse effects upon, the environment, water tables or natural resources), liabilities or losses (collectively, "**Environmental Claims**") that arise during or after the Term as a result of such contamination; provided, however, that Tenant shall have no indemnification, remediation, or other obligation or responsibility under this Section 30 for any contamination or Environmental Claim if Tenant proves by a preponderance of the evidence that such contamination or Environmental Claim arises from any Hazardous Materials brought into, kept, used, stored, handled, treated, generated in or about, or released or disposed of from the Premises by Landlord, its employees or contractors, or another tenant or party unrelated or unaffiliated with Tenant or that existed in the Premises as of the Commencement Date and were not brought into, kept, used, stored, handled, treated, generated in or about, or released or disposed of from the Premises by Tenant, any Tenant Party, or any subtenant of Tenant or other occupant of the Premises; provided that Tenant shall not have the obligation to specifically identify the party responsible for the contamination or Environmental Claim. This indemnification of Landlord by Tenant includes, without limitation, costs incurred in connection with any investigation of site conditions or any cleanup, treatment, remedial, removal, or restoration work required by any federal, state or local Governmental Authority because of Hazardous Materials present In the air, soil or ground water above, on, or under the Premises. Without limiting the foregoing, if the presence of any Hazardous Materials on the Premises, the Project or any adjacent property caused or permitted by Tenant or any Tenant Party

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results in any contamination of the Premises, the Project or any adjacent property, Tenant shall promptly take all actions at its sole expense and in accordance with applicable Environmental Requirements as are necessary to return the Premises, the Project or any adjacent property to the condition existing prior to the time of such contamination, provided that Landlord's approval of such action shall first be obtained, which approval shall not unreasonably be withheld so long as such actions would not potentially have any material adverse long-term or short-term effect on the Premises or the Project.

(b) **Business**. Landlord acknowledges that it is not the intent of this Section 30 to prohibit Tenant from using the Premises for the Permitted Use. Tenant may operate its business according to prudent industry practices so long as the use or presence of Hazardous Materials is strictly and properly monitored according to all then applicable Environmental Requirements. As a material inducement to Landlord to allow Tenant to use Hazardous Materials in connection with its business, Tenant agrees to deliver to Landlord prior to the Commencement Date a list identifying each type of Hazardous Materials to be brought upon, kept, used, stored, handled, treated, generated on, or released or disposed of from, the Premises and setting forth any and all governmental approvals or permits required in connection with the presence, use, storage, handling, treatment, generation, release or disposal of such Hazardous Materials on or from the Premises ("**Hazardous Materials List**"). Tenant shall deliver to Landlord an updated Hazardous Materials List at least once a year and shall also deliver an updated list before any new Hazardous Material is brought onto, kept, used, stored, handled, treated, generated on, or released or disposed of from, the Premises. Tenant shall deliver to Landlord true and correct copies of the following documents (**"Haz Mat Documents"**) relating to the use, storage, handling, treatment, generation, release or disposal of Hazardous Materials prior to the Commencement Date, or if unavailable at that time, concurrent with the receipt from or submission to a Governmental Authority: permits; approvals; reports and correspondence; storage and management plans, notice of violations of any Legal Requirements; plans relating to the installation of any storage tanks to be installed in or under the Project (provided, such installation of tanks shall only be permitted after Landlord has given Tenant its written consent to do so, which consent may be withheld in Landlord's sole and absolute discretion); all closure plans or any other documents required by any and all federal, state and local Governmental Authorities for any storage tanks installed in, on or under the Project for the closure of any such tanks; and a Surrender Plan (to the extent surrender in accordance with Section 28 cannot be accomplished in 3 months). Tenant is not required, however, to provide Landlord with any portion(s) of the Haz Mat Documents containing information of a proprietary nature that, in and of themselves, do not contain a reference to any Hazardous Materials or hazardous activities. It is not the intent of this Section to provide Landlord with information that could be detrimental to Tenant's business should such information become possessed by Tenant's competitors.

(c) **Tenant Representation and Warranty**. Tenant hereby represents and warrants to Landlord that (i) neither Tenant nor any of its legal predecessors has been required by any prior landlord, lender, or Governmental Authority at any time to take remedial action in connection with Hazardous Materials contaminating a property, which contamination was permitted by Tenant or such predecessor or resulted from Tenant's or such predecessor's action or use of the property in question, and (ii) Tenant is not subject to any enforcement order issued by any Governmental Authority in connection with the use, storage, handling, treatment, generation, release or disposal of Hazardous Materials (including, without limitation, any order related to the failure to make a required reporting to any Governmental Authority). If Landlord determines that this representation and warranty was not true as of the date of this lease, Landlord shall have the right to terminate this Lease in Landlord's sole and absolute discretion.

(d) **Testing**. Landlord shall have access to, and a right to perform inspections and tests of, the Premises and the Project to determine Tenant's compliance with Environmental Requirements (as defined below), its obligations under this Section 30, or the environmental condition of the Premises and the Project. In connection with such testing, upon the request of Landlord, Tenant shall deliver to Landlord or its consultant such non-proprietary information concerning the use of Hazardous Materials in or about the Premises by Tenant or any Tenant Party. Access shall be granted to Landlord upon Landlord's prior notice to Tenant and at such times so as to minimize, so far as may be reasonable under

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the circumstances, any disturbance to Tenant's operations. Such inspections and tests shall be conducted at Landlord's expense, unless such inspections or tests are conducted pursuant to Section 21 hereof or reveal that Tenant has not complied with any Environmental Requirement, in which case Tenant shall reimburse Landlord for the reasonable cost of such inspection and tests. Tenant shall, at its sole cost and expense, promptly and satisfactorily remediate any environmental conditions identified by such testing in accordance with all Environmental Requirements. Landlord's receipt of or satisfaction with any environmental assessment in no way waives any rights that Landlord may have against Tenant.

(e) **Underground Tanks**. Under no circumstances whatsoever will Tenant have the right to install any underground storage tank on or about the Premises or the Project. If underground or other storage tanks storing Hazardous Materials located on the Premises or the Project before the Commencement Date are used by Tenant, Tenant shall install, use, monitor, operate, maintain, upgrade and manage such storage tanks, maintain appropriate records, obtain and maintain appropriate insurance, implement reporting procedures, properly close any underground storage tanks if required by applicable Legal Requirements, and take or cause to be taken all other actions necessary or required under applicable state and federal Legal Requirements, as such now exists or may hereafter be adopted or amended in connection with the installation, use, maintenance, management, operation, upgrading and closure of such storage tanks.

(f) **Control Areas**. Tenant shall be allowed to utilize up to its pro rata share of the Hazardous Materials inventory within any control area or zone (located within the Premises), as designated from time to time by the applicable building code or other Legal Requirement, for Hazardous Materials use or storage. As used in the preceding sentence, Tenant's pro rata share of any control area or zone located within the Premises shall be determined based on the rentable square footage that Tenant leases within the applicable control area or zone. For purposes of example only, if a control area or zone contains 10,000 rentable square feet and 2,000 rentable square feet of a tenant's premises are located within such control area or zone (while such premises as a whole contains 5,000 rentable square feet), the applicable tenant's pro rata share of such control area or zone would be 20%.

(g) **Tenant's Obligations**. Tenant's obligations under this Section 30 shall survive the expiration or earlier termination of this Lease for the applicable statute of limitations period under federal, state, or local Legal Requirement. During any period of time after the expiration or earlier termination of this Lease required by Tenant or Landlord to complete the removal from the Premises of any Hazardous Materials (including, without limitation, the release and termination of any licenses or permits restricting the use of the Premises and the completion of the approved Surrender Plan), Tenant shall continue to pay the full Rent in accordance with this Lease for any portion of the Premises not relet by Landlord in Landlord's sole discretion, which Rent shall be prorated daily.

(h) **Definitions**. As used herein, (i) the term "**Environmental Requirements**" means all applicable present and future statutes, regulations, ordinances, rules, codes, judgments, orders or other similar enactments of any Governmental Authority regulating or relating to health, safety, or environmental conditions on, under, or about the Premises or the Project, or the environment, including without limitation, the following: the Comprehensive Environmental Response, Compensation and Liability Act; the Resource Conservation and Recovery Act; and all state and local counterparts thereto, and any regulations or policies promulgated or issued thereunder, and (ii) the term "**Hazardous Materials**" means and includes any substance, material, waste, pollutant, or contaminant listed or defined as hazardous or toxic, or regulated by reason of its impact or potential impact on humans, animals and/or the environment under any Environmental Requirements, asbestos and petroleum, including crude oil or any fraction thereof, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). As defined in Environmental Requirements, Tenant is and shall be deemed to be the "**operator**" of Tenant's "**facility**" and the "**owner**" of all Hazardous Materials brought on the Premises by Tenant or any Tenant Party, and the wastes, by-products, or residues generated, resulting, or produced therefrom.

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31. **Tenant's Remedies/Limitation of Liability.** Landlord shall not be in default hereunder unless Landlord fails to perform any of its obligations hereunder within 30 days after written notice from Tenant specifying such failure (unless such performance will, due to the nature of the obligation, require a period of time in excess of 30 days, then after such period of time as is reasonably necessary). Upon any default by Landlord, Tenant shall give notice by registered or certified mail to any Holder of a Mortgage covering the Premises and to any landlord of any lease of property in or on which the Premises are located and Tenant shall offer such Holder and/or landlord a reasonable opportunity to cure the default, including time to obtain possession of the Project by power of sale or a judicial action if such should prove necessary to effect a cure: provided Landlord shall have furnished to Tenant in writing the names and addresses of all such persons who are to receive such notices. All obligations of Landlord hereunder shall be construed as covenants, not conditions; and, except as may be otherwise expressly provided in this Lease, Tenant may not terminate this Lease for breach of Landlord's obligations hereunder.

Notwithstanding the foregoing, if any claimed Landlord default hereunder will immediately, materially and adversely affect Tenant's ability to conduct its business in the Premises (a **"Material Landlord Default"),** Tenant shall, as soon as reasonably possible, but in any event within 2 business days of obtaining knowledge of such claimed Material Landlord Default, give Landlord written notice of such claim and telephonic notice to Tenant's principal contact with Landlord. Landlord shall then have 2 business days to commence cure of such claimed Material Landlord Default and shall diligently prosecute such cure to completion. If such claimed Material Landlord Default is not a default by Landlord hereunder, or if Tenant failed to give Landlord the notice required hereunder within 2 business days of learning of the conditions giving rise to the claimed Material Landlord Default, Landlord shall be entitled to recover from Tenant, as Additional Rent, any costs incurred by Landlord in connection with such cure in excess of the costs, if any, that Landlord would otherwise have been liable to pay hereunder. If Landlord fails to commence cure of any claimed Material Landlord Default as provided above, Tenant may commence and prosecute such cure to completion, and shall be entitled to recover the costs of such cure (but not any consequential or other damages) from Landlord, to the extent of Landlord's obligation to cure such claimed Material Landlord Default hereunder, subject to the limitations set forth in this paragraph and the other provisions of this Lease. In no event whatsoever shall any curative action by Tenant (a) affect any Building Systems serving areas outside of the Premises, (b) interfere with another tenant's operations at its premises at the Project or such tenant's use and enjoyment of its premises at the Project, or (c) affect any portion of the Building's structure, roof, or exterior.

All obligations of Landlord under this Lease will be binding upon Landlord only during the period of its ownership of the Premises and not thereafter. The term **"Landlord"** in this Lease shall mean only the owner for the time being of the Premises. Upon the transfer by such owner of its interest in the Premises, such owner shall thereupon be released and discharged from all obligations of Landlord thereafter accruing, but such obligations shall be binding during the Term upon each new owner for the duration of such owner's ownership.

32. **Inspection and Access.** Landlord and its agents, representatives, and contractors may enter the Premises at any reasonable time to inspect the Premises and to make such repairs as may be required or permitted pursuant to this Lease and for any other business purpose. Landlord and Landlord's representatives may enter the Premises during business hours on not less than 48 hours advance written notice (except in the case of emergencies in which case no such notice shall be required and such entry may be at any time) for the purpose of effecting any such repairs, inspecting the Premises, showing the Premises to prospective purchasers and, during the last year of the Term, to prospective tenants or for any other business purpose. Landlord may erect a suitable sign on the Premises stating the Premises are available to let or that the Project is available for sale. Landlord may grant easements, make public dedications, designate Common Areas and create restrictions on or about the Premises, provided that no such easement, dedication, designation or restriction materially, adversely affects Tenant's use or occupancy of the Premises for the Permitted Use. At Landlord's request, Tenant shall execute such instruments as may be necessary for such easements, dedications or restrictions. Tenant shall at all times, except in the case of emergencies, have the right to escort Landlord or its agents, representatives, contractors or guests while the same are in the Premises, provided such escort does not materially and adversely affect Landlord's access rights hereunder.

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33. **Security.** Tenant shall have the right to install, at its sole cost and expense, a perimeter access system at the Premises that is compatible with any perimeter access system maintained and operated by Landlord at the Project. Tenant acknowledges and agrees that security devices and services, if any, while intended to deter crime may not in given instances prevent theft or other criminal acts and that Landlord is not providing any security services with respect to the Premises. Tenant agrees that Landlord shall not be liable to Tenant for, and Tenant waives any claim against Landlord with respect to, any loss by theft or any other damage suffered or incurred by Tenant in connection with any unauthorized entry into the Premises or any other breach of security with respect to the Premises. Tenant shall be solely responsible for the personal safety of Tenant's officers, employees, agents, contractors, guests and invitees while any such person is in, on or about the Premises and/or the Project. Tenant shall at Tenant's cost obtain insurance coverage to the extent Tenant desires protection against such criminal acts.

34. **Force Majeure.** Landlord shall not responsible or liable for delays in the performance of its obligations hereunder when caused by, related to, or arising out of acts of God, strikes, lockouts, or other labor disputes, embargoes, quarantines, weather, national, regional, or local disasters, calamities, or catastrophes, inability to obtain labor or materials (or reasonable substitutes therefor) at reasonable costs or failure of, or inability to obtain, utilities necessary for performance, governmental restrictions, orders, limitations, regulations, or controls, national emergencies, delay in issuance or revocation of permits, enemy or hostile governmental action, terrorism, insurrection, riots, civil disturbance or commotion, fire or other casualty, and other causes or events beyond the reasonable control of Landlord **("Force Majeure")**.

35. **Brokers.** Landlord and Tenant each represents and warrants that it has not dealt with any broker, agent or other person (collectively, **"Broker")** in connection with this transaction and that no Broker brought about this transaction, other than Jones Lang LaSalle Brokerage, Inc. **("JLL").** JLL, acting as Tenant's representative, shall be paid by Landlord pursuant to a separate agreement between Landlord and JLL. Landlord and Tenant each hereby agree to indemnify and hold the other harmless from and against any claims by any Broker, other than JLL, claiming a commission or other form of compensation by virtue of having dealt with Tenant or Landlord, as applicable, with regard to this leasing transaction.

36. **Limitation on Landlord's Liability.** NOTWITHSTANDING ANYTHING SET FORTH HEREIN OR IN ANY OTHER AGREEMENT BETWEEN LANDLORD AND TENANT TO THE CONTRARY: (A) LANDLORD SHALL NOT BE LIABLE TO TENANT OR ANY OTHER PERSON FOR (AND TENANT AND EACH SUCH OTHER PERSON ASSUME ALL RISK OF) LOSS, DAMAGE OR INJURY, WHETHER ACTUAL OR CONSEQUENTIAL TO: TENANT'S PERSONAL PROPERTY OF EVERY KIND AND DESCRIPTION, INCLUDING, WITHOUT LIMITATION TRADE FIXTURES, EQUIPMENT, INVENTORY, SCIENTIFIC RESEARCH, SCIENTIFIC EXPERIMENTS, LABORATORY ANIMALS, PRODUCT, SPECIMENS, SAMPLES, AND/OR SCIENTIFIC, BUSINESS, ACCOUNTING AND OTHER RECORDS OF EVERY KIND AND DESCRIPTION KEPT AT THE PREMISES AND ANY AND ALL INCOME DERIVED OR DERIVABLE THEREFROM; (B) THERE SHALL BE NO PERSONAL RECOURSE TO LANDLORD FOR ANY ACT OR OCCURRENCE IN, ON OR ABOUT THE PREMISES OR ARISING IN ANY WAY UNDER THIS LEASE OR ANY OTHER AGREEMENT BETWEEN LANDLORD AND TENANT WITH RESPECT TO THE SUBJECT MATTER HEREOF AND ANY LIABILITY OF LANDLORD HEREUNDER SHALL BE STRICTLY LIMITED SOLELY TO LANDLORD'S INTEREST IN THE PROJECT OR ANY PROCEEDS FROM SALE OR CONDEMNATION THEREOF AND ANY INSURANCE PROCEEDS PAYABLE IN RESPECT OF LANDLORD'S INTEREST IN THE PROJECT OR IN CONNECTION WITH ANY SUCH LOSS; AND (C) IN NO EVENT SHALL ANY PERSONAL LIABILITY BE ASSERTED AGAINST ANY OF LANDLORD'S OFFICERS, DIRECTORS, EMPLOYEES, AGENTS OR CONTRACTORS. UNDER NO CIRCUMSTANCES SHALL LANDLORD OR

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ANY OF LANDLORD'S OFFICERS, DIRECTORS, EMPLOYEES, AGENTS OR CONTRACTORS BE LIABLE FOR INJURY TO TENANT'S BUSINESS OR FOR ANY LOSS OF INCOME OR PROFIT THEREFROM. TENANT ACKNOWLEDGES AND AGREES THAT MEASURES AND/OR SERVICES IMPLEMENTED AT THE PROJECT, IF ANY, INTENDED TO ENCOURAGE SOCIAL DISTANCING, PROMOTE AND PROTECT HEALTH AND PHYSICAL WELL-BEING AND/OR INTENDED TO PREVENT OR LIMIT THE SPREAD OR TRANSMISSION OF INFECTIOUS CONDITIONS, MAY NOT PREVENT OR LIMIT THE SPREAD OR TRANSMISSION OF SUCH INFECTIOUS CONDITIONS. LANDLORD SHALL HAVE NO LIABILITY AND TENANT IRREVOCABLY RELEASES AND WAIVES ANY CLAIMS AGAINST LANDLORD FOR ANY LOSS, DAMAGE, INJURY, OR DEATH IN CONNECTION WITH (X) THE IMPLEMENTATION, OR FAILURE OF LANDLORD OR ANY LANDLORD INDEMNIFIED PARTIES TO IMPLEMENT, ANY MEASURES AND/OR SERVICES AT THE PROJECT INTENDED TO ENCOURAGE SOCIAL DISTANCING, PROMOTE AND PROTECT HEALTH AND PHYSICAL WELL-BEING AND/OR INTENDED TO PREVENT OR LIMIT THE SPREAD OR TRANSMISSION OF INFECTIOUS CONDITIONS, OR (Y) THE FAILURE OF ANY MEASURES AND/OR SERVICES IMPLEMENTED AT THE PROJECT TO PREVENT OR LIMIT THE SPREAD OR TRANSMISSION OF ANY INFECTIOUS CONDITIONS.

37. **Severability.** If any clause or provision of this Lease is illegal, invalid or unenforceable under present or future laws, then and in that event, it is the intention of the parties hereto that the remainder of this Lease shall not be affected thereby. It is also the intention of the parties to this Lease that in lieu of each clause or provision of this Lease that is illegal, invalid or unenforceable, there be added, as a part of this Lease, a clause or provision as similar in effect to such illegal, invalid or unenforceable clause or provision as shall be legal, valid and enforceable. This Lease, including the exhibits attached hereto, constitutes the entire agreement between Landlord and Tenant pertaining to the subject matter hereof and supersedes all prior agreements, understandings, letters of intent, negotiations, and discussions, whether oral or written, of the parties, and there are no warranties, representations, or other agreements, express or implied, made to either party by the other party in connection with the subject matter hereof except as specifically set forth herein or in the documents delivered pursuant hereto or in connection herewith.

38. **Signs; Exterior Appearance.** Tenant shall not, without the prior written consent of Landlord, which may be granted or withheld in Landlord's sole discretion: (i) attach any awnings, exterior lights, decorations, balloons, flags, pennants, banners, painting or other projection to any outside wall of the Project, (ii) use any curtains, blinds, shades or screens other than Landlord's standard window coverings, (iii) coat or otherwise sunscreen the interior or exterior of any windows, (iv) place any bottles, parcels, or other articles on the window sills, (v) place any equipment, furniture or other items of personal property on any exterior balcony, or (vi) paint, affix or exhibit on any part of the Premises or the Project any signs, notices, window or door lettering, placards, decorations, or advertising media of any type that can be viewed from the exterior of the Premises. Interior signs on doors and the directory tablet shall be inscribed, painted or affixed for Tenant by Landlord at the sole cost and expense of Tenant, and shall be of a size, color and type acceptable to Landlord. Nothing may be placed on the exterior of corridor walls or corridor doors other than Landlord's standard lettering. The directory tablet shall be provided exclusively for the display of the name and location of tenants.

39. **Right to Negotiate.**

(a) **Expansion in the Building.** If at any time any Available Space (as defined below) in the Project becomes available for lease through December 31, 2020, Landlord shall give notice of such availability to Tenant. Landlord shall thereafter, for a period of up to 5 business days, negotiate in good faith with Tenant for Tenant's lease of the Available Space on such terms as shall be acceptable to Landlord and Tenant **("Negotiation Right").** For purposes of this Section 39(a). **"Available Space"** shall mean Suite 3 on the second floor of the Project that is not occupied by a tenant or that is occupied by an existing tenant whose lease is expiring within 6 months or less and such tenant does not wish to renew (regardless of whether such tenant has a right to renew) its occupancy of such space. Provided that no

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right to expand is exercised by any tenant with superior rights, Tenant shall be entitled to lease the Available Space upon the terms and conditions, if any, agreed to by Landlord and Tenant; provided, however, that the annual Base Rent for the Available Space for the first year of the term thereof shall be an amount equal to $39 per rentable square foot (with 3% annual escalations thereafter), the term shall be for a period of 7 years, and the Available Space shall be delivered in its "as is, where is, with an faults" condition in accordance with Landlord's then current space plan for the Available Space and with no tenant improvement allowance.

(b) **Amended Lease.** If after the expiration of such 5 business day period, no lease amendment or lease agreement for the Available Space has been executed and delivered, the Negotiation Right shall be waived and of no further force or effect with respect to the Available Space at any time during the balance of the Term.

(c) **Exceptions.** Notwithstanding the above, the Negotiation Right shall not be in effect and may not be exercised by Tenant: (i) during any period of time that Tenant is in Default under any provision of this Lease; or (ii) if Tenant has been in Default under any provision of this Lease 3 or more times, regardless of whether the Defaults are cured, during the 12 month period prior to the date on which Tenant seeks to exercise the Negotiation Right.

(d) **Termination.** The Negotiation Right shall terminate and be of no further force or effect even after Tenant's due and timely exercise of the Negotiation Right, if, after such exercise, but prior to the commencement date of the lease of such Available Space, (i) Tenant fails to timely cure any default by Tenant under this Lease; or (ii) Tenant has Defaulted 3 or more times during the period from the date of the exercise of the Negotiation Right to the date of the commencement of the lease of the Available Space, regardless of whether such Defaults are cured.

(e) **Right Personal.** The Negotiation Right is personal to Tenant and is not assignable without Landlord's consent, which may be granted or withheld in Landlord's sole discretion separate and apart from any consent by Landlord to an assignment of Tenant's interest in this Lease.

(f) **No Extensions.** The period of time within which the Negotiation Right may be exercised shall not be extended or enlarged by reason of Tenant's inability to exercise the Negotiation Right.

40. **Right to Extend Term.** Tenant shall have the right to extend the Term of this Lease upon the following terms and conditions:

(a) **Extension Right.** Tenant shall have the one-time right **("Extension Right")** to extend the term of this Lease for 5 years **("Extension Term")** on the same terms and conditions as this Lease (other than Base Rent) by giving Landlord written notice of its election to exercise the Extension Right at least 9 months prior, and no earlier than 12 months prior, to the expiration of the Base Term of this Lease.

(b) **Base Rent.** Upon the commencement of the Extension Term, Base Rent shall be payable at the greater of (i) the Market Rate (as defined below) and (ii) an amount equal to the Base Rent in effect immediately prior to the Extension Term and increased by the Rent Adjustment Percentage. Base Rent shall thereafter be adjusted on each anniversary of the commencement of the Extension Term by a percentage as determined by Landlord and agreed to by Tenant at the time the Market Rate is determined. As used herein, **"Market Rate"** shall mean the then market rental rate as determined by Landlord and agreed to by Tenant. If, on or before the date that is 120 days prior to the expiration of the Base Term of this Lease, Tenant has not agreed with Landlord's determination of the Market Rate and the rent escalations during such subsequent Extension Term after negotiating in good faith, Tenant may by written notice to Landlord not later than 120 days prior to the expiration of the Base Term of this Lease, elect arbitration as described in Section 40(c) below. If Tenant does not elect such arbitration, Tenant shall be deemed to have waived any right to extend the Term of this Lease and the Extension Right shall terminate.

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(c) **Arbitration**.

(i) Within 10 days of Tenant's notice to Landlord of its election to arbitrate Market Rate and escalations, each party shall deliver to the other a proposal containing the Market Rate and escalations that the submitting party believes to be correct **("Extension Proposal").** If either party fails to timely submit an Extension Proposal, the other party's submitted proposal shall determine the Base Rent (including the Market Rent) and escalations for the Extension Term. If both parties submit Extension Proposals, then Landlord and Tenant shall meet within 7 days after delivery of the last Extension Proposal and make a good faith attempt to mutually appoint a single Arbitrator (as defined below) to determine the Base Rent (including the Market Rent) and escalations. If Landlord and Tenant are unable to agree upon a single Arbitrator, then each shall, by written notice delivered to the other within 10 days after the meeting, select an Arbitrator. If either party fails to timely give notice of its selection for an Arbitrator, the other party's submitted proposal shall determine the Base Rent (including the Market Rent) and escalations for the Extension Term. The 2 Arbitrators so appointed shall, within 5 business days after their appointment, appoint a third Arbitrator. If the 2 Arbitrators so selected cannot agree on the selection of the third Arbitrator within the time above specified, then either party, on behalf of both parties, may request such appointment of such third Arbitrator by application to any state court of general jurisdiction in the jurisdiction in which the Premises are located, upon 10 days prior written notice to the other party of such intent.

(ii) The decision of the Arbilrator(s) shall be made within 30 days after the appointment of a single Arbitrator or the third Arbitrator, as applicable. The decision of the single Arbitrator shall be final and binding upon the parties. The average of the two closest Arbitrators in a three Arbitrator panel shall be final and binding upon the parties. Each party shall pay the fees and expenses of the Arbitrator appointed by or on behalf of such party and the fees and expenses of the third Arbitrator shall be borne equally by both parties. If the Base Rent (including the Market Rent) and escalations are not determined by the first day of the Extension Term, then Tenant shall pay Landlord Base Rent in an amount equal to the Base Rent in effect immediately prior to the Extension Term and increased by the Rent Adjustment Percentage until such determination is made. After the determination of the Base Rent (including the Market Rent) and escalations, the parties shall make any necessary adjustments to such payments made by Tenant. Landlord and Tenant shall then execute and deliver an amendment recognizing the Base Rent and escalations for the Extension Term.

(iii) An **"Arbitrator"** shall be any person appointed by or on behalf of either party or appointed pursuant to the provisions hereof and: (A) shall be (1) a member of the American Institute of Real Estate Appraisers with not less than 10 years of experience in the appraisal of improved office and high tech industrial real estate in the greater Rockville, Maryland metropolitan area, or (2) a licensed commercial real estate broker with not less than 15 years' experience representing landlords and/or tenants in the leasing of high tech or life sciences space in the greater Rockville, Maryland metropolitan area, (A) devoting substantially all of their time to professional appraisal or brokerage work, as applicable, at the time of appointment and (C) be in all respects impartial and disinterested.

(d) **Right Personal.** The Extension Right is personal to Tenant and is not assignable without Landlord's consent, which may be granted or withheld in Landlord's sole discretion separate and apart from any consent by Landlord to an assignment of Tenant's interest in this Lease, except that the Extension Right may be assigned in connection with any Permitted Assignment of this Lease.

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(e) **Exceptions.** Notwithstanding anything set forth above to the contrary, the Extension Right shall not be in effect and Tenant may not exercise the Extension Right: (i) during any period of time that Tenant is in Default under any provision of this Lease; or (ii) if Tenant has been in Default under any provision of this Lease 3 or more times, regardless of whether the Defaults are cured, during the 12 month period immediately prior to the date that Tenant intends to exercise the Extension Right, regardless of whether the Defaults are cured.

(f) **No Extension.** The period of time within which the Extension Right may be exercised shall not be extended or enlarged by reason of Tenant's inability to exercise the Extension Right.

(g) **Termination.** The Extension Right shall terminate and be of no further force or effect even after Tenant's due and timely exercise of the Extension Right, if, after such exercise, but prior to the commencement date of the Extension Term, (i) Tenant fails to timely cure any default by Tenant under this Lease; or (ii) Tenant has Defaulted 3 or more times during the period from the date of the exercise of the Extension Right to the date of the commencement of the Extension Term, regardless of whether such Defaults are cured.

41. **Miscellaneous.**

(a) **Notices.** All notices or other communications between the parties shall be in writing and shall be deemed duly given upon delivery or refusal to accept delivery by the addressee thereof if delivered in person, or upon actual receipt if delivered by reputable overnight guaranty courier, addressed and sent to the parties at their addresses set forth above. Landlord and Tenant may from time to time by written notice to the other designate another address for receipt of future notices.

(b) **Joint and Several Liability.** If and when included within the term **"Tenant,"** as used in this instrument, there is more than one person or entity, each shall be jointly and severally liable for the obligations of Tenant.

(c) **Financial Information.** Upon written request from Landlord, Tenant shall furnish Landlord with true and complete copies of (i) Tenant's most recent audited annual financial statements within 90 days of the end of each of Tenant's fiscal years during the Term, (ii) Tenant's most recent unaudited quarterly financial statements within 45 days of the end of each of Tenant's fiscal quarters during each of Tenant's fiscal years during the Term, (iii) at Landlord's request from time to time, updated business plans, including cash flow projections and/or pro forma balance sheets and income statements, all of which shall be treated by Landlord as confidential information belonging to Tenant, (iv) corporate brochures and/or profiles prepared by Tenant for prospective investors, and (v) any other financial information or summaries that Tenant typically provides to its lenders or shareholders.

(d) **Recordation.** Neither this Lease nor a memorandum of lease shall be filed by or on behalf of Tenant in any public record. Landlord may prepare and file, and upon request by Landlord Tenant will execute, a memorandum of lease.

(e) **Interpretation.** The normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of this Lease or any exhibits or amendments hereto. Words of any gender used in this Lease shall be held and construed to include any other gender, and words in the singular number shall be held to include the plural, unless the context otherwise requires. The captions inserted in this Lease are for convenience only and in no way define, limit or otherwise describe the scope or intent of this Lease, or any provision hereof, or in any way affect the interpretation of this Lease.

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(f) **Not Binding Until Executed.** The submission by Landlord to Tenant of this Lease shall have no binding force or effect, shall not constitute an option for the leasing of the Premises, nor confer any right or impose any obligations upon either party until execution of this Lease by both parties.

(g) **Limitations on Interest.** It is expressly the intent of Landlord and Tenant at all times to comply with applicable law governing the maximum rate or amount of any interest payable on or in connection with this Lease. If applicable law is ever judicially interpreted so as to render usurious any interest called for under this Lease, or contracted for, charged, taken, reserved, or received with respect to this Lease, then it is Landlord's and Tenant's express intent that all excess amounts theretofore collected by Landlord be credited on the applicable obligation (or, if the obligation has been or would thereby be paid in full, refunded to Tenant), and the provisions of this Lease immediately shall be deemed reformed and the amounts thereafter collectible hereunder reduced, without the necessity of the execution of any new document, so as to comply with the applicable law, but so as to permit the recovery of the fullest amount otherwise called for hereunder.

(h) **Choice of Law.** Construction and interpretation of this Lease shall be governed by the internal laws of the state in which the Premises are located, excluding any principles of conflicts of laws.

(i) **Time.** Time is of the essence as to the performance of Tenant's obligations under this Lease.

(j) **OFAC.** Tenant, and all beneficial owners of Tenant, are currently (i) in compliance with and shall at all times during the Term of this Lease remain in compliance with the regulations of the Office of Foreign Assets Control **("OFAC")** of the U.S. Department of Treasury and any statute, executive order, or regulation relating thereto (collectively, the **"OFAC Rules"),** (ii) not listed on, and shall not during the Term of this Lease be listed on, the Specially Designated Nationals and Blocked Persons List, Foreign Sanctions Evaders List, or the Sectoral Sanctions Identifications List, which are all maintained by OFAC and/or on any other similar list maintained by OFAC or other governmental authority pursuant to any authorizing statute, executive order, or regulation, and (iii) not a person or entity with whom a U.S. person is prohibited from conducting business under the OFAC Rules.

(k) **Incorporation by Reference.** All exhibits and addenda attached hereto are hereby incorporated into this Lease and made a part hereof. If there is any conflict between such exhibits or addenda and the terms of this Lease, such exhibits or addenda shall control.

(l) **No Accord and Satisfaction.** No payment by Tenant or receipt by Landlord of a lesser amount than the monthly installment of Base Rent or any Additional Rent will be other than on account of the earliest stipulated Base Rent and Additional Rent, nor will any endorsement or statement on any check or letter accompanying a check for payment of any Base Rent or Additional Rent be an accord and satisfaction. Landlord may accept such check or payment without prejudice to Landlord's right to recover the balance of such Rent or to pursue any other remedy provided in this Lease.

(m) **Non-Disclosure of Terms.** Tenant acknowledges and agrees that the terms of this Lease are confidential and constitute proprietary information of Landlord. Disclosure of such terms could adversely affect the ability of Landlord and its affiliates to negotiate, manage, and administer other leases and impair Landlord's relationship with other tenants. Accordingly, as a material inducement for Landlord to enter into this Lease, Tenant, on behalf of itself and its partners, managers, members, officers, directors, employees, agents, and attorneys, agrees that it shall not intentionally and voluntarily disclose the terms and conditions of this Lease to any publication or other media or any tenant or apparent prospective tenant of the Building or other portion of the Project, or real estate agent or broker, either directly or indirectly.

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(n) **Counterparts/Electronic Signatures.** This Lease may be executed in 2 or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature process complying with the U.S. federal ESIGN Act of 2000) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes. Electronic signatures shall be deemed original signatures for purposes of this Lease and all matters related thereto, with such electronic signatures having the same legal effect as original signatures.

(o) **Hazardous Activities.** Notwithstanding any other provision of this Lease, Landlord, for itself and its employees, agents and contractors, reserves the right to refuse to perform any repairs or services in any portion of the Premises that, pursuant to Tenant's routine safety guidelines, practices or custom or prudent industry practices, require any form of protective clothing or equipment other than safety glasses. In any such case, Tenant shall contract with parties who are acceptable to Landlord, in Landlord's reasonable discretion, for all such repairs and services, and Landlord shall, to the extent required, equitably adjust Tenant's Share of Operating Expenses in respect of such repairs or services to reflect that Landlord is not providing such repairs or services to Tenant.

(p) **LEED.** Tenant acknowledges that Landlord may, but shall not be obligated to, seek to obtain Leadership in Energy and Environmental Design (LEED), WELL Building Standard, or other similar "green" certification for the Project and/or the Premises, and Tenant agrees to reasonably cooperate with Landlord, and to provide such information and/or documentation as Landlord may reasonably request, in connection therewith.

[Signatures on next page]

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IN WITNESS WHEREOF, Landlord and Tenant have executed this Lease under seal as of the day and year first above written.

TENANT:

SENSEI BIOTHERAPEUTICS, INC.,
a Delaware corporation

By: /s/ John Celebi
Name: John Celebi
Title: Chief Executive Officer

LANDLORD:

ARE-MARYLAND NO. 8 CORP.,
a Maryland corporation

By: /s/ Allison Grochola
Name: Allison Grochola
Title: Vice President
RE: Legal Affairs

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EXHIBIT A TO LEASE
DESCRIPTION OF PREMISES

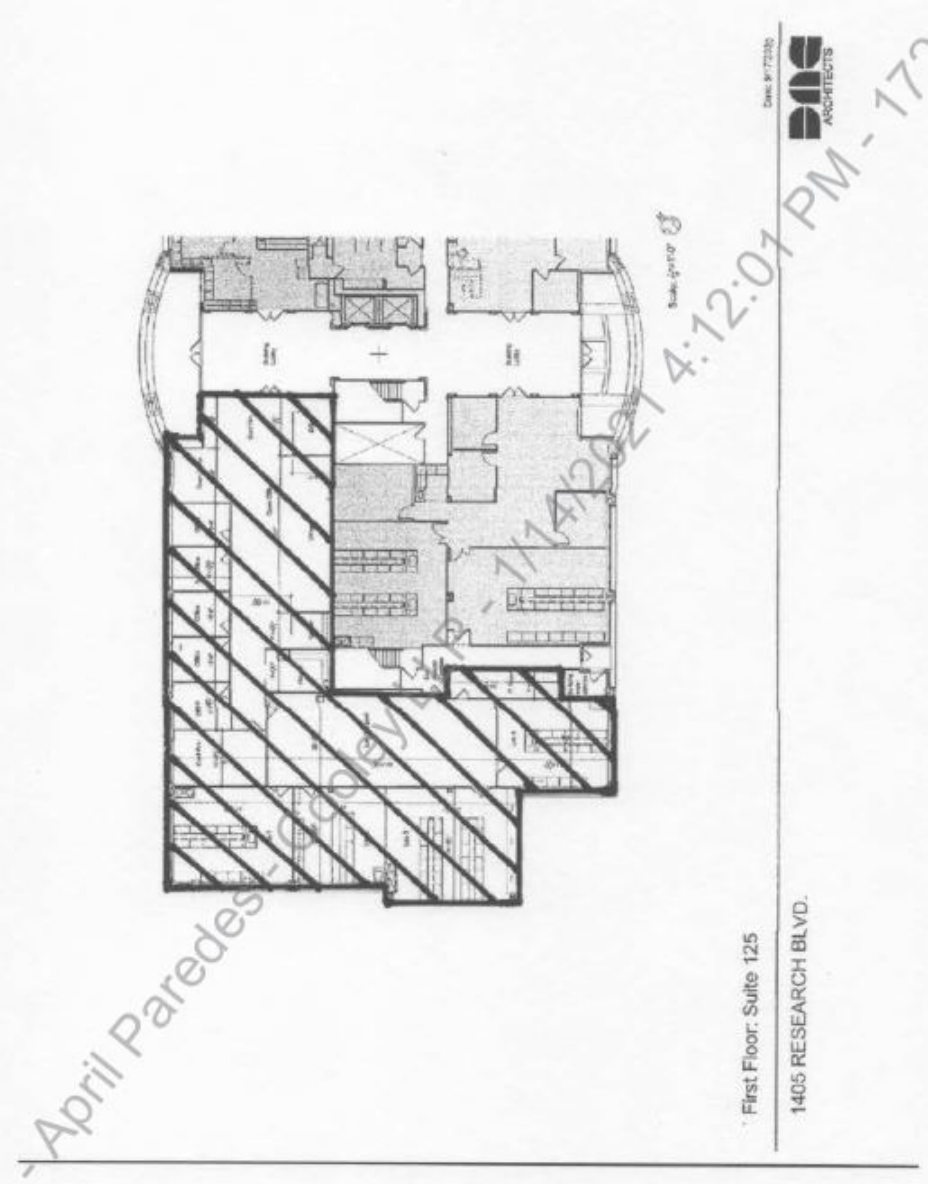

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EXHIBIT B TO LEASE
DESCRIPTION OF PROJECT

All that certain lot or parcel of land together with all improvements thereon located and being in the County of Montgomery, Maryland and being more particularly described as follows:

Ownership Lot numbered 18E pursuant to "Plat of Ownership, Ownership Lots 18D, 18E and 18F, National Capital Research Park" per plat thereof recorded at Plat No 25237, among the Land Records of Montgomery County, Maryland.

Together with the: (i) Electric, Gas, Water, Sanitary Sewer and other Utility Easements in, on and over Ownership Lot 18D and 18F; and (ii) Common Area, Ingress, Egress, Access, Construction and Parking Easements, in, on and over Ownership Lot 18D and 18F; all as more particularly set forth in the Ownership Plat Declaration recorded in Liber 26896 at folio 773 as amended and restated by Amended and Restated Ownership Plat Declaration recorded in Liber 53454 at folio 312.

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EXHIBIT C TO LEASE
WORK LETTER

WORK LETTER

THIS WORK LETTER dated October 22, 2020 (this **"Work Letter")** is made and entered into by and between **ARE-MARYLAND NO. 8 CORP.,** a Maryland corporation **("Landlord"),** and **SENSEI BIOTHERAPEUTICS, INC.,** a Delaware corporation **("Tenant"),** and is attached to and made a part of the Lease Agreement dated October __, 2020 **("Lease"),** by and between Landlord and Tenant. Any initially capitalized terms used but not defined herein shall have the meanings given them in the Lease.

1. **General Requirements**.

a. **Tenant's Authorized Representative.** Tenant designates Steve Fuller and Thomas Thisted (either such individual acting alone, **"Tenant's Representative")** as the only persons authorized to act for Tenant pursuant to this Work Letter. Landlord shall not be obligated to respond to or act upon any request, approval, inquiry or other communication **("Communication")** from or on behalf of Tenant in connection with this Work Letter unless such Communication is in writing from Tenant's Representative. Tenant may change either Tenant's Representative at any time upon not less than 5 business days advance written notice to Landlord. Neither Tenant nor Tenant's Representative shall be authorized to direct Landlord's contractors in the performance of Landlord's Work (as hereinafter defined}.

b. **Landlord's Authorized Representative.** Landlord designates Lawrence J. Diamond and Edward J. Rose (either such individual acting alone, **"Landlord's Representative**") as the only persons authorized to act for Landlord pursuant to this Work Letter. Tenant shall not be obligated to respond to or act upon any request, approval, inquiry or other Communication from or on behalf of Landlord in connection with this Work Letter unless such Communication is in writing from Landlord's Representative. Landlord may change either Landlord's Representative at any time upon not less than 5 business days advance written notice to Tenant. Landlord's Representative shall be the sole persons authorized to direct Landlord's contractors in the performance of Landlord's Work.

c. **Architects, Consultants and Contractors.** Landlord and Tenant hereby acknowledge and agree that: (i) the general contractor and any subcontractors for the Tenant Improvements (including, but not limited to, the cGMP space) shall be selected by Landlord, subject to Tenant's approval, which approval shall not be unreasonably withheld, conditioned or delayed, and (ii) EwingCole shall be the architect **("TI Architect")** for the Tenant Improvements.

2. **Tenant Improvements.**

a. **Tenant Improvements Defined.** As used herein, **"Tenant Improvements"** shall mean all improvements to the Project of a fixed and permanent nature as shown on the TI Construction Drawings, as defined in Section 2(c) below. Other than Landlord's Work (as defined in Section 3(a) below, Landlord shall not have any obligation whatsoever with respect to the finishing of the Premises for Tenant's use and occupancy.

b. **Tenant's Space Plans.** Attached hereto as **Exhibits C-1** and **C-2** are Tenant's preliminary space plan **("Preliminary Space Plan")** detailing Tenant's requirements for the Tenant Improvements. Tenant shall be solely responsible for ensuring that the Preliminary Space Plan reflects Tenant's requirements for the Tenant Improvements.

c. **Working Drawings.** Landlord shall cause the TI Architect to prepare and deliver to Tenant for review and comment construction plans, specifications and drawings for the Tenant Improvements **("TI Construction Drawings"),** which TI Construction Drawings shall be prepared substantially in accordance

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with the Preliminary Space Plan. Tenant shall deliver its written comments on the TI Construction Drawings to Landlord not later than 10 business days after Tenant's receipt of the same; provided, however, that Tenant may not disapprove any matter that is consistent with the Preliminary Space Plan without submitting a Change Request. Landlord and the TI Architect shall consider all such comments in good faith and shall, within 10 business days after receipt, notify Tenant how Landlord proposes to respond to such comments, but Tenant's review rights pursuant to the foregoing sentence shall not delay the design or construction schedule for the Tenant Improvements. Any disputes in connection with such comments shall be resolved in accordance with Section 2(d) hereof. Provided that the design reflected in the TI Construction Drawings is consistent with the Preliminary Space Plan, Tenant shall approve the TI Construction Drawings submitted by Landlord, unless Tenant submits a Change Request. Once approved by Tenant, subject to the provisions of Section 4 below, Landlord shall not materially modify the TI Construction Drawings except, after written notice to Tenant, as may be reasonably required in connection with the issuance of the TI Permit (as defined in Section 3(b) below).

d. **Approval and Completion.** It is hereby acknowledged by Landlord and Tenant that the TI Construction Drawings must be completed and approved not later than December 1, 2020 in order for the Landlord's Work to be Substantially Complete within 180 days of the Rent Commencement Date (as defined in the Lease). Upon any dispute regarding the design of the Tenant Improvements, which is not settled within 10 business days after notice of such dispute is delivered by one party to the other, Tenant may make the final decision regarding the design of the Tenant Improvements, provided (i) Tenant acts reasonably and such final decision is either consistent with or a compromise between Landlord's and Tenant's positions with respect to such dispute, (ii) that all costs and expenses resulting from any such decision by Tenant shall be payable out of the TI Fund (as defined below), and (iii) Tenant's decision will not affect the base Building, structural components of the Building or any Building systems. Any changes to the TI Construction Drawings following Landlord's and Tenant's approval of same requested by Tenant shall be processed as provided in Section 4 hereof.

e. **Design Changes to Building and Tenant Improvements.** Notwithstanding anything to the contrary contained in this Work Letter, Landlord may require that the design of the Building and/or the design of the Tenant Improvements incorporate (or, if applicable, be revised to incorporate) elements that are intended to enhance social distancing, promote and protect health and physical well-being and/or intended to prevent or limit the spread or transmission of Infectious Conditions. Landlord shall be responsible for the cost of such changes to the core and shell, and such changes to the Tenant Improvements shall be payable out of the TI Fund. Landlord does not represent or warrant that any such design elements will actually enhance social distancing, promote and protect health and physical well-being and/or intended to prevent or limit the spread or transmission of Infectious Conditions.

3. **Performance of Landlord's Work.**

a. **Definition of Landlord's Work.** As used herein, **"Landlord's Work"** shall mean the work of constructing the Tenant Improvements.

b. **Commencement and Permitting.** Landlord shall commence construction of the Tenant Improvements upon obtaining a building permit **("TI Permit")** authorizing the construction of the Tenant Improvements consistent with the TI Construction Drawings approved by Tenant. The cost of obtaining the TI Permit shall be payable from the TI Fund. Tenant shall assist Landlord in obtaining the TI Permit. If any Governmental Authority having jurisdiction over the construction of Landlord's Work or any portion thereof shall impose terms or conditions upon the construction thereof that: (i) are inconsistent with Landlord's obligations hereunder, (ii) increase the cost of constructing Landlord's Work, or (iii) will materially delay the construction of Landlord's Work, Landlord and Tenant shall reasonably and in good faith seek means by which to mitigate or eliminate any such adverse terms and conditions. Within 5 days after Landlord's request, Tenant shall at its expense complete and submit any documentation obtained by Landlord and required by the applicable Governmental Authority (including, but not limited to, the Washington Suburban Sanitary Commission **('WSSC"))** for the issuance of a plumbing authority (or

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comparable) permit relating to laboratory water and wastewater usage at the Premises, provided that any fees related to the submission of such permits shall be payable from the TI Fund. Such documentation includes, but is not limited to, an Industrial Wastewater Survey on the form specified by WSSC's Regulatory Services Division, Industrial Discharge Control Section. At Landlord's request, Tenant shall also meet with Landlord and WSSC personnel at the Project to review cooperatively matters relating to water and wastewater usage, including, but not limited to, laboratory processes.

c. **Completion of Landlord's Work.** On or before the date that is 180 days after the Rent Commencement Date (subject to Tenant Delays and Force Majeure Delays), Landlord shall substantially complete or cause to be substantially completed Landlord's Work in a good and workmanlike manner, in accordance with the TI Permit subject, in each case, to Minor Variations and normal "punch list" items of a non-material nature that do not interfere with the use of the Premises **("Substantial Completion"** or **"Substantially Complete").** Upon Substantial Completion of Landlord's Work, Landlord shall require the TI Architect and the general contractor to execute and deliver, for the benefit of Tenant and Landlord, a Certificate of Substantial Completion in the form of the American Institute of Architects **("AIA")** document G704. For purposes of this Work Letter, **"Minor Variations"** shall mean any modifications reasonably required: (i) to comply with all applicable Legal Requirements and/or to obtain or to comply with any required permit (including the TI Permit); (ii) to comply with any request by Tenant for modifications to Landlord's Work; (iii) to comport with good design, engineering, and construction practices that are not material; or (iv) to make reasonable adjustments for field deviations or conditions encountered during the construction of Landlord's Work.

d. **Selection of Materials.** Where more than one type of material or structure is indicated on the TI Construction Drawings approved by Landlord and Tenant, the option will be selected at Landlord's sole and absolute subjective discretion. As to all building materials and equipment that Landlord is obligated to supply under this Work Letter and not otherwise set forth with specificity on the TI Construction Drawings, Landlord shall select a reputable manufacturer thereof in its sole and absolute subjective discretion..

e. **Delivery of the Premises.** Tenant shall have the right to occupy the Premises while Landlord is performing Landlord's Work. Tenant's taking possession of the Premises shall not constitute a waiver of: (i) any warranty with respect to workmanship (including installation of equipment) or material (exclusive of equipment provided directly by manufacturers), (ii) any non-compliance of Landlord's Work with applicable Legal Requirements, or (iii) any claim that Landlord's Work was not completed substantially in accordance with the TI Construction Drawings (subject to Minor Variations and such other changes as are permitted hereunder) (collectively, a **"Construction Defect").** Tenant shall have one year after Substantial Completion within which to notify Landlord of any such Construction Defect discovered by Tenant, and Landlord shall pursue such correction to completion, including but not limited to using reasonable efforts to remedy or cause the responsible contractor to remedy any such Construction Defect within 30 days thereafter.

f. **Warranties.** Tenant shall be entitled to receive the benefit of all construction warranties and manufacturer's equipment warranties relating to equipment installed in the Premises. If requested by Tenant, Landlord shall attempt to obtain extended warranties from manufacturers and suppliers of such equipment, but the cost of any such extended warranties shall be borne solely out of the TI Fund. Landlord shall promptly undertake and complete, or cause to be completed, all punch list items.

g. **Commencement Date Delay**. Except as otherwise provided in the Lease, to the extent that any of the following cause an actual delay in Landlord's Substantial Completion of Landlord's Work, Landlord's Substantial Completion of Landlord's Work shall be deemed to be have been delayed by any one or more of the following causes ("**Tenant Delay**"):

i. Tenant's Representative was not available to give or receive any Communication or to take any other action required to be taken by Tenant hereunder, including, but not limited to, timely

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completing and submitting the documentation relating to the plumbing authority (or comparable) permit described in Section 3.b. or meeting with Landlord and WSSC personnel as requested pursuant to Section 3.b.;

ii. Tenant's request for Change Requests (as defined in Section 4(a) below) whether or not any such Change Requests are actually performed;

iii. Construction of any Change Requests;

iv. Tenant's request for materials, finishes or installations requiring unusually long lead times, which unusually long lead times are not due to Force Majeure Delays;

v. Tenant's delay in reviewing, revising or approving plans and specifications beyond the periods set forth herein;

vi. Tenant's delay in providing information critical to the normal progression of the Project. Tenant shall provide such information as soon as reasonably possible, but in no event longer than one week after receipt of any request for such information from Landlord;

vii. Tenant's delay in making payments to Landlord for Excess TI Costs (as defined in Section 5(d) below); or

viii. Any other act or omission by Tenant or any Tenant Party (as defined In the Lease), or persons employed by any of such persons.

If Delivery is delayed for any of the foregoing reasons, then Landlord shall cause the TI Architect to certify the date on which the Tenant Improvements would have been completed but for such Tenant Delay and such certified date shall be the date of Delivery.

4. **Changes.** Any changes requested by Tenant to the Tenant Improvements after the delivery of the Preliminary Space Plan shall be requested and instituted in accordance with the provisions of this Section 4 and shall be subject to the written approval of Landlord and the TI Architect, such approval not to be unreasonably withheld, conditioned or delayed.

a. **Tenant's Request For Changes.** If Tenant shall request changes to the Tenant Improvements **("Changes"),** Tenant shall request such Changes by notifying Landlord in writing in substantially the same form as the AIA standard change order form (a **"Change Request"),** which Change Request shall detail the nature and extent of any such Change. Such Change Request must be signed by Tenant's Representative. Landlord shall, before proceeding with any Change, use commercially reasonable efforts to respond to Tenant as soon as is reasonably possible with an estimate of: (i) the time it will take, and (ii) the architectural and engineering fees and costs that will be incurred, to analyze such Change Request (which costs shall be paid from the TI Fund to the extent actually incurred, regardless of whether such change is implemented). Landlord shall thereafter submit to Tenant in writing, within 5 business days of receipt of the Change Request (or such longer period of time as is reasonably required depending on the extent of the Change Request), an analysis of the additional cost or savings involved, including, without limitation, architectural and engineering costs and the period of time, if any, that the Change will extend the date on which Landlord's Work will be Substantially Complete. Any such delay in the completion of Landlord's Work caused by a Change, including any suspension of Landlord's Work while any such Change is being evaluated and/or designed, shall be Tenant Delay.

b. **Implementation of Changes.** If Tenant: (i) approves in writing the cost or savings and the estimated extension in the time for completion of Landlord's Work, if any, and (ii) deposits with Landlord any costs required in connection with such Change (to the extent such Change will cause Excess TI

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Costs), Landlord shall cause the approved Change to be instituted. Notwithstanding any approval or disapproval by Tenant of any estimate of the delay caused by such proposed Change, the TI Architect's reasonable determination of the actual amount of Tenant Delay in connection with such Change shall be final and binding on Landlord and Tenant.

5. **Costs.**

a. **Turnkey Completion.** Landlord shall, at its sole cost and expense, perform Landlord's Work as set forth in this Work Letter. The cost to perform Landlord's Work is an amount equal to **$42.63** per rentable square foot of the Premises, or **$325,823** in the aggregate. Landlord's Work shall include the construction of the Tenant Improvements, space planning, TI Design Drawings, TI Construction Drawings, construction management, and permitting fees.

b. **TI Allowances**. Landlord shall provide to Tenant the following tenant improvement allowances (collectively, the **"TI Allowances").** The amount of the Tenant Improvement Allowance and the Additional Tenant Improvement Allowance (each as defined below) equal the aggregate cost to perform Landlord's Work:

i. **$25** per rentable square foot of the Premises, or **$191,075** in the aggregate **("Tenant Improvement Allowance"),** which amount shall be applied toward the cost to perform Landlord's Work.

ii. **$12.63** per rentable square foot of the Premises, or **$134,748** in the aggregate **("Additional Tenant Improvement Allowance"),** which amount shall be applied toward the cost to perform Landlord's Work. The Additional Tenant Improvement Allowance shall result in adjustments to the Base Rent as provided in Section 4 of the Lease.

iii. **$5** per rentable square foot of the Premises, or **$38,215** in the aggregate **("FF&E Allowance").** Tenant shall use the FF&E Allowance to offset and fund the costs of furniture, fixtures, and equipment **("FF&E")** to be installed in the Premises. Upon completion of the Tenant Improvements, Tenant shall deliver to Landlord copies of all operation and maintenance manuals and warranties affecting the FF&E. Except for the FF&E Allowance, no part of the TI Allowances shall be used to purchase any furniture, personal property or other non-Building system materials or equipment, including, but not be limited to, Tenant's voice or data cabling, non-ducted biological safety cabinets and other scientific equipment not incorporated into the Tenant Improvements.

The TI Allowances shall be disbursed in accordance with this Work Letter. Tenant shall have no right to any portion of the TI Allowances that are not disbursed before the last day of the month that is 18 months after the Rent Commencement Date.

c. **Costs Includable in TI Fund.** The TI Fund shall be used solely for the payment of design, permits and construction costs in connection with the construction of the Tenant Improvements, including, without limitation, the cost of electrical power and other utilities used in connection with the construction of the Tenant Improvements (but such cost shall apply, on a pro rata basis, only to the portion of the Premises that is then subject to Landlord's performance of Landlord's Work), the cost of preparing the TI Design Drawings and the TI Construction Drawings, all costs set forth in the Budget, including Landlord's administrative rent equal to 3% of the TI Costs for monitoring and inspecting the construction of the Tenant Improvements and Changes, Landlord's out-of-pocket expenses, costs resulting from Tenant Delays and the cost of Changes (collectively, **"TI Costs").** Notwithstanding anything to the contrary contained herein, except for the FF&E Allowance, the TI Fund shall not be used to purchase any furniture, personal property or other non-Building system materials or equipment, including, but not limited to, Tenant's voice or data cabling, non-ducted biological safety cabinets and other scientific equipment not incorporated into the Tenant Improvements.

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d. **Excess TI Costs.** Landlord shall have no obligation to bear any portion of the cost of any of the Tenant Improvements except to the extent of the TI Allowances. If at any time the remaining TI Costs exceed the remaining unexpended TI Allowances, Tenant shall deposit with Landlord, as a condition precedent to Landlord's obligation to complete the Tenant Improvements, 100% of the then current TI Costs in excess of the remaining TI Allowances **("Excess TI Costs").** If Tenant fails to deposit any Excess TI Costs with Landlord, Landlord shall have all of the rights and remedies set forth in the Lease for nonpayment of Rent (including, but not limited to, the right to interest at the Default Rate and the right to assess a late charge). For purposes of any litigation instituted with regard to such amounts, those amounts will be deemed Rent under the Lease. The TI Allowances and Excess TI Costs are herein referred to as the **"TI Fund."** Funds deposited by Tenant shall be the first disbursed to pay TI Costs. Notwithstanding anything to the contrary set forth in this Section 5.d, Tenant shall be fully and solely liable for TI Costs and the cost of Minor Variations in excess of the TI Allowances. If upon Substantial Completion of the Tenant Improvements and the payment of all sums due in connection therewith there remains any undisbursed portion of the TI Fund, Tenant shall be entitled to such undisbursed TI Fund solely to the extent of any Excess TI Costs deposit Tenant has actually made with Landlord.

6. **Tenant Access.**

a. **Tenant's Rights.** Tenant shall have the right to occupy the Premises from and after the Rent Commencement Date and while Landlord is performing Landlord's Work within the Premises. Tenant shall have the right, at Tenant's sole risk and expense, to (i) perform any work **("Tenant's Work")** required by Tenant other than Landlord's Work, provided that such Tenant's Work is coordinated with the TI Architect and the general contractor, and complies with the Lease and all other reasonable restrictions and conditions Landlord may impose, and (ii) inspect and observe Landlord's Work in process. Tenant shall comply with all established safety practices of Landlord's contractor and Landlord until completion of Landlord's Work and acceptance thereof by Tenant.

b. **No Interference.** Neither Tenant nor any Tenant Party (as defined in the Lease) shall interfere with the performance of Landlord's Work, nor with any inspections or issuance of final approvals by applicable Governmental Authorities.

c. **No Acceptance of Premises.** During such time that Landlord is performing Landlord's Work Within the Premises, Tenant shall defend with counsel reasonably acceptable by Landlord, Indemnify and hold Landlord harmless from and against any loss of or damage to Tenant's property, completed work, fixtures, equipment, materials or merchandise, and from liability for death of, or injury to, any person, caused by the act or omission of Tenant or any Tenant Party.

7. **Miscellaneous.**

a. **Consents.** Whenever consent or approval of either party is required under this Work Letter, that party shall not unreasonably withhold, condition or delay such consent or approval, unless expressly set forth herein to the contrary

b. **Modification.** No modification, waiver or amendment of this Work Letter or of any of its conditions or provisions shall be binding upon Landlord or Tenant unless in writing signed by Landlord and Tenant.

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EXHIBIT C-1 TO LEASE
SPECIFICATIONS

As set forth in **Exhibit C-2** attached hereto, the Premises shall include all fixed improvements currently in the Premises, including non-moveable cabinetry and casework, chemical fume hood(s), and bench tops. Specific renovations all are related to the large open area that is labeled "Lab Support" on **Exhibit C-2** and shall include:

1) Move entry door to area near Lab 1

2) Separate "Lab Support" area into 4 rooms + new hallway (approx. 6' wide} for access to Labs 1, 2, 3 and 4

   a. Room nearest Lab 4 would be roughly 19-20' in length, width (-14.5') determined by dimension of hallway. This room would be for large equipment, such as -80C freezers

   b. Remaining 32-33' of area would be divided into two 8' rooms in the middle of the space and one 16' room for GMP use on the end near the offices. Each of these rooms requires a sink. The GMP room needs an air-lock entry room (~6' x 6').

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EXHIBIT C-2 TO LEASE
PRELIMINARY SPACE PLAN

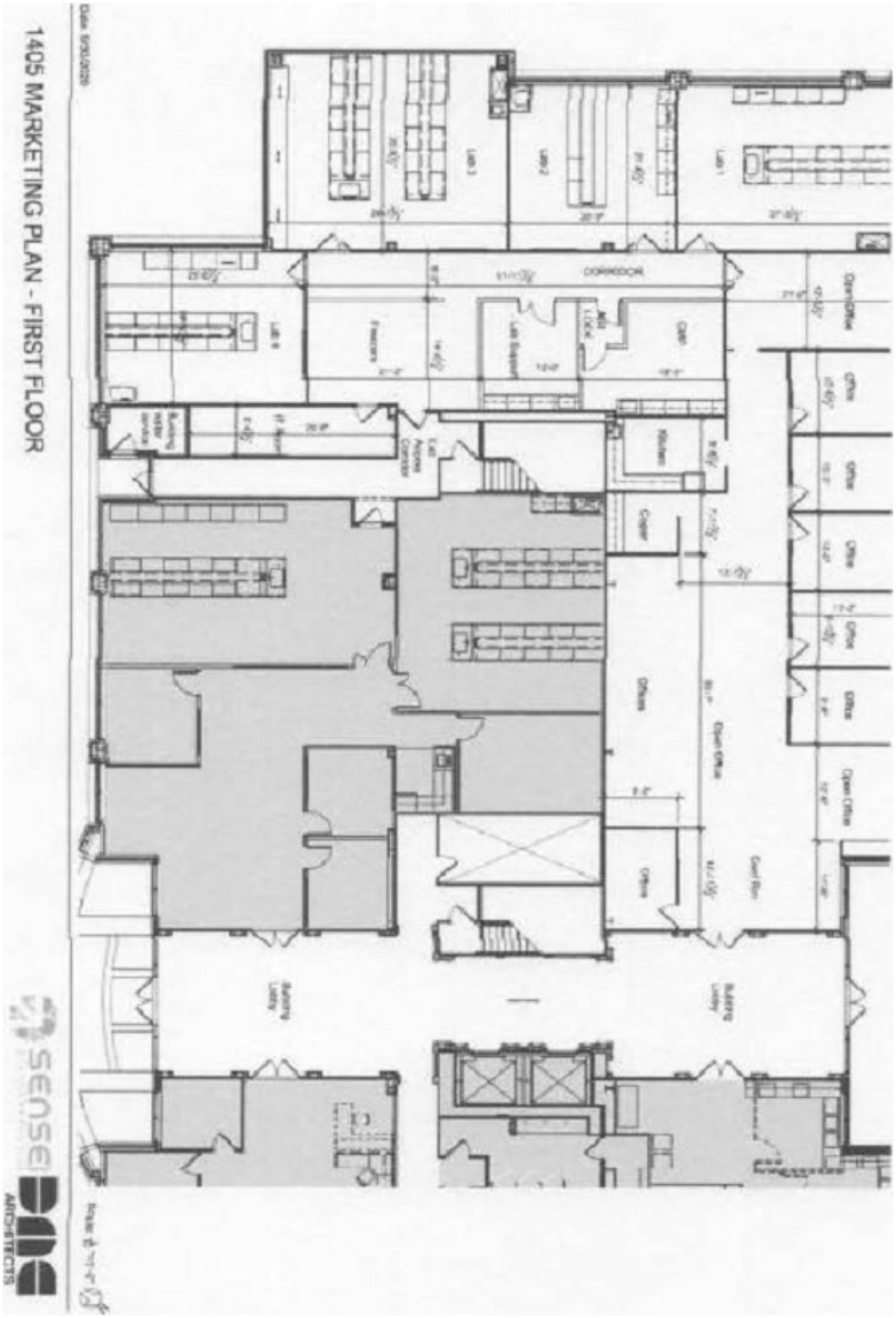

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EXHIBIT D TO LEASE
ACKNOWLEDGMENT OF COMMENCEMENT DATE

This **ACKNOWLEDGMENT OF COMMENCEMENT DATE** is made as of this _____ day of _____, 2020, between **ARE-MARYLAND NO. 8 CORP.,** a Maryland corporation **("Landlord"),** and **SENSEI BIOTHERAPEUTICS, INC.,** a Delaware corporation **("Tenant"),** and is attached to and made a part of the Lease Agreement dated as of October ____, 2020 **("Lease"),** by and between Landlord and Tenant. Any initially capitalized terms used but not defined herein shall have the meanings given them in the Lease.

Landlord and Tenant hereby acknowledge and agree that the Commencement Date of the Base Term of the Lease is October ____, 2020, the Rent Commencement Date (subject to the applicable abatement of Base Rent set forth in Section 4(a) of the Lease) is _____, 2020, and the expiration date of the Base Term of the Lease shall be midnight on _____, _____, 202__. In case of a conflict between the terms of the Lease and the terms of this Acknowledgement of Commencement Date, this Acknowledgement of Commencement Date shall control for all purposes.

IN WITNESS WHEREOF, Landlord and Tenant have executed this ACKNOWLEDGMENT OF COMMENCEMENT DATE under seal to be effective on the date first above written.

TENANT:

SENSEI BIOTHERAPEUTICS, INC.,
a Delaware corporation

By: _____(SEAL)
Name: _____
Title: _____

LANDLORD:

ARE-MARYLAND NO. 8 CORP.,
a Maryland corporation

By: _____(SEAL)
Name: _____
Title: _____

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EXHIBIT E TO LEASE

Rules and Regulations

1. The sidewalk, entries, and driveways of the Project shall not be obstructed by Tenant, or any Tenant Party, or used by them for any purpose other than ingress and egress to and from the Premises.

2. Tenant shall not place any objects, including antennas, outdoor furniture, etc., in the parking areas, landscaped areas or other areas outside of its Premises, or on the roof of the Project.

3. Except for animals assisting the disabled, no animals shall be allowed in the offices, halls, or corridors in the Project.

4. Tenant shall not disturb the occupants of the Project or adjoining buildings by the use of any radio or musical instrument or by the making of loud or improper noises.

5. If Tenant desires telegraphic, telephonic or other electric connections in the Premises, Landlord or its agent will direct the electrician as to where and how the wires may be introduced; and, without such direction, no boring or cutting of wires will be permitted. Any such installation or connection shall be made at Tenant's expense.

6. Tenant shall not install or operate any steam or gas engine or boiler, or other mechanical apparatus in the Premises, except as specifically approved in the Lease. The use of oil, gas or inflammable liquids for heating, lighting or any other purpose is expressly prohibited. Explosives or other articles deemed extra hazardous shall not be brought into the Project.

7. Parking any type of recreational vehicles is specifically prohibited on or about the Project. Except for the overnight parking of operative vehicles, no vehicle of any type shall be stored in the parking areas at any time. In the event that a vehicle is disabled, it shall be removed within 48 hours. There shall be no "For Sale" or other advertising signs on or about any parked vehicle. All vehicles shall be parked in the designated parking areas in conformity with all signs and other markings. All parking will be open parking, and no reserved parking, numbering or lettering of individual spaces will be permitted except as specified by Landlord.

8. Tenant shall maintain the Premises free from rodents, insects and other pests.

9. Landlord reserves the right to exclude or expel from the Project any person who, in the judgment of Landlord, is intoxicated or under the influence of liquor or drugs or who shall in any manner do any act in violation of the Rules and Regulations of the Project.

10. Tenant shall not cause any unnecessary labor by reason of Tenant's carelessness or indifference in the preservation of good order and cleanliness. Landlord shall not be responsible to Tenant for any loss of property on the Premises, however occurring, or for any damage done to the effects of Tenant by the janitors or any other employee or person.

11. Tenant shall give Landlord prompt notice of any defects in the water, lawn sprinkler, sewage, gas pipes, electrical lights and fixtures, heating apparatus, or any other service equipment affecting the Premises.

12. Tenant shall not permit storage outside the Premises, including without limitation, outside storage of trucks and other vehicles, or dumping of waste or refuse or permit any harmful materials to be placed in any drainage system or sanitary system in or about the Premises.

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13. All moveable trash receptacles provided by the trash disposal firm for the Premises must be kept in the trash enclosure areas, if any, provided for that purpose.

14. No auction, public or private, will be permitted on the Premises or the Project.

15. No awnings shall be placed over the windows In the Premises except with the prior written consent of Landlord.

16. The Premises shall not be used for lodging, sleeping or cooking or for any immoral or illegal purposes or for any purpose other than that specified in the Lease. No gaming devices shall be operated in the Premises.

17. Tenant shall ascertain from Landlord the maximum amount of electrical current that can safely be used in the Premises, taking into account the capacity of the electrical wiring in the Project and the Premises and the needs of other tenants, and shall not use more than such safe capacity. Landlord's consent to the installation of electric equipment shall not relieve Tenant from the obligation not to use more electricity than such safe capacity.

18. Tenant assumes full responsibility for protecting the Premises from theft, robbery and pilferage.

19. Tenant shall not install or operate on the Premises any machinery or mechanical devices of a nature not directly related to Tenant's ordinary use of the Premises and shall keep all such machinery free of vibration, noise and air waves that may be transmitted beyond the Premises.

20. Each tenant shall regularly review the guidelines and other guidance published by the Centers for Disease Control and Prevention **("CDC")** and any other Governmental Authorities, and will implement the practices and procedures suggested thereby, as well as industry standard best practices, to prevent or limit the spread or transmission of Infectious Conditions, including, without limitation, COVID-19.

21. Landlord shall have the right to (a) require tenants, at their expense, to implement and enforce reasonable screening and tracking protocols intended to identify and track the activity at the Project of employees, agents, contractors, visitors, and invitees seeking access to or accessing the Premises and/or the Project exhibiting flu-like symptoms or symptoms consistent with those associated with any Infectious Conditions including, without limitation, COVID-19 (collectively, **"Symptoms"),** (b) require tenant employees, agents, contractors, visitors, and invitees to comply with reasonable screening and tracking protocols implemented by Landlord, Landlord's property manager and/or any operator of Project Amenities, intended to identify and track the activity at the Project of individuals seeking access to or accessing the Premises or the Project (including the Project Amenities) exhibiting Symptoms, (c) require tenants, at their expense, to implement and enforce protocols to prohibit individuals exhibiting Symptoms, from accessing the Premises and/or the Project, (d) require tenants, at their expense, to immediately report to Landlord incidences of (i) tenant employees, agents, contractors, visitors, and invitees accessing the Premises or any portion of the Project while exhibiting Symptoms or presenting Risk Factors (as defined below), and/or (ii) tenant employees, agents, contractors, visitors, and invitees known to have accessed the Premises or the Project being diagnosed with an Infectious Condition, including, without limitation, COVID-19. For purposes of these Rules and Regulations, **"Risk Factors"** include (A) persons who have recently traveled from countries having widespread ongoing transmission of communicable diseases and/or viruses of any kind or nature, including COVID-19, and (B) persons who have been in recent contact with others who have tested positive for communicable diseases and/or viruses of any kind or nature, including COVlD-19.

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22. Landlord may exclude or expel from the Project any person who presents Risk Factors or exhibits Symptoms associated with any currently known or unknown Infectious Conditions, including, without limitation, COVID-19.

23. Notwithstanding anything to the contrary contained in the Lease, if Landlord believes or becomes aware that any Tenant Party exhibiting Symptoms and/or diagnosed with an Infectious Condition had access to the Premises or any portion of the Project (including, without limitation, the project amenities), Tenant shall be responsible for any costs (as Additional Rent) incurred by or on behalf of Landlord to perform additional or deep cleaning of the Premises and/or the Common Areas of the Project or to take other measures deemed reasonably necessary or prudent by Landlord that are intended to prevent or limit the spread or transmission of such Infectious Conditions due to or arising out of such Tenant Party's presence at the Project.

24. Landlord reserves the right to adopt and implement additional rules and regulations relating to access to the Premises, the Building and/or the Project (including, without limitation, the Project Amenities) that are intended to promote and protect health and physical well-being and/or intended to prevent or limit the spread or transmission of Infectious Conditions.

25. Wireless internet service **("Internet Service")** may be available in the Common Areas in the Project. If Internet Service is so available, Tenant shall have the right, on a non-exclusive basis in common with other tenants and users of the Project, to use the Internet Service, subject to the further terms of this Section 20.

(a) Tenant acknowledges that Landlord is not the generator of Internet Service and that the availability and quality of Internet Service consequently is subject to the provision of Internet Service to the Project by the third party provider(s) responsible for delivering Internet Service to the Project. Landlord shall have no liability for the availability, capacity, quality, continuity, or character of service of Internet Service, and no abatement of Rent or other penalty shall arise due to, nor shall Landlord have any liability due to any loss, cost, claim, damage, or expense arising from the availability, capacity, quality, continuity, or character of service of Internet Service or any interruption, deterioration, or removal of internet Service. Tenant acknowledges that the capacity of Internet Service available for use by Tenant (if any) is part of the overall capacity of Internet Service available to the Project for use on a non-exclusive basis in common with al\ other tenants at the Project. Tenant agrees to limit Tenant's use of Internet Service to Tenant's reasonable share of the then-existing capacity of Internet Service, and Tenant shall not use Internet Service in a manner that interferes with any other tenant's or user's use of Internet Service.

(b) By accessing or using Internet Service, Tenant accepts and agrees to comply with all terms and conditions applicable thereto (including any modifications and/or additions thereto provided in connection with accessing or using Internet Service from time to time).

(c) Tenant acknowledges *and* agrees that (1) *all* information (including, without limitation, data files, written text, computer software, music, audio files or other sounds, photographs, graphics, videos or other images) that Tenant may have access to as a part of, or through Tenant's use of, Internet Service (collectively, **"Content")** is the sole responsibility of the person from whom such Content originated, and (2) by using Internet Service, Tenant may be exposed to Content that Tenant may find offensive, indecent, or objectionable, and Tenant uses the Internet Service at its own risk. Landlord and any third party provider(s) responsible for delivering Internet Service to the Project reserve the right (but shall have no obligation) to pre-screen, review, flag, filter, modify, refuse, or remove any or all Content from the Internet Service. Landlord does not control the Content posted via the Internet Service and, as such, does not guarantee the accuracy, integrity, or quality of such Content. Under no circumstances shall Landlord or any Landlord Parties be liable in any way for any Content, including, without limitation, any errors or omissions in any Content, or for any loss or damage arising out of or in connection with Tenant's use of the Internet Service (including, without limitation, damages for loss of use, lost profits, or loss of data or information of any kind).

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(d) Tenant is solely responsible for maintaining its account for the use of Internet Service, and Tenant is fully responsible for all activities that occur under Tenant's account and in connection with Tenant's use of the Internet Service. Tenant agrees to notify Landlord and any third party provider(s) responsible for delivering Internet Service to the Project immediately of any unauthorized use of Tenant's account or any other breaches of security of which Tenant becomes aware. Tenant is solely responsible for, and shall indemnify, defend, and hold harmless Landlord and the Landlord Parties for, any Content created, uploaded, posted, emailed, transmitted, displayed, or otherwise made available by Tenant via the Internet Service and for any and all consequences of Tenant's use of the Internet Service (including, without limitation, any loss or damage suffered by Landlord or any Landlord Parties arising therefrom or in connection therewith).

(e) Tenant agrees not to use the Internet Service to: (1) upload, post, email, transmit, or otherwise make available any Content that is unlawful, harmful, threatening, abusive, harassing, tortious, defamatory, vulgar, obscene, libelous, invasive of another's privacy, hateful, or racially, ethnically, or otherwise objectionable; (2) harm minors in any way; (3) impersonate any person or entity or falsely state or otherwise misrepresent Tenant's affiliation with a person or entity; (4) forge headers or otherwise manipulate identifiers in order to disguise the origin of any Content transmitted through the Internet Service; (5) upload, post, email, transmit, or otherwise make available any Content that Tenant does not have a right to make available under any law or under contractual or fiduciary relationships (such as inside information, proprietary and confidential information learned or disclosed as part of employment relationships or under nondisclosure agreements); (6) upload, post, email, transmit, or otherwise make available any Content that infringes any patent, trademark, trade secret, copyright, or other proprietary or intellectual property rights of any party; (7) upload, post, email, transmit, or otherwise make available any unsolicited or unauthorized advertising, promotional materials, "junk mail," "spam," "chain letters," "pyramid schemes," or any other form of solicitation, except in those areas (such as shopping) that are designated for such purpose; (8) upload, post, email, transmit, or otherwise make available any material that contains software viruses or any other computer code, files, or programs designed to interrupt, destroy, or limit the functionality of any computer software or hardware or telecommunications equipment; (9) disrupt the normal flow of dialogue, cause a screen to "scroll" faster than other users of the Internet Service are able to type, or otherwise act in a manner that negatively affects other users' ability to engage in real time exchanges; (10) interfere with or disrupt the Internet Service or servers or networks connected to the Internet Services, or disobey any requirements, procedures, policies or regulations of networks connected to the Internet Service, including using any device, software or routine to bypass Landlord's robot exclusion headers (if any); (11) intentionally or unintentionally violate any applicable local, state, national, or international law, including, but not limited to, regulations promulgated by the U.S. Securities and Exchange Commission, any rules of any national or other securities exchange, including, without limitation, the New York Stock Exchange, the American Stock Exchange or the NASDAQ, and any regulations having the force of law; (12) provide material support or resources (or to conceal or disguise the nature, location, source, or ownership of material support or resources) to any organization(s) designated by the United States government as a foreign terrorist organization pursuant to Section 219 of the Immigration and Nationality Act; (13) "stalk" or otherwise harass another; or (14) collect or store personal data about other users in connection with the prohibited conduct and activities set forth in clauses (1) through (13) above.

(f) Tenant acknowledges, consents to and agrees that Landlord and/or any third party provider(s) responsible for delivering Internet Service to the Project may access, preserve, and disclose Tenant's account information associated with the Internet Service if required to do so by applicable Legal Requirements or in a good faith belief that such access, preservation, or disclosure is reasonably necessary to (1) comply with legal process, (2) comply with the directives of law enforcement officials, (3) enforce the provisions of this Section 20 and/or the terms and conditions applicable to the Internet Service from time to time, (4) respond to claims that any Content violates the rights of third

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parties, (5) respond to Tenant's requests for customer service, and/or (6) protect the rights, property, or personal safety of Landlord, the Landlord Parties, any third party provider(s) responsible for delivering Internet Service to the Project, any users of Internet Service, any tenants or other occupants of the Project and the public.

(g) Tenant acknowledges and agrees that the Internet Service may include security components that permit digital materials to be protected, and that the use of these materials is subject to such usage rules as may be set by Landlord, any third party provider(s) responsible for delivering Internet Service to the Project, and/or any Content provider(s). Tenant shall not attempt to override or circumvent any of such usage rules, and any unauthorized reproduction, publication, further distribution, or public exhibition of the materials provided on the Internet Service, in whole or in part, is strictly prohibited.

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EXHIBIT F TO LEASE
TENANT'S PERSONAL PROPERTY

None except as set forth below:

NONE

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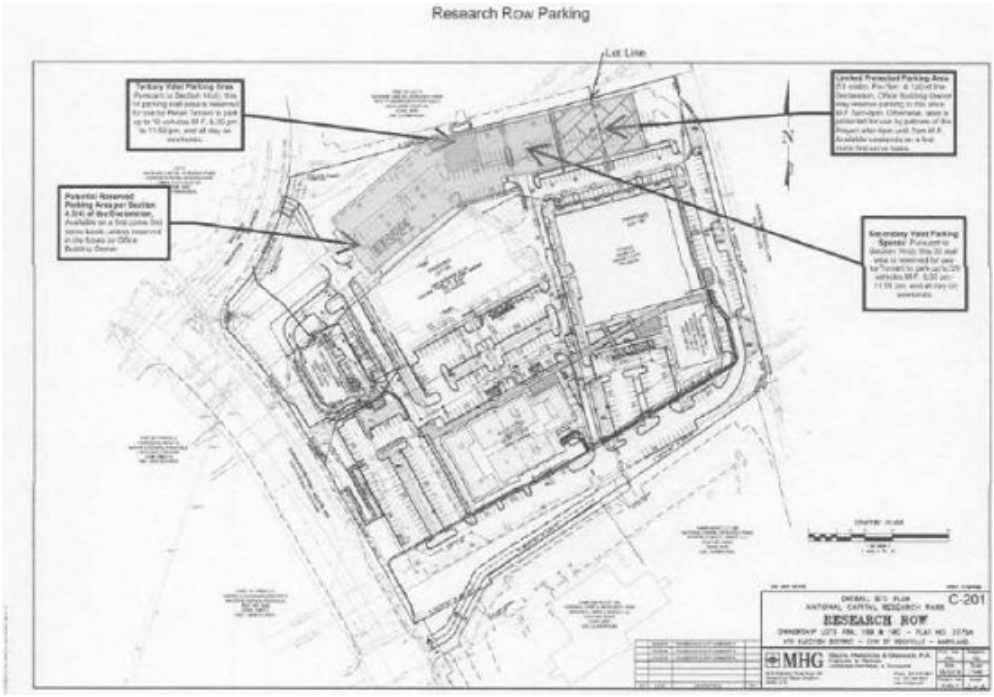
EXHIBIT G TO LEASE
PARKING PLAN



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EMPLOYMENT AGREEMENT

This **EMPLOYMENT AGREEMENT** (the "***Agreement***") is entered into effective October 13, 2020, by and between Sensei Biotherapeutics, Inc. (the "***Company***") and Anupama Hoey (the "***Employee***").

The Company desires to employ the Employee, in the capacity of full-time Chief Business Officer pursuant to the terms of this Agreement and, in connection therewith, to compensate the Employee for Employee's personal services to the Company; and

The Employee wishes to be employed by the Company and provide personal services to the Company in return for certain compensation.

Accordingly, in consideration of the mutual promises and covenants contained herein, the parties agree to the following:

1. EMPLOYMENT BY THE COMPANY.

1.1 At-Will Employment. Employee shall be employed by the Company on an "at-will" basis, meaning either the Company or Employee may terminate Employee's employment at any time, with or without cause or advanced notice. Any contrary representations that may have been made to Employee shall be superseded by this Agreement. This Agreement shall constitute the full and complete agreement between Employee and the Company on the "at-will" nature of Employee's employment with the Company, which may be changed only in an express written agreement signed by Employee and a duly authorized officer of the Company. Employee's rights to any compensation following a termination shall be only as set forth in Section 6.

1.2 Position. Subject to the terms set forth herein, the Company agrees to employ Employee, initially in the position of Chief Business Officer, and Employee hereby accepts such employment. During the term of Employee's employment with the Company, Employee will devote Employee's best efforts and substantially all of Employee's business time and attention to the business of the Company.

1.3 Start Date. Employee's employment with the Company shall commence on October 14, 2020, or such other date mutually agreed to in writing by Employee and the Company. The date Employee actually commences working for the Company is referred to as Employee's "***Start Date.***" Prior to the Start Date or in the event that Employee does not commence employment with the Company under this Agreement, the Company shall have no obligation to provide Employee with compensation and benefits (including, but not limited to, the "Severance Benefits" stated in Section 6.1).

1.4 Duties. Employee will report to the President and Chief Executive Officer performing such duties as are normally associated with her then current position and such duties as are assigned to her from time to time, subject to the oversight and direction of the President and Chief Executive Officer. In general, and without limitation, Employee will lead all business and corporate development activities. Employee shall perform her duties under this Agreement principally from a remote work location in the San Francisco Bay Area or such other location as assigned. In addition, Employee shall make such business trips to such places as may be necessary or advisable for the efficient operations of the Company.

1.5 Company Policies and Benefits. The employment relationship between the parties shall also be subject to the Company's personnel policies and procedures as they may be interpreted, adopted, revised or deleted from time to time in the Company's sole discretion. Employee will be eligible to participate on the same basis as similarly situated employees in the Company's benefit plans in effect from time to time during her employment. All matters of eligibility for coverage or benefits under any benefit plan shall be determined in accordance with the provisions of such plan. The Company reserves the right to change, alter, or terminate any benefit plan in its sole discretion. Notwithstanding the foregoing, in the event that the terms of this Agreement differ from or are in conflict with the Company's general employment policies or practices, this Agreement shall control.

1.6 Insurance. While this Agreement is in effect, for actions within the scope of Employee's employment, the Company will include Employee as an insured at a level comparable to similarly-situated employees at the Company in its Directors and Officers Liability insurance policy in effect from time to time.

2. COMPENSATION.

2.1 Salary. Employee shall initially receive for Employee's services to be rendered hereunder an initial annualized base salary of $345,000 ("***Base Salary***"). The Base Salary is subject to review and adjustment from time to time by the Company in its sole discretion. The Base Salary is payable subject to standard federal and state payroll withholding requirements in accordance with the Company's standard payroll practices.

2.2 Annual Bonus. Employee shall be eligible to receive an annual performance bonus of up to 30% (the "***Target Percentage***") of her then-current Base Salary ("***Annual Bonus***"). The Annual Bonus will be based upon the Company's assessment of the Employee's performance, the Company's attainment of targeted goals as set by the Company's Board of Directors (the "***Board***") in its sole discretion, overall economic conditions and forecasts, and related financial factors, all as determined by the Company in its sole discretion. The Annual Bonus, if any, will be subject to applicable payroll deductions and withholdings. Following the close of each calendar year, the Company will determine whether the Employee has earned the Annual Bonus, and the amount of any Annual Bonus (which can be less than the Target Percentage), based on the set criteria. No amount of the Annual Bonus is guaranteed, and the Employee must be an employee in good standing on the Annual Bonus payment date to be eligible to receive an Annual Bonus; except as stated in this Section 2.2, no partial or prorated bonuses will be provided. Notwithstanding the foregoing, Employee will be eligible to receive a prorated bonus for 2020, calculated with reference to the Start Date. The Employee's eligibility for an Annual Bonus is subject to change in the discretion of the Board (or any authorized committee thereof).

2.3 Signing and Retention Payment. The Company will make a one-time payment to Employee of $25,000 (the "***Signing and Retention Payment***"), less applicable withholding taxes, which will be earned upon Employee remaining in employment through the

one (1) year anniversary of the Start Date. The Signing and Retention Payment will be paid as an advance, in a lump sum within fifteen (15) days following Employee's Start Date, subject to Employee's continued employment through and including the date on which the Signing and Retention Payment is paid. If at any time prior to the one (1) year anniversary of Employee's Start Date, Employee's service to the Company terminates for any reason (other than a termination by the Company without Cause (as defined below) or a resignation by Employee for Good Reason (as defined below)), Employee will be required to, and hereby agrees to, repay to the Signing and Retention Payment (on a net of tax basis) (such amount, the "***Repayment Amount***"), provided that the Repayment Amount to be paid by Employee will be calculated as follows: for each full month of Employee's employment with the Company following the Start Date, the Company will forgive one-twelfth (1/12th) of the Repayment Amount, and the remaining unforgiven portion of the Repayment Amount will be due and payable by Employee to the Company on demand. Employee agrees that the Company may deduct, in accordance with applicable law, the Repayment Amount from any payments the Company owes Employee, including but not limited to any regular payroll amount and any expense payments. Employee further agrees to pay to the Company, within thirty (30) days of the termination date, any remaining unpaid balance of the Repayment Amount not covered by such deductions.

2.4 Stock Option. Subject to approval of the Board, Employee will be granted an option to purchase 10,000,000 shares of the Company's common stock (the "***Option***"), pursuant and subject to the Company's 2018 Stock Incentive Plan (the "***Plan***") and other documents issued in connection with the grant (the "***Option Documents***"), at an exercise price per share equal to the fair market value of a share of the Company's common stock on the date of grant, as determined by the Board in its sole discretion. The vesting commencement date of the Option will be the Start Date (the "***Vesting Commencement Date***"). The Option will vest according to the following schedule: four-year vesting with 25% of the shares subject to the Option vesting upon the one year anniversary of the Vesting Commencement Date and the balance of the shares vesting in equal installments each month thereafter over the thirty-six (36) month period to follow, subject to Employee being employed by the Company on such dates. The specific terms and conditions of the Option will be as set forth in the Plan, grant notice, option agreement and other applicable documents, which Employee may be required to sign.

2.5 Expense Reimbursement. The Company will reimburse Employee for all reasonable, documented business expenses incurred in connection with her services hereunder, in accordance with the Company's business expense reimbursement policies and procedures as may be in effect from time to time. For the avoidance of doubt, to the extent that any reimbursements payable to Employee are subject to the provisions of Section 409A of the Internal Revenue Code of 1986, as amended (the "***Code***"): (a) any such reimbursements will be paid no later than December 31 of the year following the year in which the expense was incurred, (b) the amount of expenses reimbursed in one year will not affect the amount eligible for reimbursement in any subsequent year, and (c) the right to reimbursement under this Agreement will not be subject to liquidation or exchange for another benefit.

3. CONFIDENTIAL INFORMATION AND INVENTIONS OBLIGATIONS. Contemporaneously with this Agreement and as a condition of employment, Employee agrees to sign and abide by the Employee Confidential Information and Inventions Assignment Agreement (the "***Confidential Information Agreement***") attached hereto as **Exhibit A**. The Confidential Information Agreement may be amended by the parties from time to time without regard to this Agreement. The Confidential Information Agreement contains provisions that are intended by the parties to survive and do survive termination or expiration of this Agreement.

4. OUTSIDE ACTIVITIES. Except with the prior written consent of the Company's Board, Employee will not, while employed by the Company, undertake or engage in any other employment, occupation or business enterprise that would interfere with Employee's responsibilities and the performance of Employee's duties hereunder except for (i) reasonable time devoted to volunteer services for or on behalf of such religious, educational, non-profit and/or other charitable organization as Employee may wish to serve; (ii) reasonable time devoted to activities in the non-profit and business communities consistent with Employee's duties; (iii) Employee's participation in professional and academic activities; (iv) the activity stated in **Exhibit B**, *provided that* such activity does not interfere with Employee's full performance of duties under this Agreement and does not pose a conflict of interest in the determination of the President and Chief Executive Officer; and (v) such other activities as may be specifically approved by the Board. This restriction shall not, however, preclude Employee from managing personal investments or owning less than one percent (1%) of the total outstanding shares of a publicly-traded company.

5. NO CONFLICT WITH EXISTING OBLIGATIONS. Employee represents that Employee's performance of all the terms of this Agreement and as an Employee of the Company do not and will not breach any agreement or obligation of any kind made prior to Employee's employment by the Company, including agreements or obligations Employee may have with prior employers or entities for which Employee has provided services. Employee has not entered into, and Employee agrees that Employee will not enter into, any agreement or obligation, either written or oral, in conflict herewith.

6. TERMINATION OF EMPLOYMENT. The parties acknowledge that Employee's employment relationship with the Company is at-will. Either Employee or the Company may terminate the employment relationship at any time, with or without Cause. The provisions in this Section govern the amount of compensation, if any, to be provided to Employee upon termination of employment and do not alter this at-will status.

6.1 Termination by the Company Without Cause or Resignation by Employee for Good Reason.

(a) The Company shall have the right to terminate Employee's employment with the Company pursuant to this Section 6.1 at any time without "Cause" (as defined in Section 6.2(a) below) by giving notice as described in Section 6.6 of this Agreement. A termination pursuant to Section 6.4 or 6.5 below is not a termination without "Cause" for purposes of receiving the Severance Benefits described in (and as defined in) this Section 6.1.

(b) If the Company terminates Employee's employment at any time without Cause or Employee terminates her employment with the Company for "Good Reason" (as defined in Section 6.1(g) below), then Employee shall be entitled to receive the Accrued Obligations (defined in 6.1(d) below). If such termination without Cause constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h), without regard to any alternative definition thereunder, a "***Separation from Service***"), and Employee complies with the obligations in Section 6.1(c) below, Employee shall also be eligible to receive the following "***Severance Benefits***":

(i) The Company will pay Employee an amount equal to Employee's then current Base Salary for six (6) months, less all applicable withholdings and deductions ("***Severance***"), paid in equal installments beginning on the Company's first regularly scheduled payroll date following the Release Effective Date (as defined in Section 6.1(c) below), with the remaining installments occurring on the Company's regularly scheduled payroll dates thereafter.

(ii) If Employee timely elects continued coverage under COBRA, or state continuation coverage (as applicable), for herself and her covered dependents under the Company's group health plans following such termination, then the Company shall pay the portion of the COBRA, or state continuation coverage, premiums, which is equal to the cost of the coverage that the Company was paying as of the date of termination, necessary to continue Employee's and her covered dependents' health insurance coverage in effect for herself (and her covered dependents) on the termination date until the earliest of: (i) six (6) months following the termination date; (ii) the date when Employee becomes eligible for substantially equivalent health insurance coverage in connection with new employment or self-employment; or (iii) the date Employee ceases to be eligible for COBRA continuation coverage for any reason, including plan termination (such period from the termination date through the earlier of (i)-(iii), (the "***COBRA Payment Period***"). Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA, or state continuation coverage, premiums on Employee's behalf would result in a violation of applicable law (including, but not limited to, the 2010 Patient Protection and Affordable Care Act, as amended by the 2010 Health Care and Education Reconciliation Act), then in lieu of paying such portion of the premiums pursuant to this Section, the Company shall pay Employee on the last day of each remaining month of the COBRA Payment Period, a fully taxable cash payment equal to the portion of such COBRA or state continuation coverage premium that would have been paid by the Company for such month, subject to applicable tax withholding, for the remainder of the COBRA Payment Period. Nothing in this Agreement shall deprive Employee of her rights under COBRA or ERISA for benefits under plans and policies arising under her employment by the Company.

(iii) Notwithstanding the terms of any equity plan or award agreement to the contrary, the unvested portion of all time-based equity awards outstanding on the date of Employee's termination that would have vested over the six (6) month period following the date of Employee's termination had she remained continuously employed by the Company during such period will be automatically vested and exercisable as of the Separation Date (as defined below). Notwithstanding the foregoing, in the event that such termination without Cause or resignation for Good Reason under this Section 6.1 occurs within twelve (12) months following the effective date of a Change in Control (as defined in the Plan), and provided that such termination without Cause constitutes a Separation from Service, and subject to Employee's full compliance with Section 6.1(c), then, effective as of Employee's date of termination, each of Employee's then outstanding options and equity awards that have been continued, assumed or substituted for by the Company or the surviving entity or acquirer in such Change in Control, including awards that would otherwise vest only upon satisfaction of performance criteria, shall

accelerate and become vested and exercisable as to 100% of the then-unvested and, in the case of performance-based awards, then-unearned (at the actual performance level or, if the actual performance level has not been determined at the time of such termination, at 100% achievement of target, in any case, unless more-favorable acceleration terms are otherwise provided in the award agreement applicable to such performance-based award) shares subject to the equity award.

(c) Employee will be paid all of the Accrued Obligations on the Company's first payroll date after Employee's date of termination from employment or earlier if required by law. Employee shall receive the Severance Benefits pursuant to Section 6.1(b) of this Agreement if: (i) by the 60th day following the date of Employee's Separation from Service, she has signed and delivered to the Company a separation agreement containing an effective, general release of claims in favor of the Company and its affiliates and representatives, in the form presented by the Company (the "***Release***"), which cannot be revoked in whole or part by such date (the date that the Release can no longer be revoked is referred to as the "***Release Effective Date***"); and (ii) if she holds any other positions with the Company or any Affiliate, including a position on the Board, she resigns such position(s) to be effective no later than the date of Employee's termination date (or such other date as requested by the Board); (iii) she returns all Company property; (iv) she complies with her post-termination obligations under this Agreement and the Confidential Information Agreement; and (v) she complies with the terms of the Release, including without limitation any non-disparagement and confidentiality provisions contained in Release. To the extent that any severance payments are deferred compensation under Section 409A of the Code, and are not otherwise exempt from the application of Section 409A, then, if the period during which Employee may consider and sign the Release spans two calendar years, the payment of Severance will not be made or begin until the later calendar year.

(d) For purposes of this Agreement, "***Accrued Obligations***" are (i) Employee's accrued but unpaid salary and accrued but unused vacation days, each through the date of termination, (ii) any unreimbursed business expenses incurred by Employee payable in accordance with the Company's standard expense reimbursement policies, and (iii) benefits owed to Employee under any qualified retirement plan or health and welfare benefit plan in which Employee was a participant in accordance with applicable law and the provisions of such plan.

(e) The Severance Benefits provided to Employee pursuant to this Section 6.1 are in lieu of, and not in addition to, any benefits to which Employee may otherwise be entitled under any Company severance plan, policy, program, or prior agreement with the Company.

(f) Any damages caused by the termination of Employee's employment without Cause would be difficult to ascertain; therefore, the Severance Benefits for which Employee is eligible pursuant to Section 6.1(b) above in exchange for the Release is agreed to by the parties as liquidated damages, to serve as full compensation, and not a penalty.

(g) For purposes of this Agreement, "***Good Reason***" shall mean the occurrence of any of the following events without Employee's consent: (i) a material reduction in Employee's Base Salary of at least 10%; (ii) a material reduction in Employee's duties, authority and responsibilities relative to Employee's duties, authority, and responsibilities in effect immediately prior to such reduction; (iii) the relocation of Employee's principal place of

employment, without Employee's consent, in a manner that lengthens her one-way commute distance by fifty (50) or more miles from her then-current principal place of employment immediately prior to such relocation; or (iv) any material breach of this Agreement by Company; provided, however, that, any such termination by Employee shall only be deemed for Good Reason pursuant to this definition if: (1) Employee gives the Company written notice of her intent to terminate for Good Reason within thirty (30) days following the first occurrence of the condition(s) that she believes constitute(s) Good Reason, which notice shall describe such condition(s); (2) the Company fails to remedy such condition(s) within thirty (30) days following receipt of the written notice (the "***Cure Period***"); (3) the Company has not, prior to receiving such notice from Employee, already informed Employee that her employment with the Company is being terminated; and (4) Employee voluntarily terminates her employment within thirty (30) days following the end of the Cure Period.

6.2 Termination by the Company for Cause.

(a) Subject to Section 6.2(b) below, the Company shall have the right to terminate Employee's employment with the Company at any time for Cause by giving notice as described in Section 6.6 of this Agreement.

(b) "***Cause***" for termination shall mean that the Company has determined in its sole discretion that Employee has engaged in any of the following: (i) a material breach of any covenant or condition under this Agreement or any other agreement between the parties; (ii) any act constituting dishonesty, fraud, immoral or disreputable conduct; (iii) any conduct which constitutes a felony under applicable law; (iv) material violation of any Company policy or any act of misconduct; (v) refusal to follow or implement a clear and reasonable directive of the Company; (vi) negligence or incompetence in the performance of Employee's duties after the expiration of ten (10) days without cure after written notice of such failure; or (vii) breach of fiduciary duty.

(c) In the event Employee's employment is terminated at any time for Cause, Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, consistent with the Company's standard payroll policies, the Company shall provide to Employee the Accrued Obligations.

6.3 Resignation by the Employee (other than for Good Reason).

(a) Employee may resign for any reason from Employee's employment with the Company at any time by giving notice as described in Section 6.6.

(b) In the event Employee resigns from Employee's employment with the Company (other than for Good Reason), Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, consistent with the Company's standard payroll policies, the Company shall provide to Employee the Accrued Obligations.

6.4 Termination by Virtue of Death or Disability of the Employee.

(a) In the event of Employee's death while employed pursuant to this Agreement, all obligations of the parties hereunder shall terminate immediately, and the Company shall, pursuant to the Company's standard payroll policies, provide to Employee's legal representatives Employee's Accrued Obligations, but neither Employee nor her legal representatives will be eligible for the Severance Benefits.

(b) Subject to applicable state and federal law, the Company shall at all times have the right, upon written notice to the Employee, to terminate this Agreement based on the Employee's Disability (as defined below). Termination by the Company of the Employee's employment based on "***Disability***" shall mean termination because the Employee is unable due to a physical or mental condition to perform the essential functions of her position with or without reasonable accommodation for six (6) months in the aggregate during any twelve (12) month period or based on the written certification by two licensed physicians of the likely continuation of such condition for such period. This definition shall be interpreted and applied consistent with the Americans with Disabilities Act, the Family and Medical Leave Act, and other applicable law. In the event Employee's employment is terminated based on the Employee's Disability, Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall provide to Employee the Accrued Obligations.

6.5 Termination Due to Discontinuance of Business. Anything in this Agreement to the contrary notwithstanding, in the event the Company's business is discontinued because rendered impracticable by substantial financial losses, lack of funding, legal decisions, administrative rulings, declaration of war, dissolution, national or local economic depression or crisis or any reasons beyond the control of the Company, then this Agreement shall terminate as of the day the Company determines to cease operation with the same force and effect as if such day of the month were originally set as the termination date hereof. In the event this Agreement is terminated pursuant to this Section 6.5, Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall provide to Employee the Accrued Obligations.

6.6 Notice; Effective Date of Termination.

(a) Termination of Employee's employment (the "***Separation Date***") pursuant to this Agreement shall be effective on the earliest of:

(i) immediately after the Company gives notice to Employee of Employee's termination, with or without Cause, unless pursuant to Section 6.2(b)(vi) in which case ten (10) days after notice if not cured, or unless the Company specifies a later date, in which case, termination shall be effective as of such later date;

(ii) immediately upon the Employee's death;

(iii) immediately after the Company gives written notice to Employee of Employee's termination on account of Employee's Disability, unless the Company specifies a later Separation Date, in which case, termination shall be effective as of such later Separation Date, *provided* that Employee has not returned to the full time performance of Employee's duties prior to such date;

(iv) forty-five (45) days (or such shorter period agreed to by the President and Chief Executive Officer and the Employee in writing) after the Employee gives written notice to the Company of Employee's resignation for any reason, *provided* that the Company may set a Separation Date at any time between the date of notice and the date of resignation, in which case the Employee's resignation shall be effective as of such other date. Employee will receive compensation through any required notice period; or

(v) for a termination for Good Reason, immediately upon Employee's full satisfaction of the requirements of Section 6.1(g).

(b) In the event notice of a termination under subsection (a)(i) is given orally, at the other party's request, the party giving notice must provide written confirmation of such notice within five (5) business days of the request in compliance with the requirement of Section 7.1 below. In the event of a termination for Cause, written confirmation shall specify the subsection(s) of the definition of Cause relied on to support the decision to terminate.

6.7 Cooperation With Company After Termination of Employment. Following termination of Employee's employment for any reason, Employee shall reasonably cooperate with the Company in all matters relating to the winding up of Employee's pending work including, but not limited to, any litigation in which the Company is involved, and the orderly transfer of any such pending work to such other employees as may be designated by the Company.

6.8 Effect of Termination. Employee agrees that should Employee's employment be terminated for any reason, Employee shall be deemed to have resigned from any and all positions with the Company and its subsidiaries.

6.9 Application of Section 409A. Notwithstanding anything to the contrary set forth herein, any payments and benefits provided under this Agreement that constitute "***deferred compensation***" within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended ("***Code***") and the regulations and other guidance thereunder and any state law of similar effect (collectively, "***Section 409A***") shall not commence in connection with Employee's termination of employment unless and until Employee has also incurred a Separation from Service, unless the Company reasonably determines that such amounts may be provided to Employee without causing Employee to incur the additional 20% tax under Section 409A. It is intended that each installment of severance pay provided for in this Agreement is a separate "***payment***" for purposes of Treasury Regulation Section 1.409A-2(b)(2)(i). For the avoidance of doubt, it is intended that severance payments set forth in this Agreement satisfy, to the greatest extent possible, the exceptions from the application of Section 409A provided under Treasury Regulation Sections 1.409A-1(b)(4) and 1.409A-1(b)(9). If the Company (or, if applicable, the successor entity thereto) determines that any payments or benefits constitute "deferred compensation" under Section 409A and Employee is, on the termination of service, a "specified employee" of the Company or any successor entity thereto, as such term is defined in Section 409A(a)(2)(B)(i) of the Code, then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences under Section 409A, the timing of the payments and benefits shall be delayed until the earlier to occur of: (a) the date that is six months and one day after Employee's Separation From Service, or (b) the date of Employee's death (such applicable date, the "***Specified Employee Initial Payment Date***"). On the Specified Employee Initial Payment Date, the Company (or the

successor entity thereto, as applicable) shall (i) pay to Employee a lump sum amount equal to the sum of the payments and benefits that Employee would otherwise have received through the Specified Employee Initial Payment Date if the commencement of the payment of such amounts had not been so delayed pursuant to this Section and (ii) commence paying the balance of the payments and benefits in accordance with the applicable payment schedules set forth in this Agreement. All reimbursements provided under this Agreement shall be subject to the following requirements: (i) the amount of in-kind benefits provided or reimbursable expenses incurred in one taxable year shall not affect the in-kind benefits to be provided or the expenses eligible for reimbursement in any other taxable year, (ii) all reimbursements shall be paid as soon as administratively practicable, but in no event shall any reimbursement be paid after the last day of the taxable year following the taxable year in which the expense was incurred, and (iii) the right to reimbursement or in-kind benefits is not subject to liquidation or exchange for any other benefit. It is intended that all payments and benefits under this Agreement shall either comply with or be exempt from the requirements of Section 409A, and any ambiguity contained herein shall be interpreted in such manner so as to avoid adverse personal tax consequences under Section 409A. Notwithstanding the foregoing, the Company shall in no event be obligated to indemnify Employee for any taxes or interest that may be assessed by the Internal Revenue Service pursuant to Section 409A of the Code to payments made pursuant to this Agreement.

7. GENERAL PROVISIONS.

7.1 Notices. Any notices required hereunder to be in writing shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by electronic mail, telex or confirmed facsimile if sent during normal business hours of the recipient, and if not, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent to the Company at its primary office location and to Employee at Employee's address as listed on the Company payroll or Employee's company-provided email address, or at such other address as the Company or the Employee may designate by ten (10) days advance written notice to the other.

7.2 Severability. Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

7.3 Waiver. If either party should waive any breach of any provisions of this Agreement, Employee or it shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement.

7.4 Complete Agreement. This Agreement constitutes the entire agreement between Employee and the Company with regard to the subject matter hereof. This Agreement is the complete, final, and exclusive embodiment of their agreement with regard to this subject matter

and supersedes any prior oral discussions or written communications and agreements, including the "Term Sheet" from the Company dated September 3, 2020. This Agreement is entered into without reliance on any promise or representation other than those expressly contained herein, and it cannot be modified or amended except in writing signed by Employee and an authorized officer of the Company. The parties have entered into a separate Confidential Information Agreement and may enter into separate agreements related to equity awards. These separate agreements govern other aspects of the relationship between the parties, have or may have provisions that survive termination of the Employee's employment under this Agreement, may be amended or superseded by the parties without regard to this Agreement and are enforceable according to their terms without regard to the enforcement provision of this Agreement.

7.5 Counterparts. This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one party, but all of which taken together will constitute one and the same Agreement.

7.6 Headings. The headings of the sections hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

7.7 Successors and Assigns. The Company shall assign this Agreement and its rights and obligations hereunder in whole, but not in part, to any Company or other entity with or into which the Company may hereafter merge or consolidate or to which the Company may transfer all or substantially all of its assets, if in any such case said Company or other entity shall by operation of law or expressly in writing assume all obligations of the Company hereunder as fully as if it had been originally made a party hereto, but may not otherwise assign this Agreement or its rights and obligations hereunder. The Employee may not assign or transfer this Agreement or any rights or obligations hereunder, other than to her estate upon her death.

7.8 Choice of Law. All questions concerning the construction, validity and interpretation of this Agreement will be governed by the law of the State of California.

7.9 Resolution of Disputes. To ensure the rapid and economical resolution of disputes that may arise in connection with Employee's employment with the Company, Employee and the Company agree that any and all disputes, claims, or causes of action, in law or equity, including but not limited to statutory claims, arising from or relating to the enforcement, breach, performance, or interpretation of this Agreement, Employee's employment with the Company, or the termination of Employee's employment, shall be resolved pursuant to the Federal Arbitration Act, 9 U.S.C. § 1-16, to the fullest extent permitted by law, by final, binding and confidential arbitration, before a single arbitrator, conducted by JAMS or its successor, under JAMS' then applicable Employment Arbitration Rules and Procedures (available upon request and also currently available at http://www.jamsadr.com/rules-employment-arbitration/) and subject to JAMS' then applicable Policy on Employment Arbitration Minimum Standards of Procedural Fairness. **Employee acknowledges that by agreeing to this arbitration procedure, both Employee and the Company waive the right to resolve any such dispute through a trial by jury or judge or administrative proceeding**. In addition, all claims, disputes, or causes of action under this Section, whether by Employee or the Company, must be brought in an individual capacity, and shall not be brought as a plaintiff (or claimant) or class member in any purported class or representative proceeding, nor joined or consolidated with the claims of any other person

or entity. The arbitrator may not consolidate the claims of more than one person or entity, and may not preside over any form of representative or class proceeding. To the extent that the preceding sentences regarding class claims or proceedings are found to violate applicable law or are otherwise found unenforceable, any claim(s) alleged or brought on behalf of a class shall proceed in a court of law rather than by arbitration. This paragraph shall not apply to any action or claim that cannot be subject to mandatory arbitration as a matter of law, including, without limitation, claims brought pursuant to the California Private Attorneys General Act of 2004, as amended, the California Fair Employment and Housing Act, as amended, and the California Labor Code, as amended, to the extent such claims are not permitted by applicable law(s) to be submitted to mandatory arbitration and the applicable law(s) are not preempted by the Federal Arbitration Act or otherwise invalid (collectively, the "***Excluded Claims***"). In the event Employee intends to bring multiple claims, including one of the Excluded Claims listed above, the Excluded Claims may be filed with a court, while any other claims will remain subject to mandatory arbitration. Employee will have the right to be represented by legal counsel at any arbitration proceeding. Questions of whether a claim is subject to arbitration under this agreement shall be decided by the arbitrator. Likewise, procedural questions which grow out of the dispute and bear on the final disposition are also matters for the arbitrator. The arbitrator shall: (a) have the authority to compel adequate discovery for the resolution of the dispute and to award such relief as would otherwise be permitted by law; and (b) issue a written statement signed by the arbitrator regarding the disposition of each claim and the relief, if any, awarded as to each claim, the reasons for the award, and the arbitrator's essential findings and conclusions on which the award is based. The arbitrator shall be authorized to award all relief that Employee or the Company would be entitled to seek in a court of law. The Company shall pay all JAMS arbitration fees in excess of the administrative fees that Employee would be required to pay if the dispute were decided in a court of law. Nothing in this letter agreement is intended to prevent either Employee or the Company from obtaining injunctive relief in court to prevent irreparable harm pending the conclusion of any such arbitration. Any awards or orders in such arbitrations may be entered and enforced as judgments in the federal and state courts of any competent jurisdiction.

IN WITNESS WHEREOF, the parties have executed this Employment Agreement on the day and year first written above.

SENSEI BIOTHERAPEUTICS, INC.

By: */s/ John Celebi*
Name: John Celebi
Title: President and Chief Executive Officer

Employee:

/s/ Anu Hoey
Anupama Hoey

Exhibit A

EMPLOYEE CONFIDENTIAL INFORMATION AND INVENTIONS ASSIGNMENT AGREEMENT

EMPLOYEE CONFIDENTIAL INFORMATION AND INVENTIONS ASSIGNMENT AGREEMENT

In consideration of my employment or continued employment by Sensei Biotherapeutics, Inc. ("***Employer***"), and its subsidiaries, parents, affiliates, successors and assigns (together with Employer, "***Company***"), the compensation paid to me now and during my employment with Company, and Company's agreement to provide me with access to its Confidential Information (as defined below), I enter into this Employee Confidential Information and Inventions Assignment Agreement with Employer (the "***Agreement***"). Accordingly, in consideration of the mutual promises and covenants contained herein, Employer (on behalf of itself and Company) and I agree as follows:

1. Confidential Information Protections.

1.1 **Recognition of Company's Rights; Nondisclosure**. My employment by Company creates a relationship of confidence and trust with respect to Confidential Information (as defined below) and Company has a protectable interest in the Confidential Information. At all times during and after my employment, I will hold in confidence and will not disclose, use, lecture upon, or publish any Confidential Information, except as required in connection with my work for Company, or as approved by an officer of Company. I will obtain written approval by an officer of Company before I lecture on or submit for publication any material (written, oral, or otherwise) that discloses and/or incorporates any Confidential Information. I will take all reasonable precautions to prevent the disclosure of Confidential Information. Notwithstanding the foregoing, pursuant to 18 U.S.C. Section 1833(b), I will not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that: (1) is made in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney, and solely for the purpose of reporting or investigating a suspected violation of law; or (2) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. I agree that Company information or documentation to which I have access during my employment, regardless of whether it contains Confidential Information, is the property of Company and cannot be downloaded or retained for my personal use or for any use that is outside the scope of my duties for Company.

1.2 **Confidential Information**. "***Confidential Information***" means any and all confidential knowledge or data of Company, and includes any confidential knowledge or data that Company has received, or receives in the future, from third parties that Company has agreed to treat as confidential and to use for only certain limited purposes. By way of illustration but not limitation, Confidential Information includes (a) trade secrets, inventions, ideas, processes, formulas, software in source or object code, data, technology, know-how, designs and techniques, and any other work product of any nature, and all Intellectual Property Rights (defined below) in all of the foregoing (collectively, "***Inventions***"), including all Company Inventions (defined in Section 2.1); (b) information regarding research, development, new products, business and operational plans, budgets, unpublished financial statements and projections, costs, margins, discounts, credit terms, pricing, quoting procedures, future plans and strategies, capital-raising plans, internal services, suppliers and supplier information; (c) information about customers and potential customers of Company, including customer lists, names, representatives, their needs or desires with respect to the types of products or services offered by Company, and other non-public information; (d) information about Company's business partners and their services, including names, representatives, proposals, bids, contracts, and the products and services they provide; (e) information regarding personnel, employee lists, compensation, and employee skills; and (f) any other non-public information that a competitor of Company could use to Company's competitive disadvantage. However, Company agrees that I am free to use information that I knew prior to my employment with Company or that is, at the time of use, generally known in the trade or industry through no breach of this Agreement by me. Company further agrees that this Agreement does not limit my right to discuss my employment or unlawful acts in Company's workplace, including but not limited to sexual harassment, or report possible violations of law or regulation with any federal, state or local government agency, or to discuss the terms and conditions of my employment with others to the extent expressly permitted by Section 7 of the National Labor Relations Act, or to the extent that such disclosure is protected under the applicable provisions of law or regulation, including but not limited to "***whistleblower***" statutes or other similar provisions that protect such disclosure, to the extent any such rights are not permitted by applicable law to be the subject of nondisclosure obligations.

1.3 **Term of Nondisclosure Restrictions**. I will only use or disclose Confidential Information as provided in this Section 1 and I agree that the restrictions in Section 1.1 are intended to continue indefinitely, even after my employment by Company ends. However, if a time limitation on my obligation not to use or disclose Confidential Information is required under applicable law, and the Agreement or its restriction(s) cannot otherwise be enforced, Company and I agree that the two year period after the date my employment ends will be the time limitation relevant to the contested restriction; ***provided, however***, that my obligation not to disclose or use trade secrets that are protected without time limitation under applicable law shall continue indefinitely.

1.4 **No Improper Use of Information of Prior Employers and Others**. During my employment by Company, I will not improperly use or disclose confidential information or trade secrets, if any, of any former employer or any other person to whom I have an obligation of confidentiality, and I will not bring onto Company's premises any unpublished documents or property belonging to a former employer or any other person to whom I have an obligation of confidentiality unless that former employer or person has consented in writing.

2. Assignments of Inventions.

2.1 **Definitions**. The term (a) "***Intellectual Property Rights***" means all past, present and future rights of the following types, which may exist or be created under the laws of any jurisdiction in the world: trade secrets, Copyrights, trademark and trade name rights, mask work rights, patents and industrial property, and all proprietary rights in technology or works of authorship (including, in each case, any application for any such rights and any rights to apply for any such rights, as well as all rights to pursue remedies for infringement or violation of any such rights); (b) "***Copyright***" means the exclusive legal right to reproduce, perform, display, distribute and make derivative works of a work of authorship (for example, a literary, musical, or artistic work) recognized by the laws of any jurisdiction in the world; (c) "***Moral Rights***" means all paternity, integrity, disclosure, withdrawal, special and similar rights recognized by the laws of any jurisdiction in the world; and (d) "***Company Inventions***" means any and all Inventions (and all Intellectual Property Rights related to Inventions) that are made, conceived, developed, prepared, produced, authored, edited, amended, reduced to practice, or learned or set out in any tangible medium of expression or otherwise created, in whole or in part, by me, either alone or with others, during my employment by Company, and all printed, physical, and electronic copies, and other tangible embodiments of Inventions.

2.2 **California Limited Exclusion Notification.**

(a) I acknowledge that California Labor Code section 2870(a) provides that I cannot be required to assign to Company any Invention that I develop entirely on my own time without using Company's equipment, supplies, facilities or trade secret information, except for Inventions that either (i) relate at the time of conception or reduction to practice to Company's business, or actual or demonstrably anticipated research or development, or (ii) result from any work performed by me for Company ("*Nonassignable Inventions*").

(b) To the extent that a provision in this Agreement purports to require me to assign a Nonassignable Invention to Company, the provision is against the public policy of the state of California and is unenforceable.

(c) This limited exclusion does not apply to any patent or Invention covered by a contract between Company and the United States or any of its agencies requiring full title to such patent or Invention to be in the United States.

2.3 **Prior Inventions.**

(a) On the signature page to this Agreement is a list describing any Inventions that (i) are owned by me or in which I have an interest and that were made or acquired by me prior to my date of first employment by Company, and (ii) may relate to Company's business or actual or demonstrably anticipated research or development, and (iii) are not to be assigned to Company ("***Prior Inventions***"). If no such list is attached, I represent and warrant that no Inventions that would be classified as Prior Inventions exist as of the date of this Agreement.

(b) I agree that if I use any Prior Inventions and/or Nonassignable Inventions in the scope of my employment, or if I include any Prior Inventions and/or Nonassignable Inventions in any product or service of Company, or if my rights in any Prior Inventions and/or any Nonassignable Inventions may block or interfere with, or may otherwise be required for, the exercise by Company of any rights assigned to Company under this Agreement (each, a "***License Event***"), (i) I will immediately notify Company in writing, and (ii) unless Company and I agree otherwise in writing, I hereby grant to Company a non-exclusive, perpetual, transferable, fully-paid, royalty-free, irrevocable, worldwide license, with rights to sublicense through multiple levels of sublicensees, to reproduce, make derivative works of, distribute, publicly perform, and publicly display in any form or medium (whether now known or later developed), make, have made, use, sell, import, offer for sale, and exercise any and all present or future rights in, such Prior Inventions and/or Nonassignable Inventions. To the extent that any third parties have any rights in or to any Prior Inventions or any Nonassignable Inventions, I represent and warrant that such third party or parties have validly and irrevocably granted to me the right to grant the license stated above. For purposes of this paragraph, "***Prior Inventions***" includes any Inventions that would be classified as Prior Inventions, whether or not they are listed on the signature page to this Agreement.

2.4 **Assignment of Company Inventions**. I hereby assign to Employer all my right, title, and interest in and to any and all Company Inventions other than Nonassignable Inventions and agree that such assignment includes an assignment of all Moral Rights. To the extent such Moral Rights cannot be assigned to Employer and to the extent the following is allowed by the laws in any country where Moral Rights exist, I hereby unconditionally and irrevocably waive the enforcement of such Moral Rights, and all claims and causes of action of any kind against Employer or related to Employer's customers, with respect to such rights. I further agree that neither my successors-in-interest nor legal heirs retain any Moral Rights in any Company Inventions. Nothing contained in this Agreement may be construed to reduce or limit Company's rights, title, or interest in any Company Inventions so as to be less in any respect than that Company would have had in the absence of this Agreement.

2.5 **Obligation to Keep Company Informed**. During my employment by Company, I will promptly and fully disclose to Company in writing all Inventions that I author, conceive, or reduce to practice, either alone or jointly with others. At the time of each disclosure, I will advise Company in writing of any Inventions that I believe constitute Nonassignable Inventions; and I will at that time provide to Company in writing all evidence necessary to substantiate my belief. Subject to Section 2.3(b), Company agrees to keep in confidence, not use for any purpose, and not disclose to third parties without my consent, any confidential information relating to Nonassignable Inventions that I disclose in writing to Company.

2.6 **Government or Third Party**. I agree that, as directed by Company, I will assign to a third party, including without limitation the United States, all my right, title, and interest in and to any particular Company Invention.

2.7 **Ownership of Work Product**. I acknowledge that all original works of authorship that are made by me (solely or jointly with others) within the scope of my employment and that are protectable by Copyright are "***works made for hire,***" pursuant to United States Copyright Act (17 U.S.C., Section 101).

2.8 **Enforcement of Intellectual Property Rights and Assistance**. I will assist Company, in every way Company requests, including signing, verifying and delivering any documents and performing any other acts, to obtain and enforce United States and foreign Intellectual Property Rights and Moral Rights relating to Company Inventions in any jurisdictions in the world. My obligation to assist Company with respect to Intellectual Property Rights relating to Company Inventions will continue beyond the termination of my employment, but Company will compensate me at a reasonable rate after such termination for the time I actually spend on such assistance. If Company is unable for any reason, after reasonable effort, to secure my signature on any document needed in connection with the actions specified in this paragraph, I hereby irrevocably designate and appoint Employer and its duly authorized officers and agents as my agent and attorney in fact, which appointment is coupled with an interest, to act for and on my behalf to execute, verify and file any such documents and to do all other lawfully permitted acts to further the purposes of this Agreement with the same legal force and effect as if executed by me. I hereby waive and quitclaim to Company any and all claims, of any nature whatsoever, which I now or may hereafter have for infringement of any Intellectual Property Rights assigned to Employer under this Agreement.

2.9 **Incorporation of Software Code**. I agree not to incorporate into any Inventions, including any Company software, or otherwise deliver to Company, any software code licensed under the GNU General Public License, Lesser General Public License, or any other license that, by its terms, requires or conditions the use or distribution of such code on the disclosure, licensing, or distribution of any source code owned or licensed by Company, **except** in strict compliance with Company's policies regarding the use of such software or as directed by Company.

3. Records. I agree to keep and maintain adequate and current records (in the form of notes, sketches, drawings and in any other form that is required by Company) of all Confidential Information developed by me and all Company Inventions made by me during the period of my employment at Company, which records will be available to and remain the sole property of Employer at all times.

4. Duty of Loyalty During Employment. During my employment by Company, I will not, without Company's written consent, directly or indirectly engage in any employment or business activity that is directly or indirectly competitive with, or would otherwise conflict with, my employment by Company.

5. No Solicitation of Employees, Consultants or Contractors. To the extent permitted by applicable law, I agree that during my employment and for the one year period after the date my employment ends for any reason, including but not limited to voluntary termination by me or involuntary termination by Company, I will not, as an officer, director, employee, consultant, owner, partner, or in any other capacity, either directly or through others (except on behalf of Company) solicit, induce, encourage any person known to me to be an employee, consultant, or independent contractor of Company to terminate his, her or its relationship with Company.

6. Reasonableness of Restrictions. I have read this entire Agreement and understand it. I agree that (a) this Agreement does not prevent me from earning a living or pursuing my career, and (b) the restrictions contained in this Agreement are reasonable, proper, and necessitated by Company's legitimate business interests. I represent and agree that I am entering into this Agreement freely, with knowledge of its contents and the intent to be bound by its terms. If a court finds this Agreement, or any of its restrictions, are ambiguous, unenforceable, or invalid, Company and I agree that the court will read the Agreement as a whole and interpret such restriction(s) to be enforceable and valid to the maximum extent allowed by law. If the court declines to enforce this Agreement in the manner provided in this Section and/or Section 12.2, Company and I agree that this Agreement will be automatically modified to provide Company with the maximum protection of its business interests allowed by law, and I agree to be bound by this Agreement as modified.

7. No Conflicting Agreement or Obligation. I represent that my performance of all the terms of this Agreement and as an employee of Company does not and will not breach any agreement to keep in confidence information acquired by me in confidence or in trust prior to my employment by Company. I have not entered into, and I agree I will not enter into, any written or oral agreement in conflict with this Agreement.

8. Return of Company Property. When I cease to be employed by Company, I will deliver to Company any and all materials, together with all copies thereof, containing or disclosing any Company Inventions, or Confidential Information. I will not copy, delete, or alter any information contained upon my Company computer or Company equipment before I return it to Company. In addition, if I have used any personal computer, server, or e-mail system to receive, store, review, prepare or transmit any Company information, including but not limited to, Confidential Information, I agree to provide Company with a computer-useable copy of all such information and then permanently delete such information from those systems; and I agree to provide Company access to my system as reasonably requested to verify that the necessary copying and/or deletion is completed. I further agree that any property situated on Company's premises and owned by Company, including disks and other storage media, filing cabinets or other work areas, is subject to inspection by Company's personnel at any time during my employment, with or without notice. Prior to leaving, I hereby agree to: provide Company any and all information needed to access any Company property or information returned or required to be returned pursuant to this paragraph, including without limitation any login, password, and account information; cooperate with Company in attending an exit interview; and complete and sign Company's termination statement if required to do so by Company.

9. Legal and Equitable Remedies. I agree that (a) it may be impossible to assess the damages caused by my violation of this Agreement or any of its terms, (b) any threatened or actual violation of this Agreement or any of its terms will constitute immediate and irreparable injury to Company, and (c) Company will have the right to enforce this Agreement by injunction, specific performance or other equitable relief, without bond and without prejudice to any other rights and remedies that Company may have for a breach or threatened breach of this Agreement. If Company enforces this Agreement through a court order, I agree that the restrictions of Section 5 will remain in effect for a period of 12 months from the effective date of the order enforcing the Agreement.

10. Notices. Any notices required or permitted under this Agreement will be given to Company at its headquarters location at the time notice is given, labeled "Attention Chief Executive Officer," and to me at my address as listed on Company payroll, or at such other address as Company or I may designate by written notice to the other. Notice will be effective upon receipt or refusal of delivery. If delivered by certified or registered mail, notice will be considered to have been given five business days after it was mailed, as evidenced by the postmark. If delivered by courier or express mail service, notice will be considered to have been given on the delivery date reflected by the courier or express mail service receipt.

11. Publication of This Agreement to Subsequent Employer or Business Associates of Employee. If I am offered employment, or the opportunity to enter into any business venture as owner, partner, consultant or other capacity, while the restrictions in Section 5 of this Agreement are in effect, I agree to inform my potential employer, partner, co-owner and/or others involved in managing the business I have an opportunity to be associated with, of my obligations under this Agreement and to provide such person or persons with a copy of this Agreement. I agree to inform Company of all employment and business ventures which I enter into while the restrictions described in Section 5 of this Agreement are in effect and I authorize Company to provide copies of this Agreement to my employer, partner, co-owner and/or others involved in managing the business I have an opportunity to be associated with and to make such persons aware of my obligations under this Agreement.

12. General Provisions.

12.1 **Governing Law; Consent to Personal Jurisdiction**. This Agreement will be governed by and construed according to the laws of the State of California without regard to any conflict of laws principles that would require the application of the laws of a different jurisdiction. I expressly consent to the personal jurisdiction and venue of the state and federal courts located in California for any lawsuit filed there against me by Company arising from or related to this Agreement.

12.2 **Severability**. If any portion of this Agreement is, for any reason, held to be invalid, illegal or unenforceable, such invalidity, illegality or unenforceability will not affect the other provisions of this Agreement, and this Agreement will be construed as if such provision had never been contained in this Agreement. If any portion of this Agreement is, for any reason, held to be excessively broad as to duration, geographical scope, activity or subject, it will be construed by limiting and reducing it, so as to be enforceable to the extent allowed by the then applicable law.

12.3 **Successors and Assigns**. This Agreement is for my benefit and the benefit of Company and its and their successors, assigns, parent corporations, subsidiaries, affiliates, and purchasers, and will be binding upon my heirs, executors, administrators and other legal representatives.

12.4 **Survival**. This Agreement will survive the termination of my employment, regardless of the reason, and the assignment of this Agreement by Company to any successor in interest or other assignee.

12.5 **Employment At-Will**. I understand and agree that nothing in this Agreement will change my at-will employment status or confer any right with respect to continuation of employment by Company, nor will it interfere in any way with my right or Company's right to terminate my employment at any time, with or without cause or advance notice.

12.6 **Waiver**. No waiver by Company of any breach of this Agreement will be a waiver of any preceding or succeeding breach. No waiver by Company of any right under this Agreement will be construed as a waiver of any other right. Company will not be required to give notice to enforce strict adherence to all terms of this Agreement.

12.7 **Export**. I agree not to export, reexport, or transfer, directly or indirectly, any U.S. technical data acquired from Company or any products utilizing such data, in violation of the United States export laws or regulations.

12.8 **Counterparts**. This Agreement may be executed in two or more counterparts, each of which will be deemed an original, but all of which together will constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, Uniform Electronic Transactions Act or other applicable law) or other transmission method and any counterpart so delivered will be deemed to have been duly and validly delivered and be valid and effective for all purposes.

12.9 **Advice of Counsel**. **I ACKNOWLEDGE THAT, IN EXECUTING THIS AGREEMENT, I HAVE HAD THE OPPORTUNITY TO SEEK THE ADVICE OF INDEPENDENT LEGAL COUNSEL, AND I HAVE READ AND UNDERSTOOD ALL OF THE TERMS AND PROVISIONS OF THIS AGREEMENT. THIS AGREEMENT WILL NOT BE CONSTRUED AGAINST ANY PARTY BY REASON OF THE DRAFTING OR PREPARATION OF THIS AGREEMENT.**

12.10 **Entire Agreement**. The obligations in Sections 1 and 2 (except Section 2.2 and Section 2.7, in each case, with respect to a consulting relationship) of this Agreement will apply to any time during which I was previously engaged, or am in the future engaged, by Company as a consultant, employee or other service provider if no other agreement governs nondisclosure and assignment of inventions during such period. This Agreement is the final, complete and exclusive agreement of the parties with respect to the subject matter of this Agreement and supersedes and merges all prior discussions between us, provided, however, if, prior to execution of this Agreement, Company and I were parties to any agreement regarding the subject matter hereof, that agreement will be superseded by this Agreement prospectively only. No modification of or amendment to this Agreement will be effective unless in writing and signed by the party to be charged. Any subsequent change or changes in my duties, salary or compensation will not affect the validity or scope of this Agreement.

[Signatures to follow on next page]

This Agreement will be effective as of the date signed by the Employee below.

EMPLOYER: SENSEI BIOTHERAPEUTICS	**EMPLOYEE:**
/s/ John Celebi	*/s/ Anu Hoey*
(Signature)	(Signature)
John Celebi	Anu Hoey
(Printed Name)	(Printed Name)
President and CEO	Oct. 13, 2020
(Title)	(Date Signed)

PRIOR INVENTIONS

1. Prior Inventions Disclosure. Except as listed in Section 2 below, the following is a complete list of all Prior Inventions:

☒ No Prior Inventions.

☐ See below:

_____

_____

_____

☐ ☐Additional sheets attached.

2. Due to a prior confidentiality agreement, I cannot complete the disclosure under Section 1 above with respect to the Prior Inventions generally listed below, the intellectual property rights and duty of confidentiality with respect to which I owe to the following party(ies):

	Excluded Invention	**Party(ies)**	**Relationship**
1.			
2.			
3.			

☐ Additional sheets attached.

Exhibit B

PERMITTED OUTSIDE ACTIVITY

Consulting agreement with Gali Health, Inc., a digital health company, as a strategic advisor.

Exhibit 21.1

LIST OF SUBSIDIARIES OF REGISTRANT
SENSEI BIOTHERAPEUTICS, INC.
A DELAWARE CORPORATION

Subsidiaries	Jurisdiction
Panacea Pharmaceuticals, Inc.	Maryland
Alvaxa Biosciences, Inc.	Delaware

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the use in this Registration Statement on Form S-1 of our report dated November 12, 2020 relating to the financial statements of Sensei Biotherapeutics, Inc. We also consent to the reference to us under the heading “Experts” in such Registration Statement.

/s/ Deloitte & Touche LLP

Baltimore, Maryland
January 15, 2021