UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2018

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE TRANSITION PERIOD FROM TO**

Commission File Number 001-38470

Unity Biotechnology, Inc.

(Exact name of Registrant as specified in its Charter)

Delaware	**26-4726035**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
3280 Bayshore Blvd. Suite 100 Brisbane, CA	**94005**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (650) 416-1192

Title of each class	**Name of each exchange on which registered**
Common stock, par value $0.0001	**The Nasdaq Global Select Market**

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES ☐ NO ☒

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. YES ☐ NO ☒

Indicate by check mark whether the Registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES ☒ NO ☐

Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit such files). YES ☒ NO ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405) is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

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	☒	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 13(a) of the Exchange Act. ☐

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). YES ☐ NO ☒

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the Registrant, based on the closing price of the shares of common stock on The NASDAQ Global Select Market on June 29, 2018, was $423,352,473.

The number of shares of Registrant's Common Stock outstanding as of March 1, 2019 was 42,856,993.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Definitive Proxy Statement relating to the 2019 Annual Meeting of Shareholders, scheduled to be held on June 20, 2019, are incorporated by reference into Part III of this Report. Such proxy statement will be filed with the Securities and Exchange Commission within 120 days of the end of the fiscal year covered by this Annual Report on Form 10-K.

Table of Contents

Forward-Looking Statements

This Annual Report on Form 10-K contains "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). All statements other than statements of historical facts contained in this Annual Report on Form 10-K are statements that could be deemed forward-looking statements reflecting the current beliefs and expectations of management with respect to future events or to our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. These statements are often identified by the use of words such as "aim," "anticipate," "assume," "believe," "contemplate," "continue," "could," "due," "estimate," "expect," "goal," "if," "intend," "may," "objective," "plan," "predict," "potential," "positioned," "seek," "should," "target," "will," "would," "until" and similar expressions or variations. Forward-looking statements contained in this Annual Report on Form 10-K include, but are not limited to, statements about:

- our expectations regarding the potential benefits, activity, effectiveness and safety of our drug candidates;
- our expectations with regard to the results of our clinical studies, preclinical studies and research and development programs, including the timing and availability of data from such studies;
- our preclinical, clinical and regulatory development plans for our drug candidates, including the timing or likelihood of regulatory filings and approvals for our drug candidates;
- our expectations with regard to our ability to acquire, discover and develop additional drug candidates and advance such drug candidates into, and successfully complete, clinical studies;
- our expectations regarding the potential market size and size of the potential patient populations for our drug candidates, if approved for commercial use;
- our intentions and our ability to establish collaborations and/or partnerships;
- the timing and amount of any milestone payments we are obligated to make pursuant to our existing license agreements and any future license or collaboration agreements that we may enter into;
- our commercialization, marketing, and manufacturing capabilities and expectations;
- our intentions with respect to the commercialization of our drug candidates;
- the pricing and reimbursement of our drug candidates, if approved;
- the implementation of our business model and strategic plans for our business and drug candidates, including additional indications for which we may pursue;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our drug candidates, including the projected terms of patent protection;
- estimates of our expenses, future revenue, capital requirements, our needs for additional financing, and our ability to obtain additional capital;
- our anticipated use of proceeds from our initial public offering;
- our future financial performance;
- developments and projections relating to our competitors and our industry, including competing therapies; and
- other risks and uncertainties, including those listed under the caption "Risk Factors."

We caution you that the foregoing list may not contain all of the forward-looking statements made in this Annual Report on Form 10-K.

Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. We discuss these risks in greater detail in "Risk Factors" and elsewhere in this Annual Report on Form 10-K. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Also, forward-looking statements represent our management's beliefs and

assumptions only as of the date of this Annual Report on Form 10-K. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

This Annual Report on Form 10-K also contains estimates, projections and other information concerning our industry, our business and the markets for certain drugs, including data regarding the estimated size of those markets, their projected growth rates and the incidence of certain medical conditions. Information that is based on estimates, forecasts, projections or similar methodologies is inherently subject to uncertainties, and actual events or circumstances may differ materially from events and circumstances reflected in this information. Unless otherwise expressly stated, we obtained this industry, business, market and other data from reports, research surveys, studies and similar data prepared by third parties, industry, medical and general publications, government data and similar sources. In some cases, we do not expressly refer to the sources from which this data is derived. In that regard, when we refer to one or more sources of this type of data in any paragraph, you should assume that other data of this type appearing in the same paragraph is derived from the same sources, unless otherwise expressly stated or the context otherwise requires.

Trademarks

This Annual Report on Form 10-K includes trademarks, service marks and trade names owned by us or other companies. All trademarks, service marks and trade names included in this Annual Report on Form 10-K are the property of their respective owners.

PART I

Item 1. Business.

Overview Our mission is to extend human healthspan. We define healthspan, or healthy longevity, as the period of one's life unburdened by the diseases of aging. Enabled by foundational scientific insights, we have devoted over seven years to identifying multiple mechanisms that we believe to be root causes of age-related disease. We are utilizing these insights to develop a broad portfolio of drug candidates to treat these diseases of aging, and we initiated our first clinical study of our lead drug candidate in the second quarter of 2018. We believe our team of scientific, clinical, and business leaders, and our strong culture of collaboration with external scientists make us uniquely qualified to accomplish our ambitious mission.

Age-related diseases such as arthritis, vision loss, and cognitive decline cause considerable economic, personal, and societal burden. As individuals age, the prevalence of chronic disease increases, with 80% of older Americans having at least one chronic disease and 50% having two or more. Age-related diseases negatively impact quality of life, are typically chronic, and progress from the time of onset until death. It is estimated that providing healthcare for people over the age of 65 costs four to five times more than for younger individuals. According to the Centers for Disease Control and Prevention, this elderly population of Americans is expected to nearly double by 2050, increasing the economic burden of aging dramatically. Any success increasing longevity without treating underlying diseases of aging would only serve to increase this burden.

We have developed a portfolio of programs targeting specific biological mechanisms implicated in diseases of aging and a pipeline of drug candidates to attack specific age-related diseases, beginning with musculoskeletal, ophthalmologic, and pulmonary indications.

Cellular Senescence

We believe that the accumulation of senescent cells is a fundamental mechanism of aging and a major driver of many common age-related diseases. Cellular senescence is a natural biological state in which a cell permanently halts division. These cells are referred to as senescent. As senescent cells accumulate with age, they begin secreting large quantities of more than 100 proteins, including inflammatory factors, proteases, fibrotic factors, and growth factors, that disturb the tissue micro-environment. This collection of secreted proteins is referred to as the Senescence Associated Secretory Phenotype, or SASP. In addition to its effects on tissue function, the SASP contains factors that induce senescence in neighboring cells, setting off a cascade of events that culminates in the formation of the functionally aged and/or diseased tissue that underlies a variety of age-related diseases.

Senolytic medicines selectively eliminate senescent cells and stop the production of the SASP at its source, which we believe addresses a root cause of diseases of aging. Many existing therapeutics, such as antibodies, target single SASP factors, but fail to remove the cells that continually produce multiple SASP factors. By stopping the production of the SASP at it source, we believe senolytic medicines could have a more durable impact on disease and could slow, halt, or reverse particular diseases of aging, and shift the treatment paradigm from chronic to intermittent dosing. Less frequent dosing may also improve drug tolerability and patient adherence. We are developing a number of molecules that we refer to as senolytic medicines.

Our Pipeline

We are developing a portfolio of programs targeting specific biological mechanisms implicated in diseases of aging. Our core therapeutic approach targets cellular senescence, and we are currently advancing senescence programs in musculoskeletal, ophthalmologic, and pulmonary disorders. Our clinical development strategy is initially focused on the development of senolytic medicines designed to be administered locally into diseased tissue. After demonstrating efficacy in indications amenable to localized therapy, we plan to pursue the development of senolytic medicines that could be administered systemically to treat additional age-related diseases such as kidney disease, liver disease and neurological disorders. In addition to our efforts to eliminate senescent cells, we are also advancing other programs that have the potential to extend human healthspan, including the administration of circulating youth factors and the enhancement of mitochondrial function.

Our current pipeline of programs is illustrated below:

Within our cellular senescence programs, our lead senolytic molecules, UBX0101 and UBX1967, designed for local treatment for the removal of accumulated senescent cells, are described below:

Musculoskeletal/Osteoarthritis Programs

UBX0101 is our lead drug candidate for musculoskeletal disease with an initial focus on osteoarthritis, or OA, of the knee. It is a potent senolytic small molecule inhibitor of the MDM2/p53 interaction. Disruption of this protein-protein interaction can trigger the elimination of senescent cells. We initiated a Phase 1 clinical study in OA of the knee in the second quarter of 2018 and we expect initial results from this Phase 1 clinical study in the second quarter of 2019. We own, co-own or have exclusively licensed worldwide rights for the use of UBX0101 for the treatment of OA. See "—Intellectual Property."

Ophthalmology Program

UBX1967 is our most advanced lead drug candidate for age-related diseases of the eye, including age-related macular degeneration, diabetic macular edema and proliferative diabetic retinopathy. This drug candidate is a potent senolytic small molecule inhibitor of specific members of the Bcl-2 family of apoptosis regulatory proteins. UBX1967 inhibits the function of proteins that senescent cells rely on for survival. In our preclinical studies, we have demonstrated that by targeting this pathway UBX1967 preferentially eliminates senescent cells while sparing non-senescent cells. We plan to submit an IND application for UBX1967 in early 2020 that, if accepted, would enable us to pursue multiple age-related eye indications in clinical trials. Under a license agreement with Ascentage Pharma Group Corp Limited, we have exclusive worldwide development and commercialization rights and non-exclusive manufacturing rights to UBX1967 outside of Greater China (China, Hong Kong, Macau and Taiwan) in all non-oncology indications Inside Greater China, we will be obligated to develop, manufacture and commercialize UBX1967 through a joint venture with Ascentage. See "—Licenses and Collaborations."

Our Strategy

To achieve our objective of building Unity into a leading healthspan company, we focus on two parallel efforts. First, we are committed to developing senolytic medicines that slow, halt, or reverse specific diseases of aging. Second, we dedicate significant resources and effort to better understand fundamental aging mechanisms and translating these insights into human medicines. This pioneering work is supported by valuable collaborations with leading academics. By investing early in the science of aging, we believe we are positioned to transition the field of

aging biology from fundamental scientific insights to the development and commercialization of medicines. Our core strategies to achieve this objective include:

- ***Demonstrate in our clinical studies that local treatment with senolytic medicines can alter the course of age-related diseases***. We believe that local treatment with senolytic medicines has the potential to slow, halt, or reverse aspects of aging. If we prove this concept in a localized setting, we will be well-positioned to expand upon that success with numerous additional applications.
- ***Continue research into the development of systemic senolytic medicines***. We believe that harnessing the full potential of senolysis, or the selective elimination of senescent cells, to alter many diseases of aging will require systemic senolytic medicines. We intend to explore the development of systemic senolytic medicines using multiple modalities, including small molecules and biologics.
- ***Target aging mechanisms beyond cellular senescence***. While cellular senescence and senolysis have been shown to affect the course of multiple diseases of aging, we believe achieving our broader goal of extending human healthspan will require intervention in additional aging mechanisms beyond cellular senescence. We will continue to conduct fundamental research into these other aging mechanisms, including loss of circulating youth factors and mitochondrial dysfunction. We will also continue to partner with the most forward-thinking aging researchers in the world to foster a collaborative environment to bring their insights, innovation, and technologies into our powerful research and drug development infrastructure.
- ***Leverage our core science and biotechnology experience***. We strive to attract, retain, and incentivize a unique team with significant strengths and experience in basic science, biotechnology, medicinal chemistry, and clinical development. Over the last seven years, our team has identified multiple mechanisms that can selectively eliminate senescent cells, created potent senolytic molecules, and developed proprietary animal models to monitor senescent cell clearance. We have developed significant insight into the relationship between the accumulation of senescent cells and human disease. Further, our management team has extensive biotechnology and pharmaceutical experience, and has played a leadership role in the creation of numerous FDA-approved medicines.
- ***Opportunistically expand our product portfolio***. Our internal research has identified multiple biological pathways that are potential targets for diseases of aging. We will search for opportunities to in-license novel medicines that can rapid enter clinical development. We expect that our current leadership in the biology of cellular senescence will serve as a foundation for us to develop numerous products to treat human disease.
- ***Continue to build a robust and defensible patent portfolio***. We are an innovative biotechnology company focused on developing novel insights into the biology and diseases of aging. Our current patent portfolio consists, on a worldwide basis, of 30 issued and allowed patents and more than 100 additional pending patent applications which we own, co-own or have exclusively licensed. We intend to continue to aggressively develop, file, and pursue additional patent protection for our innovative technologies and products.

Healthspan and Diseases of Aging

Age-related diseases such as arthritis, vision loss, and cognitive decline cause considerable economic, personal and societal burden. As individuals age, the prevalence of chronic disease increases, with 80% of older Americans having at least one chronic disease and 50% having two or more. This deterioration of health negatively impacts quality of life, and age-related diseases are typically chronic and persist from the time of onset until death.

Diseases of aging drive significant healthcare spending. It is estimated that providing healthcare for people over the age of 65 costs four to five times more than for younger individuals. The Centers for Medicare and Medicaid Services expect health spending in the United States, or U.S., to exceed $5.2 trillion by 2025, which is equal to approximately 20% of the projected U.S. gross national product for the same year. According to the Centers for Disease Control and Prevention, the population of Americans aged 65 years or older is expected to nearly double by 2050, dramatically increasing the economic burden of aging. Moreover, diseases associated with aging have a detrimental impact on quality of life and older adults are often less optimistic about their future. Of the 34 million

family caregivers in the U.S. who support aging relatives, many experience a deterioration in their own health and well-being as a result.

We believe that by creating medicines that target fundamental aging mechanisms, we can reduce the economic, personal, and societal burden of aging and enhance quality of life.

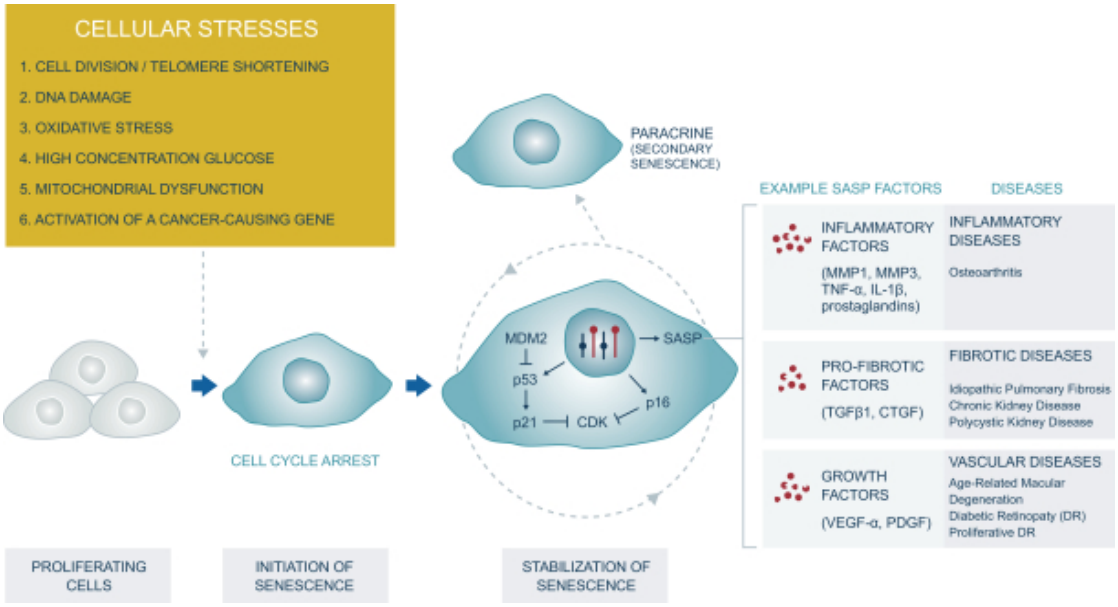
Our Approach to Extending Human Healthspan

Causes of Cellular Senescence

Cellular senescence is a natural biological state in which a cell permanently halts division. Cells become senescent when they experience some form of unresolvable cellular stress. To date, six stress mechanisms have been identified that can cause a cell to become senescent, including (i) extensive cell division and telomere shortening, (ii) DNA damage, (iii) oxidative stress, (iv) high concentration glucose, (v) mitochondrial dysfunction, and (vi) activation of a cancer-causing gene.

These cellular stress events result in the activation of the tumor suppressor protein p53, which drives the production of two cell-cycle dependent kinase inhibitors, or CDK inhibitors, p21 and p16. These two molecules are required for the establishment and subsequent maintenance of the senescent cell state. The first CDK inhibitor to be produced is p21, which works through subsequent pathways to block the production of numerous proteins that cells need to divide. The initial p21-driven signal is an acute response to cell damage and eventually decreases. In contrast, p16 permanently locks the cell into a non-dividing state and the production of p16 continues as long as the cell lives. Given that p16 production, in most cases, continues indefinitely and is believed to be produced almost exclusively in senescent cells, it is a widely used marker to identify and quantify senescent cells.

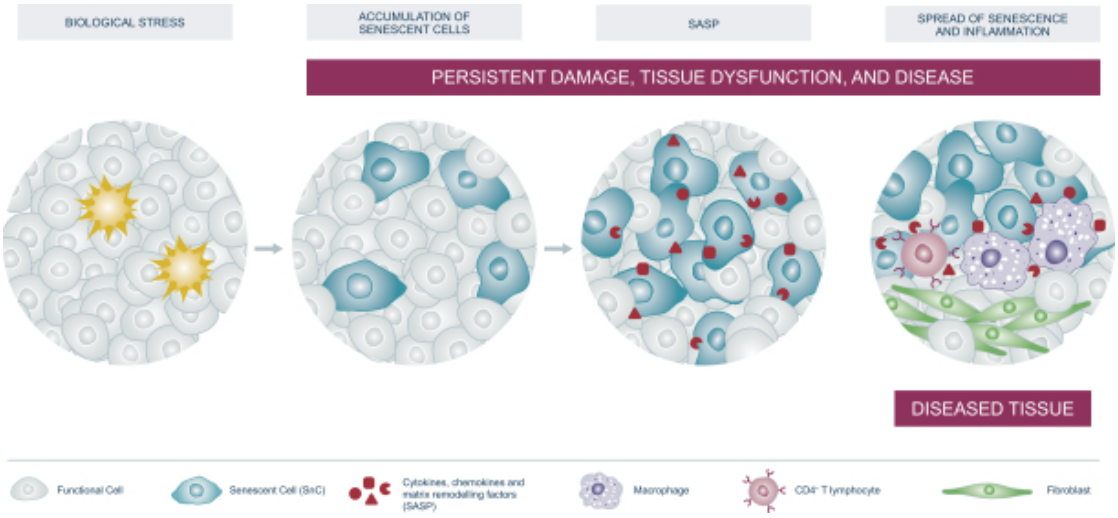
The process through which stress mechanisms can induce cells to become senescent is illustrated in the figure below.



How Senescent Cells Drive Diseases of Aging: The SASP

Once cells become senescent, they begin secreting large quantities of more than 100 proteins, including pro-inflammatory factors that recruit the immune system, proteases that remodel the extra-cellular matrix, pro-fibrotic factors that drive the formation of dysfunctional matrix, and growth factors that perturb the function of the tissue

micro-environment. This collection of secreted proteins is referred to as the Senescence Associated Secretory Phenotype, or SASP. In addition to its effects on tissue function, the SASP contains factors that induce senescence in neighboring cells, setting off a cascade of events that ultimately culminates in the formation of a functionally aged and/or diseased tissue that underlies a variety of age-related diseases. This process is illustrated in the figure below.

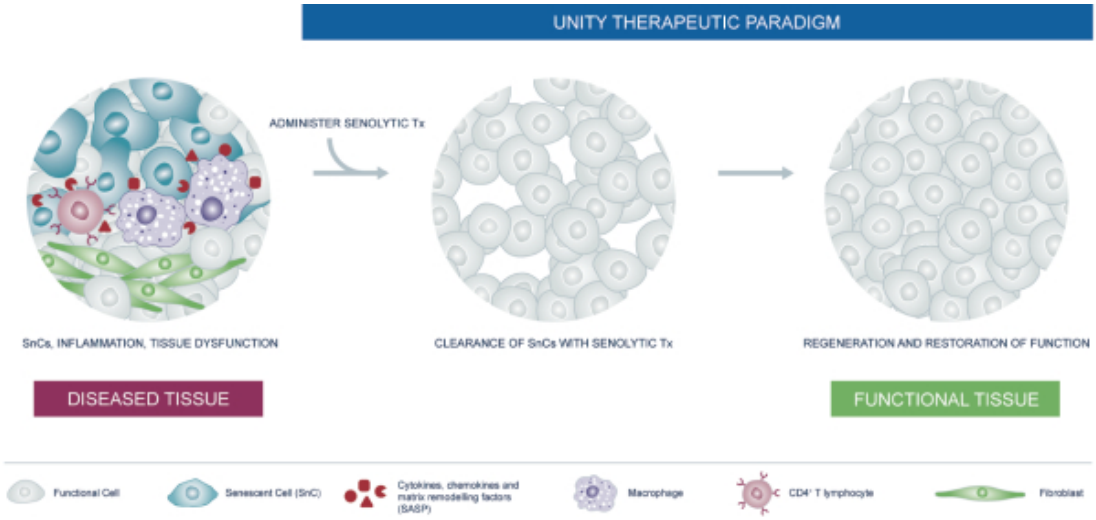


Numerous SASP factors have been implicated as potentially contributing to human disease and it is now believed that the SASP is the primary means by which senescent cells drive specific diseases of aging. For example, a variety of single SASP factors (TNF-α and VEGF-A) have been demonstrated to drive human diseases by themselves and have been the target of well-known antibody therapeutics, including HUMIRA® and EYLEA®. While these antibodies are able to modify human disease by removing the activity of a single SASP factor, we believe the clearance of senescent cells will remove the source of numerous SASP factors, providing improvement in both efficacy and duration-of-effect.

Our Therapeutic Paradigm

We were founded on the principle that the selective elimination of senescent cells and their accompanying SASP has the potential to slow, halt, or reverse diseases of aging. Our insights into senescent cell biology allow us to

identify senescence-driven diseases, target the senescent cells driving a particular disease, and selectively eliminate these cells. The figure below illustrates this process.



In developing this approach, we have acquired significant expertise with respect to senescent cell survival pathways, which are the signaling systems that senescent cells rely on for survival. When these pathways are inhibited with specifically designed molecules, senescent cells undergo programmed cell death. Through our research, we have identified several of these mechanistically distinct survival pathways, which differ depending on cell type and the tissue in which the senescent cells reside.

Using small molecules, we have cataloged these survival pathways on a cell-type-by-cell-type basis into a database we refer to as the ATLAS. The database indicates the survival pathways on which specific senescent cell types depend thereby elucidating vulnerabilities in those cells that can be exploited by the administration of senolytic molecules to trigger the selective elimination of these cells. The ATLAS provides us with a map of chemical starting points for the creation of senolytic medicines.

Advantages of Our Approach

We believe that senolytic medicines—medicines that selectively eliminate senescent cells from diseased tissues—may have four advantages over other efforts to treat age-related diseases:

- ***Senolytic medicines target a root cause of diseases of aging.*** We believe that the accumulation of senescent cells is a root cause of many diseases of aging. Unlike treatments that inhibit the activity of a single factor (such as antibodies targeting single pro-inflammatory proteins), we believe a senolytic medicine that selectively eliminates accumulated senescent cells and consequently also their associated SASP, could blunt the activity of numerous factors contributing to disease. As a result, senolytic medicines could have improved efficacy because they target diseases at their source and therefore may be able to normalize tissue levels of numerous disease-causing factors simultaneously.
- ***Senolytic medicines can be dosed intermittently***. The administration of senolytic medicines would remove senescent cells from diseased tissue. As new senescent cells may take months or even years to re-accumulate, senolytic medicines could potentially be dosed infrequently. We believe that intermittent dosing (rather than ongoing chronic dosing) could restore normal tissue function such that further drug administration would not be required until senescent cells have re-accumulated. Intermittent dosing may also improve drug tolerability and patient adherence when compared to chronic therapies.
- ***Senescent cells accumulate at sites of disease, simplifying multiple aspects of clinical development***. We believe senescent cells accumulate at sites of disease and drive disease through their accompanying SASP.

Our ability to quantify senescent cells and accompanying SASP factors in sites of disease may simplify clinical development in a number of ways. First, we can simplify indication selection to pursue the development of senolytic medicines for diseases in which we observe the local accumulation of senescent cells. Second, it is possible to identify patients that may better respond to senolytic medicines based on p16 expression and other biomarkers of senescence. Third, we can potentially monitor patients for response to therapy by tracking the reduction of senescence-associated biomarkers.

- ***Senolytic medicines restore tissues to a healthy state.*** We believe senescent cells generally do not accumulate in young individuals and that the accumulation of senescent cells is unnecessary for normal tissue function. Our goal for the administration of senolytic medicines is to restore tissue to a functionally younger state.

Our Discovery and Development Strategy

We believe that each of our senolytic programs has the potential to address a root cause of an age-related disease. Our clinical development strategy is initially to develop senolytic medicines designed to be administered locally into diseased tissue (either by injection or inhalation), which reduces systemic toxicological risks by limiting drug exposure largely to the treated tissue. After demonstrating safety and efficacy in indications amenable to localized therapy, we plan to pursue the development of senolytic medicines that could be administered systemically, initially acting on specific tissues for which direct local administration is challenging. Ultimately, we envision the potential for systemic administration of senolytic medicines to selectively eliminate senescent cells throughout the body to treat diseases of aging that are not amenable to local treatment, such as kidney, liver, and heart disease. We are also developing medicines that act on aging mechanisms beyond cellular senescence, such as those that address the loss of circulating youth factors and enhance mitochondrial health. By targeting specific biological mechanisms that are implicated in diseases of aging, our vision is to address the body as a whole, reducing age-related diseases and extending human healthspan.

Cellular Senescence Biology Program

Musculoskeletal/Osteoarthritis Programs

Unmet Need and Therapeutic Rationale

Diseases of the musculoskeletal system represent one of the leading causes of disability in the world, particularly among the aging population. According to the 2015 World Health Organization World Report on Ageing and Health, musculoskeletal diseases account for the most time those over age 50 in the developed world spend living with a disability. To date, senescence has been linked with osteoarthritis of the knee, hip, and intervertebral (spine) facet joints, degeneration of intervertebral discs, and loss of bone density.

Osteoarthritis, or OA, is a degenerative disease that negatively impacts subchondral bone and the synovial tissue surrounding the joint, causing pain and physical impairment. The effect of tissue degeneration causes the normally smooth joint layers to become fragmented and pitted, the synovial tissue to become inflamed and thickened, and the bone to develop abnormal morphology, all of which lead to a decrease in joint function and mobility, pain, and physical impairment. OA is a highly prevalent disease, symptomatically affecting as many as 10% to 15% of the world's population over age 60, and results in a decline in quality of life. The most common joint affected by OA is the knee, followed by the hip, ankle, and shoulder. Importantly, the current standard of care begins with symptomatic treatment that temporarily addresses joint inflammation or pain control. The natural progression of treatment often results in joint replacement surgery. Based on data from the Agency for Healthcare Research and Quality (a division of the U.S. Department of Health and Human Services) for 2009, the aggregate cost of knee and hip replacements in the United States was $42.3 billion. The overall cost of OA is estimated to be greater than $150 billion per year in the United States.

OA of the knee is believed to be a heterogeneous and multifactorial disease. We believe that the accumulation of senescent cells and associated SASP are significant contributing factors in OA disease. A number of SASP factors are secreted by senescent cells into the tissue and/or synovial fluid surrounding an affected joint, including (i) cytokines and chemokines which may cause inflammation, such as the interleukins IL-1ß and IL-6; (ii) proteases and protease inhibitors, which may cause tissue degradation, such as MMP-1, MMP-3 and MMP-13; and (iii) growth

factors and adhesion molecules, which may lead to tissue remodeling, such as VEGFC and ICAM-1. The presence and concentrations of these SASP factors may vary based on the tissue and fluid type, however we believe these SASP factors lead to cartilage loss, inflammation of the synovial membrane, abnormalities to bone, degeneration of the joint cartilage, and pain.

Evidence for Cellular Senescence Burden in Human Disease and Human Biomarker Discovery

To evaluate the link between cellular senescence, SASP accumulation and OA disease, we conducted a non-interventional biomarker study in 30 patients with primary OA of the knee. The enrolled patients displayed a range of OA disease between grades 1 and 4 based on an X-ray scoring system called the Kellgren-Lawrence, or KL, grade. The KL grade is a common tool used to classify extent of OA with scores ranging from 0, referring to no disease, to grade 4, referring to severe disease. During the study, patients underwent knee MRI imaging with contrast enhancement and arthroscopy, a fiber optic surgical device inserted into the knee joint, for biopsy of synovial membrane and non-weight bearing cartilage. They also provided blood and urine, and underwent pain scoring, as measured by the WOMAC-A sub-scale, a commonly used standardized questionnaire, to evaluate their OA disease status and its relationship to senescent cell burden.

Immunohistochemistry, or IHC, of the sampled tissue demonstrated p16-positive cells affecting a number of cell types within the synovial membrane. The degree of senescence was quantified in these samples by measuring the percentage of p16 positive cells relative to the total cell number in the specimen.

Several significant findings were identified by assessing the relationship between the percent of p16-positive cells and other measures in this study. First, the extent of senescence was significantly correlated with the concentration of IL-6, a well-established inflammatory marker associated with OA. (Figure 1A). Second, the extent of senescence in the synovial membrane from each patient showed statistically significant correlation to the amount of pain each of those patients experienced at the start of the study, based on the WOMAC-A pain sub-scale (Figure 1B). Third, the extent of senescence in the synovial membrane, including examining specific individual areas within the knee, showed statistically significantly correlation with the MRI-based synovitis score that evaluates 11 different regions within the knee (Figure 1C). Finally, a relationship trend was identified when assessing the correlation between the extent of senescence and the grade of disease based on the KL grade. When evaluating the relationship in patients with mild to moderately severe disease (KL grades 1-3), this relationship was statistically significant (Figure 1D).

Figure 1A. Relationship between degree of senescence (p16) and synovial fluid SASP Factors (IL-6)

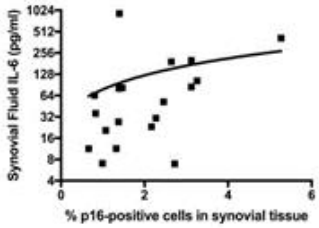


Figure 1B. Relationship between degree of senescence (p16) and patient reported pain scores (WOMAC-A)

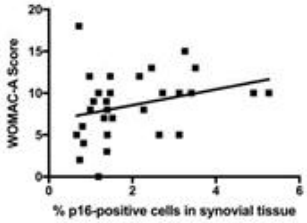


Figure 1A. Relationship between concentration of IL-6 and percent of p16 positive cells within the synovial membrane. Regression adjusted partial R, rank = 0.5888, p-value = 0.0137. The regression adjusted partial R is the correlation after adjustment for body mass index (BMI), age, and KL grade.

Figure 1B. Relationship between WOMAC-A Score and percent of p16 positive cells within the synovial membrane. Regression adjusted partial R, rank = 0.4554, p-value = 0.0147.

Figure 1C. Relationship between degree of senescence (p16) and synovial membrane inflammation (MRI Synovitis Score)

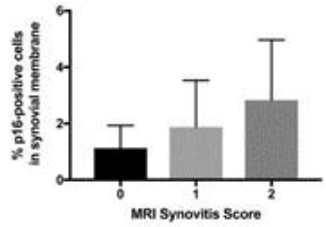


Figure 1D. Relationship between degree of senescence (p16) and stage of OA disease (K-L Score)

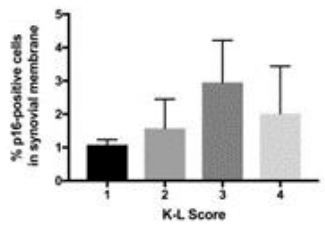


Figure 1C. Relationship between MRI synovitis score and percent of p16 positive cells within the synovial membrane; p-value overall = 0.0008; Score 0 vs 2, p = 0.0043; Score 1 vs 2, p = 0.0656.

Figure 1D. Relationship between KL grade and percent of p16 positive cells within the synovial membrane. Trend observed across all grades; across grades 1-3, p=0.005 in an unadjusted regression model.

Mechanism of Action of UBX0101

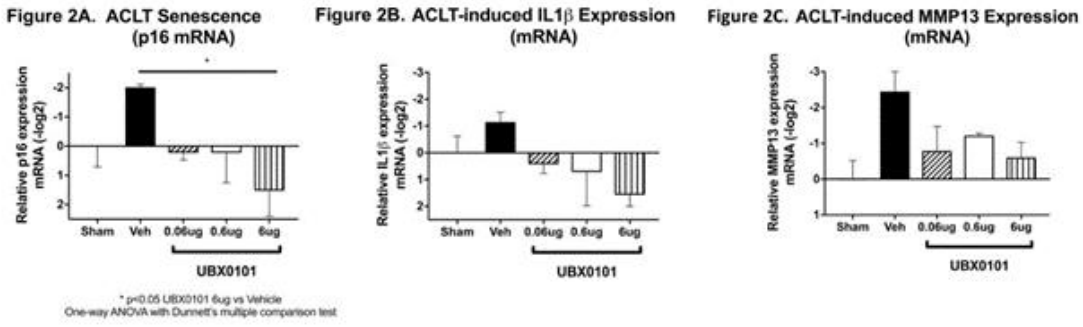
UBX0101 is a small molecule inhibitor of the MDM2/p53 protein-protein interaction. The tumor suppressor p53 is a transcription factor that regulates a broad set of genes that control cellular functions including cell cycle arrest, cell death (or apoptosis), and senescence. MDM2 is a protein-ubiquitin ligase that marks proteins for destruction. UBX0101 binds to MDM2, raising p53 levels and causing senescent cells to undergo apoptosis.

Preclinical Studies with UBX0101

We conducted *in vitro* experiments to study the potency of UBX0101 and its ability to eliminate senescent cells. *In vitro* studies demonstrate that UBX0101 is a potent inducer of p53 expression and senescent cell apoptosis. This confirmed that UBX0101 elevates p53 and eliminates senescent cells. In particular, treatment of irradiated human fetal lung fibroblasts, or IMR90, and irradiated human primary synovial fibroblasts exhibited a dose-dependent potent reduction of senescent cell survival. IMR90 cells have been the cell line used to study senescence biology for the past 30 years. These cells are used to study senescence *in vitro* because they are normal cells without acquired mutations that could drive resistance to drug-induced apoptosis. We use IMR90 and synovial fibroblast cells as our primary screens and complement these two cell types with disease-relevant primary cell cultures to confirm that mechanisms of senescence translate to the relevant cell type.

We next studied the *in vivo* efficacy of UBX0101 in a mouse model of OA. We used the mouse anterior cruciate ligament, or ACL, transection model in which the ACL is transected in a surgical procedure after which the mouse is allowed to recover for 14 days. This model induces an aggressive form of OA characterized by inflammation, cartilage degeneration, and pain. We selected this model as it has demonstrated the accumulation of senescent cells. Intra-articular, or IA, dosing of our clinical candidate, UBX0101, led to a dose-dependent reduction of senescent cells as measured by lowering the expression of p16 (Figure 2A) and a reduced expression of SASP factors, including IL-1ß (Figure 2B) and MMP-13 (Figure 2C), each in whole knee homogenate. Although attempts to replicate these findings in different animal models of OA proved to be challenging, as it is difficult to mimic a disease like OA, which

develops over a long period of time in humans, in short-term animal models, these mouse model data further support our hypothesis that elimination of senescent cells with UBX0101 leads to changes in accompanying SASP.



*Figures 2A, 2B and 2C. IA dosing of UBX0101 reduces p16 expression (*p<0.05) and OA-relevant SASP factors, including IL-1ß and MMP-13 expression levels in the ACLT murine model.*

We also conducted an *ex vivo* study in which cartilage (chondrocytes) from active OA lesions was obtained from human knees following total knee replacement surgery and then placed in culture and treated with UBX0101. The regions of high OA disease tissue burden correlated well with higher p16 and MMP-13 biomarker levels, which we believe is a key indicator of cellular senescence-driven disease within cartilage. When treated with UBX0101, the number of p16 positive cells and cells expressing MMP-13 were greatly reduced. In addition, the expression of two key proteins, type 2 collagen and aggrecan, were significantly upregulated (n=4; *p≤0.05)). These two proteins are among the most abundant components of cartilage. These data suggest that chondrocytes from patients with end-stage OA are capable of synthesizing new cartilage once accumulated senescent cells are removed. As a result, we believe that intervening *in vivo* in humans could not only slow the progression of OA, but could also induce a reparative state in which more functional tissue is restored.

The potential for local toxicity was assessed in GLP-compliant studies after a single-dose intra-articular injection in both rabbits (doses of 0.1, 0.3 and 0.6 mg/joint) and canines (doses of 0.1, 0.3 and 1.0 mg/joint). Findings from these rabbit and canine studies showed that a single intra-articular administration of UBX0101 was well tolerated at doses up to 0.6 mg/joint in the rabbit and 1 mg/joint in the canine, the highest doses tested in the GLP toxicity studies. UBX0101-related histopathological findings after a single intra-articular injection were limited to fibrinoid degeneration and mixed cell inflammation of the synovium in canines. Neither the degeneration nor the inflammation was considered adverse at any dose level due to the minimal severity of the changes. There was no evidence of systemic toxicity in the canines following intra-articular injection. Although histopathological findings were noted in earlier exploratory rabbit studies performed at high doses (up to 9 mg/joint), no UBX0101-related findings in the joint or evidence of systemic toxicity were noted in the 2017 GLP toxicity study conducted in rabbits.

The potential systemic toxicity was evaluated in GLP-compliant toxicity studies after a single oral administration in both rats (doses of 30, 300 and 600 mg/kg) and canines (doses of 30, 100 and 300 mg/kg). In these studies, the no-observed-adverse-effect level (NOAEL) was 300 mg/kg in rats and 100 mg/kg in canines. At doses of 100 mg/kg and above, adverse effects after oral dosing consisted of transient, reversible and monitorable clinical signs in canines (300 mg/kg), decrease in body weight in canines (100 and 300 mg/kg) and rats (600 mg/kg) and clinical pathology changes (decrease in hematopoietic populations and increase in hepatic parameters) in both canines (100 and 300 mg/kg) and rats (300 and 600 mg/kg). At pathological examination, changes in hematopoietic organs were noted in both rats (600 mg/kg) and dogs (100 and 300 mg/kg) whereas non-adverse liver-related changes were observed in rats only (300 and 600 mg/kg). These effects were observed at systemic exposures that are greater than 800-fold the anticipated maximum exposure in patient after a single intra articular injection.

The potential genotoxicity of UBX0101 was evaluated in the following GLP studies: (i) a bacterial reverse mutation assay (*in vitro*) at concentrations up to 5000 µg/plate, (ii) a chromosome aberration assay (*in vitro*) at concentrations ranging from 0.25 µg/ml to 300 µg/ml, and (iii) a rat micronucleus assay (oral/once) at doses of 500,

1000 and 2000 mg/kg. In these studies, UBX0101 was non-mutagenic in bacterial species up to a concentration of 5000 ug/plate and it was weakly positive *in vitro* for inducing chromosomal aberrations, which is consistent with the pharmacological activity of UBX0101. It was negative for inducing polyploidy and endoreduplication in cultured human lymphocytes and negative in the *in vivo* rat micronucleus at oral doses up to 2000 mg/kg, the maximum recommended dose based on regulatory guidelines.

We also conducted the following safety pharmacology studies: (i) hERG channel in mammalian cells (*in vitro*) at concentrations of 1, 3, 10 and 30 μM, (ii) central nervous system in rat (oral/once) at doses of 30, 300 and 600 mg/kg, (iii) cardiovascular in canine (oral/once) at doses of 10, 30 and 100 mg/kg, and (iv) respiratory in rat at doses of 30, 300 and 600 mg/kg. These studies indicated that the risk for significant hERG inhibition *in vivo* is minimal. UBX0101 demonstrated a low potential for cardiovascular effects in canines (NOAEL of 30 mg/kg) and did not produce any effect on ventilatory function or neurobehavioral effects in rats at doses up to 30 mg/kg (the no-observed-effect-level, or NOEL) when given as a single oral administration.

The nonclinical exploratory and GLP studies have demonstrated that findings related to the proposed clinical intra-articular route of administration are generally non-adverse and likely to be reversible. There was no systemic toxicity noted after intra-articular injection in safety assessment studies at any dose level tested. Estimated UBX0101 knee concentrations at the NOAEL from the safety studies were 38-fold higher than the exposures required to achieve the EC50 concentration in the *in vitro* OA knee efficacy model. Based on the findings of our preclinical studies, we believe the safety pharmacology and toxicology studies support the evaluation of UBX0101 in the Phase 1 clinical program.

UBX0101 Development Plan

In the second quarter of 2018, we initiated a Phase 1 clinical study in patients with moderate to severe OA of the knee. This Phase 1 study is a randomized, double-blind, placebo-controlled study to investigate the safety and tolerability of single, ascending intra-articular doses of UBX0101. In the initial phase, or Part A, of the study, 48 patients were randomly assigned to receive UBX0101 or placebo in 3:1 randomization by dose level cohort. Primary endpoints are safety and tolerability. Secondary and exploratory endpoints include plasma pharmacokinetics, synovitis as measured by MRI, pain, and SASP factors in synovial fluid and plasma. Patients will be followed for a total of 12 weeks following treatment administration, at which time key endpoints will be assessed.

In the first quarter of 2019, we expanded the study to include a second phase, or Part B, with an additional cohort of at least 24 patients with the highest safe and tolerated dose level evaluated during Part A of the study (4 mg). Part B is intended to supplement Part A by further evaluating the impact of UBX0101 on SASP factors. In Part B, patients will be randomized to receive UBX0101 or placebo in a 2:1 randomization. Primary endpoints are safety and tolerability. Secondary endpoints include SASP factors in synovial fluid and plasma, pain, and drug exposure. Synovial fluid samples will be obtained pre-treatment and at four weeks. Key endpoints will be assessed at four weeks and patients will be followed for a total of six weeks following treatment administration. We expect top-line results from both Part A and Part B in the second quarter of 2019.

OA of the knee is believed to be a heterogeneous and multifactorial disease where multiple SASP factors are implicated in pathogenesis. While evidence suggests that individual SASP factors contribute to OA disease pathology, it is our belief that suppression of multiple factors is likely needed for a meaningful clinical benefit to be observed. The Phase 1 study will evaluate the impact of UBX0101 on SASP factors (24 in synovial fluid and 8 plasma) believed to play a role in human OA. The factors were selected based on our Ph 0 OA biomarker study, pre-clinical data, and an extensive literature review. These factors, which include cytokines and chemokines, proteases and protease inhibitors, and growth factors and adhesion molecules, will be measured for change from baseline to 12 weeks in Part A and from baseline to 4 weeks in Part B (Figure 3).

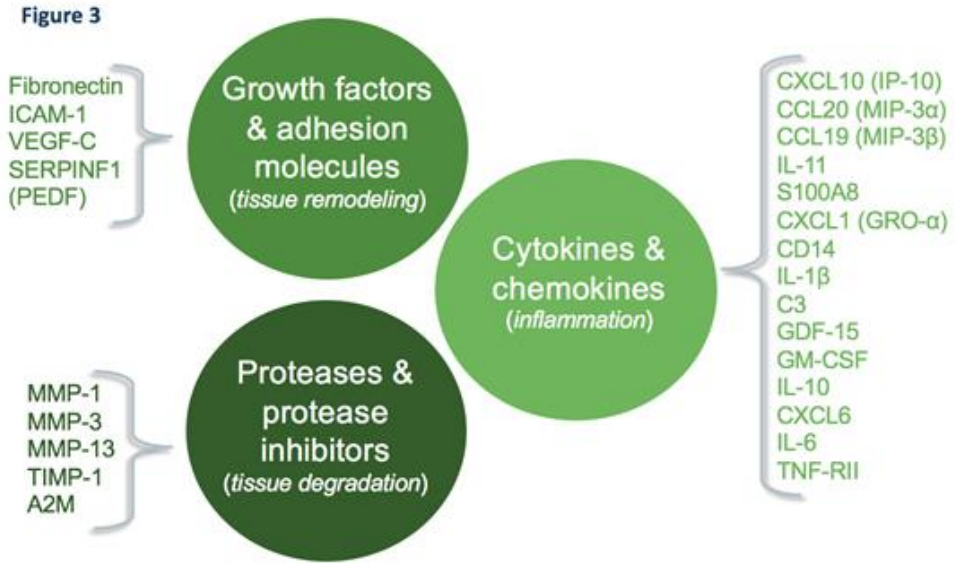


Figure 3: SASP factors for Phase 1 measurement.

At the conclusion of Parts A and B of this study, if the results are positive, we expect to have the option to use the safety, tolerability, and pharmacodynamic data from Parts A and B, to support the further expansion of selected cohorts to sufficiently power a proof-of-concept study for the assessment of pain and inflammation. Additionally, we may also conduct a repeated dose study to optimize the dosing regimen for future trials.

Ophthalmology Programs

Unmet Need and Therapeutic Rationale

The majority of significant eye diseases are age related, with the prevalence of vision-threatening disease increasing significantly over the age of 75. Of the 285 million individuals worldwide living with visual impairment, 65% are over the age of 50. The individual diseases that are associated with these figures include age-related macular degeneration, diabetic eye diseases and glaucoma, all of which have a high prevalence and significant unmet need in either prevention or therapeutic options. The diseases we are evaluating as initial target indications for local administration of senolytic therapy in the eye are age-related macular degeneration, diabetic macular edema, diabetic retinopathy, and primary open angle glaucoma.

Age-Related Macular Degeneration

Age-related macular degeneration, or AMD, is the leading cause of irreversible vision loss in people over the age of 65 in the United States, where there are an estimated 2.1 million people with AMD. This number is projected to more than double by 2050, reaching 5.4 million. The prevalence of AMD increases significantly with advancing age, with a prevalence of 2.8% in those aged 65 to 74 years, increasing to 8.7% in those over 75 years. AMD affects central vision, impairing functions such as reading, driving, and facial recognition, and has a major impact on quality of life and the ability to live independently. AMD is defined in three stages: (i) “early,” in which visual function is affected in the presence of signs of age-related changes in the retina such as drusen and pigmentary changes, (ii) “intermediate,” in which increasing degrees of macular lipid deposition and structural changes are noted, and (iii) “late,” in which central vision is severely compromised due to abnormal blood vessel growth (known as “wet” AMD) or advanced atrophy of the retina (known as “dry” AMD). It is a heterogenous, complex, multifactorial disease, with inflammatory, degenerative, genetic, and vascular factors all contributing to its development and progression. The

potential role of senescent cells and the associated SASP in driving the two main presentations of the disease, both wet and dry forms, could prove a unifying mechanism across this complex disorder.

Standard of care for AMD is limited to anti-vascular endothelial growth factor, or anti-VEGF, drugs which control aspects of the wet form of the disease only. Therapeutic options for dry AMD have proven challenging with no currently approved therapies available to slow progression or reverse disease. Wet AMD has been significantly impacted by anti-VEGF therapy but that approach is limited by the need for frequent, long-term eye injections, a significant percentage of patients not completing or being non-responsive or poorly-responsive to anti-VEGF therapy, and the contribution of multiple other mechanisms at play in the disease beyond VEGF. Thus, there is considerable potential for a senolytic approach to impact disease progression and achieve stabilization in AMD via modulation of senescent cell burden and the accompanying SASP. SASP factors in AMD include molecules that promote abnormal blood vessel growth, inflammation, and fibrosis, all of which have been implicated in various stages of the disease. It is our hypothesis that a senolytic medicine could have a meaningful and prolonged impact on the AMD disease state and help restore the cellular microenvironment to a more normal, pre-senescent state.

Diabetic Macular Edema

The prevalence of diabetic macular edema, or DME, in the U.S. ranges from approximately 4.0 to 6.8% of people with diabetes who are 40 years of age or older. There is a high burden of DME among non-Hispanic blacks and robust associations with higher hemoglobin A1c and longer duration of underlying diabetes.

Because the prevalence of DME increases with increasing duration of hyperglycemia, retinopathy is more likely to be found in eyes of patients who have a longer interval between the onset of diabetes and its discovery. Lower frequencies of DME would be expected in asymptomatic people who are discovered to have diabetes by testing during population-based studies. These people are probably closer to the time of “onset” of their diabetes than symptomatic patients who are discovered to have Type 2 diabetes by their physicians.

Despite the success achieved with anti-VEGF treatment for retinal disease like AMD that involve the proliferation of abnormal blood vessels, or neovascularization, in DME, the impact of this therapeutic approach has been limited. This is due to poor patient compliance with the regimen (monthly and or bimonthly IVT injections), the number of cases that are refractory to anti-VEGF treatment (50% of DME patients), and the long-term complication of increased ischemia and retinal fibrosis associated with long-term treatment with anti-VEGF injections. As a result there is an unmet need in this group of patients. Although VEGF has been identified as a primary biomarker for neovascular disease, other biomarkers, which we believe are SASP factors, are present in DME (including IL-1ß, TNF-a, IL-6, and TGF-ß, among others). Due to the multifactorial nature of the disease, a significant opportunity exists to develop a more comprehensive approach to the treatment of DME that targets the root cause of the disease.

Diabetic Retinopathy

Diabetic retinopathy, or DR, is estimated to affect over 90 million people globally and approximately 28 million have vision-threatening stages of disease. It is a leading cause of vision loss in middle-aged and elderly people and impacts 8% of the U.S. population over age 65. Due to the increasing diabetic population arising from lifestyle changes in developing countries, the disease incidence is predicted to climb.

Diabetic retinopathy is a complex multifactorial disease, characterized by progression through a series of stages of increasing severity. High glucose levels incite a variety of inflammatory and a number of metabolic stress-induced events leading to proliferation of neovascularization, with subsequent bleeding and swelling causing visual loss. The risk of developing diabetic retinopathy and its severity increase with the duration of underlying diabetes. It is also associated with poor glycemic control and the presence of additional coexistent diseases, such as high blood pressure, high cholesterol levels, and impaired kidney function.

Current standard of care for diabetic retinopathy, which includes blood sugar control, anti-VEGF drugs, and laser therapy, is modestly effective. Limitations of existing therapy include general challenges with achieving diabetes control, the need for frequent intra-vitreal injections for the administration of anti-VEGF therapy, a significant percentage of patients not completing or being non-responsive to anti-VEGF therapy, and tissue destruction with

permanent side effects from laser therapy. This presents a significant opportunity to design and develop a treatment paradigm that treats a root cause of the disease.

Evidence suggests that diabetic retinopathy is driven by the accumulation of senescent cells that are a direct result of elevated glucose levels in patients with diabetes. These senescent cells are triggered by local stresses in the retina and their accumulation drives the production of the accompanying ocular SASP factors, VEGF and PDGF. Overproduction of VEGF and IL-6 leads to ocular inflammation and abnormal blood vessel growth, key signatures of the causes of diabetic retinopathy. Thus, a senolytic approach could target multiple aspects of the underlying causes of diabetic retinopathy and ideally lead to greater therapeutic coverage in a wider range of patients. By eliminating senescent cell accumulation and accompanying SASP factors, one could limit further disease progression, reduce vessel leakage and inflammation, and prevent vision loss.

Primary Open-Angle Glaucoma

Glaucoma is the leading cause of irreversible blindness in the world, with an estimated 60 million cases worldwide. There are approximately 2.7 million people in the United States with glaucoma, with up to 50% of cases undetected as the result of the disease typically being asymptomatic until very late in the course of its progression. This number is projected to reach 6.3 million by 2050 and age is one of the strongest risk factors for the development of the disease. Prevalence in general increases with age, with 2.5% prevalence between the ages of 55 and 64, 5.7% between 65 and 74 and 10.3% over the age of 75.

Primary open-angle glaucoma, or POAG, is a degeneration of nerve cells in the retina characterized by a progressive loss of retinal nerve function. This occurs due to abnormalities in the outflow channels, which are referred to as the trabecular meshwork, or TM, of the front portion of the eye such that removal of aqueous humor, or AH fluid, no longer balances AH production. As a result, intra-ocular pressure, or IOP, increases. Before vision loss becomes prominent, POAG is an asymptomatic disease making screening examinations critical for early detection. There are no available therapies that restore lost visual function. With advancing disease, more central vision is lost and, if left untreated, total blindness can occur. There are no curative therapies for glaucoma. Treatment is lifelong and aimed at slowing progression of disease. Even with maximal therapy a proportion of patients will continue to progress, highlighting the significant unmet need in glaucoma treatment.

Current POAG management primarily includes strategies to lower IOP by medical and/or surgical means in an attempt to slow disease progression. IOP is a modifiable risk factor in glaucoma and therefore a target for therapy, yet it is known that IOP is but one of many factors in the complex pathophysiology of POAG. Topical therapeutic options to reduce IOP include prostaglandin analogues, cholinergic agonists, and ß-blockers. The major challenge in topical therapy is non-adherence with regimens that require at least daily dosing and are associated with significant tolerability profiles. Adherence rates with topical regimens at one year following prescription were reported to be between 10% and 40%. Compounding this problem is a greater than 40% incidence rate of intolerability issues and that 40% of patients require more than one medication to control IOP to their individual target range. Surgical options to control IOP include laser therapy, surgery to open the outflow channels, and micro-incisional glaucoma surgery. Surgical interventions are associated with greater risks and are in general reserved for more advanced cases.

Thus, POAG remains a high unmet medical need with significant opportunity for a sustained and durable IOP lowering therapy. We believe that POAG is driven by the accumulation of senescent cells and secretion of the SASP in the TM as a result of cellular stress and injury leading to decreased outflow of AH. A reduction in cellularity leading to changes in TM architecture has been described in glaucoma and supports our belief that a senolytic could have prolonged effect on IOP lowering through the clearance of senescent cells and reduction in SASP.

Evidence for Senescence Burden in Human Disease and Human Biomarker Discovery: AMD, DME and DR

We evaluated the presence of senescent cells in retinal donor tissue from normal and AMD subject samples by IHC staining for p16. We believe that data supported our hypothesis that the accumulation of senescent cells is linked to AMD and is seen at the juncture between normal retina and AMD affected retina.

We have also evaluated the link between senescence in human retinal microvascular endothelial cells, or HRMEC, and human DME/DR patients by evaluating the gene expression of several disease-relevant factors. Quantitative polymerase chain reaction, or PCR, demonstrated elevations in VEGF, PDGF, IL-1ß, and TNF in senescent HRMEC, relative to non-senescent cells. These disease-relevant mediators have been reported to be elevated in DME/DR patients. We believe this data is consistent with our hypothesis that senescent cell accumulation and SASP factors play a central role in both DME and DR. We further investigated this hypothesis by evaluating one of our proprietary senolytic molecules in an animal model of DR.

With recently optimized methods, we are now focused on quantifying the senescence burden in samples from normal donors verses donors with AMD and DME/DR. We intend to use this method to identify the cell types that stain positive for p16, and the localization of disease-relevant factors which will assist in the development of AMD and DR models in cells and animal models.

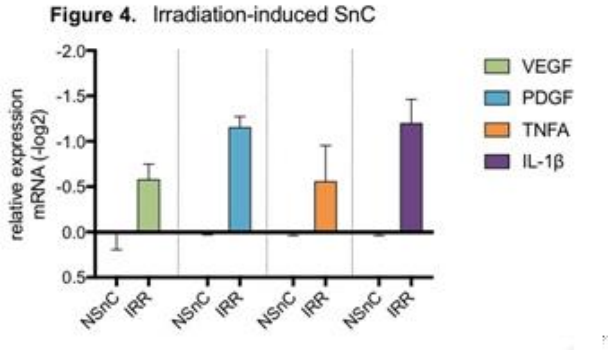


Figure 4. Disease-relevant mediators are elevated in senescent HRMEC

Evidence for Senescence Burden in Human Disease and Human Biomarker Discovery: POAG

We evaluated the presence of senescent cells in the trabecular meshwork, or TM, by quantifying the detection of p16 positive cells in TM from control verses POAG patients. We are currently focused on utilizing optimized methods for the detection of p16-positive cells and co-localization with disease-relevant factors in human donor globes. In addition, we will have the opportunity to look for p16-positive senescent cells in POAG patient retinas.

Mechanism of Action of UBX1967 (Inhibitors of the Bcl-2 Family)

The most advanced senolytic drug candidate in our ophthalmology program, UBX1967, is a potent small molecule inhibitor of specific subtypes within the Bcl-2 family of regulator proteins. The B-cell lymphoma 2, or Bcl-2, gene family encodes more than 20 proteins that regulate the intrinsic apoptosis pathway and are fundamental to the balance between cell survival and cell death. Inhibition of certain Bcl-2 family proteins results in cell death. Targeting this pathway has been extensively studied in connection with the search for new oncology medicines.

In vitro and in vivo Pharmacology Studies with UBX1967

We conducted an *in vitro* assessment of binding and efficacy to determine the potency of senolytic molecules for the Bcl-2 family protein targets and their potency at eliminating senescent cells. Biochemical assays for Bcl-2, Bcl-xL, and Bcl-w yielded binding affinities in the sub-nM range. In order to assess the activity of UBX1967 on senescent cells, we used a cell-based assay with radiation-induced senescence. Senescent cells were then exposed to increasing concentrations of UBX1967 for 72 hours. In this study, UBX1967 showed potent, dose-dependent senolytic activity against IMR90, human retinal pigmented epithelial cells, and HRMEC as measured by reduction of senescent cell survival. UBX1967 demonstrated selectivity for elimination of senescent HRMEC over non-senescent HRMEC which is observed as decreased potency in non-senescent cells (Figure 5).

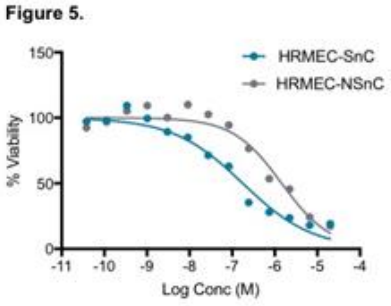


Figure 5. Dose dependent induction of apoptosis in HRMEC cells

We next studied the efficacy of UBX1967 in the eye in an *in vivo* model. We employed the mouse oxygen-induced retinopathy, or OIR, model, which provides an *in vivo* model of retinopathy of prematurity, or ROP, and DR. In this model, UBX1967 showed statistically significant improvement in the degree of neovascularization at all dose levels along with a reduction in the number of p16-positive senescent cells. We also identified a dosing formulation of UBX1967 that is compatible with clinical development, a polysorbate-80 (PS-80)-based solution formulation, which has demonstrated the same activity in this OIR model (Figure 6).

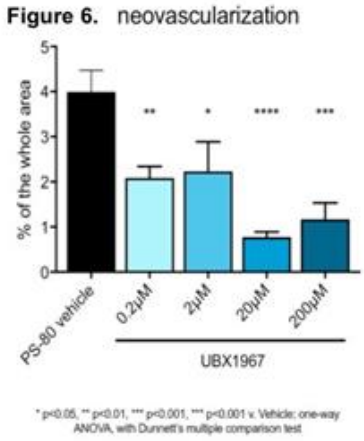


Figure 6. Intravitreal injection of UBX1967 reduced retinal neovascularization in the mouse OIR model

Based on these results in this key OIR model, we believe a single ocular injection of UBX1967 can functionally inhibit pathogenic angiogenesis and promote vascular repair (Figure 7).

Figure 7.

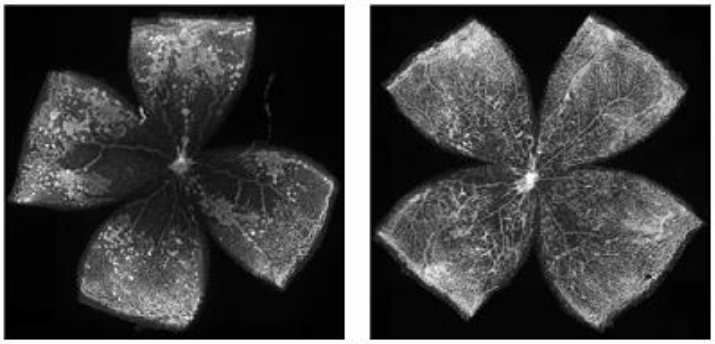


Figure 7. Representative images from mouse OIR illustrate the reduction in neovascularization and vaso-obliteration after treatment with UBX1967

We believe that efficacy of UBX1967 in the OIR model is due to elimination of senescent cells and accompanying SASP that propagates senescence in retinal cells and promotes neovascularization of retinal vessels.

We then studied *in vivo* efficacy in a mouse streptozotocin model to understand the effects of UBX1967 in a diabetic retina, which shows phenotypes similar to the human diseased condition. In this model, UBX1967 demonstrated changes in the electroretinogram, or ERG, as a measure of retinal/photoreceptor function, vascular leakage, and production of several disease-relevant cytokines. UBX1967 showed a dose dependent reduction (1 – 100 µM) in IL-1ß and TNF mRNA ($p<0.05$ v. vehicle control) in the diabetic retina. Evans Blue dye permeation was measured as an indication of vascular leakage in the eye. Administration of UBX1967 significantly reversed leakage in the DMSO-based formulation ($p<0.01$) and demonstrated dose-dependent reversal in the PS-80-based formulation, although not statistically significant. Finally, at doses of 1 – 100 µM delivered per eye, UBX1967 led to significant increase in the amplitude of both the A- and B-waves ($p<0.05$ and $p<0.001$, respectively) of the ERG when compared

to the vehicle control group. The UBX1967-treated groups were not significantly different from the non-diabetic control animals.

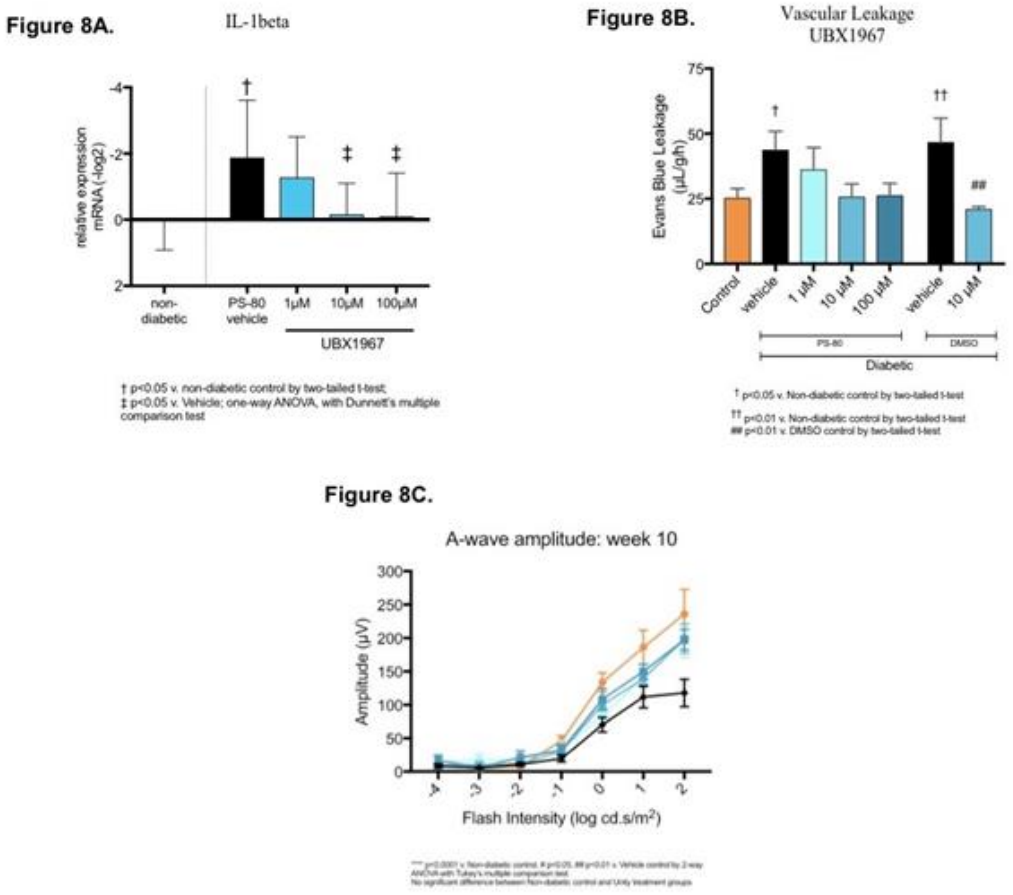


Figure 8. Streptozotocin-induced diabetic mice have increased cytokine expression (8A), increased retinal vascular leakage (8B) and decreased A-wave amplitude in ERG (8C). Administration of UBX1967 attenuated each of these disease-relevant endpoints.

We have also studied the *in vivo* efficacy of UBX1967 in a mouse model of elevated IOP, which is relevant to glaucoma. An experimental increase in IOP was induced in one eye of a mouse cohort by injection of bleomycin, a DNA damage agent known to cause fibrosis. Within the study design, the left eye of a single animal was used as a vehicle control (no insult and no treatment) while the right eye was subjected to insult and treatment with UBX1967. During the study we measured the level of p16 expression and intraocular pressure. We experienced some procedural challenges with this version of the elevated IOP model and we have recently employed a more refined technique to administer bleomycin and UBX1967. Using these new refinements, we will now extend the study duration in order to measure neuron loss in the retina after administration of UBX1967. Preliminary studies with a reference standard molecule indicate a decrease in bleomycin-induced IOP elevation and preservation of retinal ganglion cells.

We completed non-GLP non-clinical safety assessment, tolerability and drug metabolism and pharmacokinetics, or DMPK, studies with UBX1967 in two non-clinical species. In December 2018, we nominated UBX1967 as a development candidate to progress into GLP safety assessment studies to enable the filing of an IND.

Ophthalmology Development Plan

One of the properties of UBX1967 is a sustained exposure in ocular tissues of interest after intravitreal injection. After engaging regulatory authorities regarding the design of IND-enabling studies, we have determined that the duration of these non-clinical studies will be longer than originally anticipated due to the pharmacokinetic profile. As a result, we expect to file our IND for UBX1967 in early 2020 that, if accepted, would enable us to pursue multiple age-related diseases of the eye in clinical trials, such as AMD, DME and DR.

As part of our continued commitment to our ophthalmology indications, we have also designed a number of alternative senolytic molecules with differing mechanisms of action. We are also focused on the physiochemical properties of our small molecules and are developing approaches to optimize solubility, permeability, and PK parameters to create favorable ocular absorption, distribution, metabolism, and residency profiles.

Pulmonary Programs

Unmet Need and Therapeutic Rationale

Data from the World Health Organization from 2015 shows that respiratory diseases make up three of the top five causes of death worldwide, several of which are prevalent in the elderly. In addition, the National Heart, Lung, and Blood Institute of the U.S. National Institutes of Health published a white paper in 2017 highlighting the association of age with lung disease, including idiopathic pulmonary fibrosis, or IPF, and chronic obstructive pulmonary disease, or COPD, and underscoring the potential for understanding and developing therapeutics related to aging biology.

Historically, therapies for these diseases have been non-specific in their mode of action, whether anti-inflammatory (e.g., corticosteroids), or immunosuppressive (e.g., cyclophosphamide), or purely supportive in nature (e.g., supplemental oxygen). Increasingly, new therapies have been developed that are more targeted to specific pathogenic factors, such as anti-IL-5 antibody (mepolizumab) in COPD and tyrosine kinase inhibitor (nintedanib) in IPF. In contrast, the goal of senolytics is not just to interrupt specific pathogenic pathways but specifically to target senescent cells and thereby inhibit multiple pathogenic pathways.

We initiated an active discovery and development program in IPF based on a series of observations including the aggressive nature of the disease and data suggesting a potentially strong association between IPF and senescence.

IPF is a severely debilitating fibrotic disease of the lung that primarily affects older adults and often leads to a progressive worsening of lung function, eventually leading to respiratory failure or lung transplantation. Increasing organ fibrosis causes a restriction of ventilation that symptomatically is perceived as a constant state of suffocation. While the course of the disease is variable, the prognosis is uniformly poor with a median survival of about three to four years after diagnosis. In the United States, it is estimated to affect up to 90,000 people, with approximately 40,000 people dying each year. While the overall prevalence is not high, it increases substantially in people over the age of 65. The hypoxemia resulting from IPF ultimately necessitates the use of supplemental oxygen. Supplemental oxygen relieves dyspnea and improves functional status and may play a role in ameliorating associated comorbidities such as secondary pulmonary hypertension. However, the use of supplemental oxygen requires equipment for administration that can place significant burden on patients, limiting their mobility and profoundly reducing quality of life.

Beyond the use of oxygen, there are two marketed products available for the treatment of IPF, nintedanib and pirfenidone, that are recommended by the American Thoracic Society. In clinical studies, these anti-fibrotic agents slowed the rate of decline in lung function over 52 weeks but did not show a significant effect on survival or disease exacerbations. IPF remains a fatal disease for which additional effective therapies that treat the underlying lung fibrosis to improve quality of life and survival are needed.

Resident cell types within the lung, including epithelial cells and macrophages, have been shown to become senescent. Accumulation of these senescent cells followed by SASP secretion may drive IPF disease exacerbation and progression. In the case of senescent lung cells, we believe that the SASP is characterized in part by pro-fibrotic factors such as connective tissue growth factor CTGF and TGF-β. We believe that excessive and prolonged exposure to these factors leads to remodeling of the lung, expansion of lung matrix, and fibrosis, all of which deteriorate function and

ultimately result in death. Furthermore, these factors may also play a role in suppressing the endogenous capacity of the lung to demonstrate regenerative capacity that has been shown in patients after removal of diseased lung tissue, as well as during recuperation of those patients who survive Acute Respiratory Distress Syndrome, an injury that severely damages the lung.

Evidence for Cellular Senescence Burden in Human Disease and Human Biomarker Discovery

Our exploratory work in IPF resulted in the identification of senescent cells associated with areas of active disease in lung tissue taken from patients with IPF. Immunohistochemistry staining for p16 in human IPF lung tissue demonstrated the presence of senescent cells. These cells were predominantly epithelial in origin and located in areas of fibrosis and at the leading edge of the disease. These sites are likely amendable to access by inhalation therapeutics.

Importantly, the number of p16 positive cells was greater across all levels of fibrosis relative to that of normal tissue ($p<0.0001$ for group difference among means by one-way ANOVA). Additionally, there was a strong relationship between the extent of disease in a given area and the percentage of senescent cells present in those areas. At its peak, approximately 30% of the total cellularity in an affected region is comprised of senescent cells. These data support the hypothesis that elimination of senescent cells and its associated SASP could halt progressive fibrosis and potentially allow for restoration of pulmonary function. This further supports our hypothesis that IPF is related to SASP proliferation and suggests that treatment with senolytic molecules has the potential to treat the root cause of disease. We further studied our hypothesis regarding cellular senescence accumulation and their accompanying SASP by investigating the cellular senescence signature in a key animal model of lung fibrosis.

Preclinical Disease Model of Lung Fibrosis

Preclinical studies were conducted to understand the involvement of senescent cells in *in vivo* models of lung fibrosis. Based on initial results demonstrating a modest increase in whole lung senescence (p16 mRNA) following

local delivery of bleomycin, we validated an *in vivo* bleomycin-induced PD model focusing on enriched epithelial cells from mouse lungs and demonstrated a reduction in p16 mRNA following local senolytic treatment.

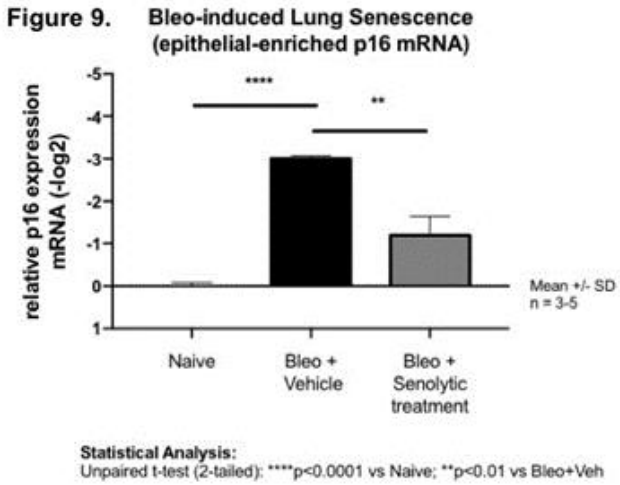


Figure 9. Epithelial cells enriched from mouse lungs treated with bleomycin exhibited an increase in p16 mRNA, which was significantly reduced following local senolytic treatment

While preliminary results from the bleomycin model of lung fibrosis in the mouse were compelling, we are exploring alternative models that better represent senescence and fibrotic lung disease. We are also conducting studies that explore how the observed senolysis translates to a reduction in lung fibrosis.

Development Plan in Pulmonary Diseases

We intend to advance our lead development candidate, an inhaled administration senolytic molecule for pulmonary indications, into IND-enabling studies and, subject to the acceptance by the FDA of an IND for such candidate, into human clinical trials. While IPF is currently our lead indication, we are also exploring inhaled administration opportunities in other lung diseases, such as systemic sclerosis with pulmonary manifestations and hypersensitivity pneumonitis, and in obstructive diseases such as COPD.

We expect our integrated pulmonary development plan will utilize patient safety data and pharmacological dose responses from the initial clinical study to accelerate the design of next-generation clinical studies in other pulmonary diseases. We expect that any Phase 1 program in any of these diseases would closely parallel our work in IPF and would take advantage of any learnings regarding pharmacokinetics following inhaled administration as well as biomarker and imaging responses. This approach should allow us to lay additional groundwork for a broader range of pulmonary diseases once we demonstrate the safety, tolerability, and pharmacodynamics of inhaled senolytic administration.

Research and Discovery – Other Anti-Aging Programs

We have secured our lead position in the discovery and development of senolytic medicines through our commitment to fundamental biological research and translational science. We have partnered with key academics and thought leaders to pursue areas of emerging aging science. We continue to recruit top-tier scientists with the desire and drive to understand, uncover, and invent. We invest a significant proportion of our resources and effort in emerging fields of aging science in order to transition fundamental scientific observations to the design and development of new therapeutics. We believe that we have built the internal research capabilities and scientific network to continue to be at the forefront of extending human healthspan.

Strategy for Systemically Administered Senolytic Medicines

In addition to our discovery and development of locally administered senolytic medicines for the treatment of local disease, we are similarly investigating the systemic administration of senolytic medicines for the treatment of senescent cell-driven disease within specific organs, tissues, and cell types.

Our first approach to systemic administration is to create a senolytic medicine that is designed to target a specific organ or even specific tissue within that organ. Such a senolytic medicine would selectively eliminate senescent cells within a tissue and reduce the SASP within that tissue. In considering therapeutic areas with unmet need and where there is strong evidence for the role of senescent cells driving disease, we are evaluating liver and kidney disease as well as neurological disorders.

Our long-term goal is to use the principles that we establish for the design of systemically administered, targeted senolytic medicines to produce a pipeline of clinical candidates to eliminate senescent cells throughout the body. This could draw on ideas from immunology, senolytic viruses, vaccines, CAR-T type approaches or antibody drug conjugates.

Circulating Youth Factors (α-Klotho Protein)

We are also evaluating the administration of circulating youth factors in age-related diseases. Our lead discovery effort in circulating youth factors is focused on the α-Klotho protein. First discovered in 1997, the *klotho* gene was identified in mice as an "aging-suppressor" that accelerates aging when disrupted and extends lifespan when overexpressed. The α-Klotho protein is a circulating hormone primarily produced in the kidneys and choroid plexus of the brain and was recently discovered to delay and suppress the deleterious effects of aging on multiple organs, including the brain. Circulating levels of α-Klotho protein gradually decline with age and are implicated in chronic stress, cognitive impairment, and neurodegenerative disease.

A small percentage of the population possesses naturally elevated α-Klotho levels as a result of the α-Klotho-VS heterozygous genetic variation. α-Klotho-VS heterozygosity is associated with extended healthspan, enhanced cognition, and less age-related cognitive decline. Elevated α-Klotho levels are also associated with greater dorsolateral prefrontal cortex volume and improved connectivity between cortical regions, which in turn correlates with better executive function in normal aging humans. As this brain region is especially susceptible to shrinkage with age and vulnerable in several psychiatric and neurological disorders, its protection may provide clinical benefit in both normal aging and disease.

In 2014, Dena Dubal, of the University of California, San Francisco, and one of our scientific collaborators, first demonstrated that genetically elevated α-Klotho levels significantly enhance cognitive performance and neural resilience independent of age in normal and human amyloid precursor protein mouse models of neurodegenerative disease related to Alzheimer's Disease. α-Klotho is hypothesized to optimize synaptic neurotransmission of NMDA receptors in the brain, effectively combatting the cognitive and synaptic deficits, despite high levels of pathogenic Ab, tau, and phosphorylated tau proteins associated with Alzheimer's Disease.

We are exploring the utility of α-Klotho protein in a variety of preclinical animal models, with the intention of identifying a drug candidate.

Manufacturing

Our success as a company will depend on our ability to deliver reliable, high-quality preclinical and clinical drug supply. As we mature as a company and approach commercial stage operations, securing reliable high-quality commercial drug supply will be critical. We do not currently own or operate facilities for product manufacturing, storage and distribution, or testing. We contract with third parties for the manufacture of our drug candidates. Because we rely on contract manufacturers, we employ personnel with extensive technical, manufacturing, analytical, and quality experience. Our staff has strong project management discipline to oversee contract manufacturing and testing activities, and to compile manufacturing and quality information for our regulatory submissions.

Manufacturing is subject to extensive regulation that imposes various procedural and documentation requirements and that governs record keeping, manufacturing processes and controls, personnel, quality control and quality assurance, and more. Our systems and our contractors are required to be in compliance with these regulations, and compliance is assessed regularly through monitoring of performance and a formal audit program.

Our current supply chains for our lead drug candidates involve several manufacturers that specialize in specific operations of the manufacturing process, specifically, raw materials manufacturing, drug substance manufacturing, and drug product manufacturing. We currently operate under purchase order programs for our drug candidates with Material Service Agreements in place, and we intend to establish long-term supply agreements in the future. We believe our current manufacturers have the scale, the systems, and the experience to supply all planned clinical studies.

We do not currently require commercial manufacturing capabilities. Should our needs change, we will likely need to scale up our manufacturing processes to enable commercial launch. To ensure continuity in our supply chain, we plan to establish supply arrangements with alternative larger scale suppliers for certain portions of our supply chain, as appropriate.

Commercialization Plan

We do not currently have, nor do we expect to have in the near term, any FDA-approved drugs in our portfolio. Therefore, we have not yet built an infrastructure for sales, marketing, or commercial distribution.

Should any of our drug candidates be approved for commercialization, we intend to develop a plan to commercialize them in the U.S. and other key markets, through an internal infrastructure or external partnerships.

Competition

The biotechnology and pharmaceutical industries, including the field of research in aging, are typically rife with rapid technological developments, bold competition, and dependence on intellectual property. Like any biotechnology company, we face competition from multiple sources, including large or established pharmaceutical, biotechnology, and wellness companies, academic research institutions, government agencies, and private institutions. We believe our drug candidates will prevail amid the competitive landscape through their efficacy, safety, administration methods and convenience, cost, public and institutional demand, intellectual property portfolio, and treatment of the root cause of many age-related diseases.

We are aware of other companies seeking to develop treatments to prevent or treat aging-associated diseases through various biological pathways, including Calico, resTORbio and several other earlier-stage companies exploring cellular senescence. Calico has not yet disclosed any pipeline candidates or mechanisms of interest, and resTORbio is developing candidates targeting TORC1. Hence, we believe that we currently have the most advanced program addressing cellular senescence.

Our drug candidates are likely to compete against current therapies from a wide range of companies and technologies, including therapies for our lead indications:

- Musculoskeletal diseases, including osteoarthritis: current standard of care treatments (though not disease-modifying and focused on symptom management) include anti-inflammatory drugs (Ibruprofen, Diclofenac, Celecoxib), analgesic pain relief (Acetaminophen), or narcotic pain relief (Tramadol).
- Ophthalmology diseases, including diabetic retinopathy: potentially disease-modifying therapeutics are being sold and developed by several pharmaceutical and biotechnology companies, including Roche/Genentech and Regeneron.
- Pulmonary disease, including idiopathic pulmonary fibrosis: therapeutics are being sold and developed by several pharmaceutical and biotechnology companies and academic institutions, including Genentech, Boehringer-Ingelheim, Cytokinetics and Mallinckrodt, and are in various stages of clinical studies.

Many of our competitors, either alone or with strategic partners, have substantially greater financial, technical, and human resources than we do. Accordingly, our competitors may be more successful in obtaining approval for treatments and achieving widespread market acceptance, rendering our treatments obsolete or non-competitive. Accelerated merger and acquisition activity in the biotechnology and biopharmaceutical industries may result in even more resources concentrated among a smaller number of our competitors. These companies also compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical study sites, patient registration for clinical studies, and 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 substantially limited in the event that our competitors develop and commercialize products that are more effective, safer, more tolerable, more convenient, or less expensive than our comparable products. In geographies that are critical to our commercial success, competitors may also obtain regulatory approvals before us, resulting in our competitors building a strong market position in advance of our products' entry. We believe the factors determining the success of our programs will be the efficacy, safety, and convenience of our drug candidates.

Intellectual Property

Our success depends in large part upon our ability to obtain and maintain proprietary protection for our products and technologies and to operate without infringing the proprietary rights of others. Our policy is to protect our proprietary position by, among other methods, filing U.S. and foreign patent applications that relate to our proprietary technologies, inventions and improvements that are important to the development and implementation of our business. We also rely on trademarks, trade secrets, know-how, continuing technological innovation and licensing opportunities to develop and maintain our proprietary position.

Patent Portfolio

Our patent portfolio consists of a combination of issued and allowed patents and pending patent applications that are owned or co-owned by us and/or licensed or optioned to us from third parties. The majority of these patents and applications cover our cellular senescence program, and others pertain to our programs that target aging mechanisms beyond cellular senescence, including the administration of circulating youth factors and enhancement of mitochondrial health. As of March 2019, we own, co-own, or have an exclusive license or exclusive option to license in certain fields of use to more than 100 patents and pending applications in the United States and foreign jurisdictions. This portfolio includes 27 issued U.S. patents, 33 pending U.S. applications (including 13 provisional applications), and over 30 granted or pending applications in foreign jurisdictions.

Our cellular senescence patent portfolio includes patents and patent applications that are directed to our senolytic agents and programs, including our lead molecules UBX0101 and UBX1967, related molecules, and other compounds. We also have licensed the issued patents and patent applications covering the composition of matter and process manufacturing of UBX1967 under a license agreement with Ascentage Pharma Group Corp. Ltd., or Ascentage, as further described below. Our cellular senescence patent portfolio includes patents and patent applications directed to compositions of matter, use for treating age-related conditions, and methods of manufacture.

Our patent portfolio, including patents and applications that we have exclusively optioned, as well as those we own, co-own or have exclusively licensed, directed to our programs that target aging mechanisms beyond cellular senescence, including the administration of circulating youth factors and enhancement of mitochondrial health, includes four pending U.S. patent applications and six pending patent applications in foreign jurisdictions.

In general, patents have a term of 20 years from the earliest claimed non-provisional priority date. Several of our issued U.S. and foreign patents that relate to UBX0101 and UBX1967 are scheduled to expire between approximately 2032 and 2037. The patent term may be extendible by up to five years in certain countries by means of patent term extension, depending on the regulatory pathway and the remaining term upon marketing approval. Certain other patents and patent applications directed to our cellular senescence patent portfolio, if they were to issue, may have later expiration dates.

Osteoarthritis Program

We co-own a patent family directed to the treatment of senescence-related diseases, including osteoarthritis, by removal of senescent cells in or around the site of the disease. The other co-owners of this patent family are the Buck Institute for Research on Aging, or the Buck Institute, the Johns Hopkins University, and Mayo Clinic, each of which has granted us an exclusive license which extends to the treatment of senescence-related diseases in therapeutic areas. This patent family includes four issued U.S. patents and one foreign patent directed toward the use of UBX0101 for the treatment of osteoarthritis. One of these issued U.S. patents covers a unit dose of a pharmaceutical composition as a composition of matter, and the other three cover methods of treatment. Applications are also pending in the following 14 foreign jurisdictions: Australia, Brazil, Canada, China, Europe, Hong Kong, Israel, Japan, Korea, Mexico, New Zealand, Russia and Singapore, and South Africa. Patents that issue from this family are expected to expire in 2035, excluding any patent term adjustments or extensions.

We also own a patent family directed to a scalable method of chiral synthesis of UBX0101, which includes one issued U.S. and one pending U.S. patent application and one international application filed under the patent cooperation treaty, or PCT. Future U.S. and foreign patents issued from this family are expected to expire in 2037, excluding any patent term adjustments and patent term extensions.

We additionally own 10 patent applications directed to alternative drug candidates for osteoarthritis, 10 pending provisional U.S. applications (which also cover aspects of our ophthalmology and pulmonary programs), and two pending international applications. Future U.S. and foreign patents issued from these patent families are expected to expire between 2035, 2038, and 2039, excluding any patent term adjustments and patent term extensions.

Ophthalmology Program

We have entered into a license with Ascentage to a family of issued composition of matter patents and pending manufacturing patent applications directed to chemical entities including our lead drug candidate, UBX1967. This license grants us exclusive development and commercialization rights and non-exclusive manufacturing rights to UBX1967 for all non-oncology indications outside of Greater China (China, Hong Kong, Macau and Taiwan). Inside Greater China, we will be obligated to develop, manufacture and commercialize UBX1967 through the joint venture with Ascentage. Patents in this family have been granted in the U.S., Korea, New Zealand, and South Africa, and are pending in Australia, Canada, China, Europe, India, Japan, and Singapore. Future U.S. and foreign patents issued from this family are expected to expire in 2032, excluding any patent term adjustments or extensions.

We co-own two families of pending patent applications directed to the use of Bcl-2 inhibitors, including UBX1967 and related chemical entities for the treatment of eye disease, including diabetic retinopathy, age-related macular degeneration, and glaucoma (which also cover aspects of our osteoarthritis and/or pulmonary programs). One of these patent families is co-owned by the Buck Institute and us. The patents within the other family that are relevant for ophthalmology indications are co-owned by the Buck Institute, the Mayo Clinic and us. We have exclusive licenses from each of the Buck Institute and the Mayo Clinic to these patent families in the field of senescence. Applications in both of these families are pending in the U.S., Australia, Canada, China, Europe, and Japan. Future U.S. and foreign patents issued from these families are expected to expire in 2035 and 2036, excluding any patent term adjustments and patent term extensions.

We also own eight patent applications directed to alternative drug candidates for the treatment of eye disease and 12 pending provisional applications (which also cover aspects of our osteoarthritis and pulmonary programs). Future U.S. and foreign patents issued from these patent families are expected to expire between 2035 and 2039, excluding any patent term adjustments and patent term extensions.

Pulmonary Program

We are currently testing a number of drug candidates for the treatment of pulmonary disease. One of these compounds is covered as composition of matter by the issued patents and pending applications that are included in the patent family we have licensed from Ascentage.

We also co-own two families of pending patent applications directed to the use of these compounds and other Bcl inhibitors for the treatment of pulmonary disease, including IPF and COPD (which also cover aspects of our osteoarthritis and/or ophthalmology programs). One of these patent families is co-owned by the Buck Institute and us. The patents within the other family that are relevant for pulmonary indications are co-owned by the Buck Institute, the Mayo Clinic and us. We have exclusive licenses from each of the Buck Institute and the Mayo Clinic to these patent families in the field of senescence. Patent applications in both these families are pending in the U.S., Australia, Canada, China, Europe, and Japan. Future U.S. and foreign patents issued from these families are expected to expire in 2035 and 2036, excluding any patent term adjustments and patent term extensions.

We additionally own eight patent applications directed to the use of alternative drug candidates for the treatment of lung disease and 12 pending provisional applications (which also cover aspects of our osteoarthritis and ophthalmology programs). Future U.S. and foreign patents issued from these patent families are expected to expire between 2035 and 2039, excluding any patent term adjustments and patent term extensions.

We also own a provisional patent application directed to the use of certain combinations of compounds for the treatment of various pulmonary diseases, as well as other disease indications. Future U.S. and foreign patents issued from this application are expected to expire in 2039, excluding any patent term adjustments and patent term extensions.

Other Anti-Aging Programs

We have an option to enter into an exclusive license with The Regents of the University of California for a patent family directed to methods of treatment and the use of klotho protein for the development of human therapeutics. Patent applications in this family are pending in the U.S. and six foreign jurisdictions. Future U.S. and foreign patents issued from this family are expected to expire in 2036, excluding any patent term adjustments and patent term extensions.

We also own one pending PCT application and co-own one U.S. provisional application with the Buck Institute on the enhancement of mitochondrial health. Future U.S. and foreign patents issued from these two patent families are expected to expire in 2038 and 2039, excluding any patent term adjustments and patent term extensions.

Other Intellectual Property

Our continuing research and development, technical know-how, and contractual arrangements supplement our intellectual property protection to maintain our competitive position. Our policy is to require inventors who are identified on any Company-owned patent applications to assign rights to us. We also have confidentiality agreements with our employees, consultants, and other advisors to protect our proprietary information. Our policy is to require third parties that receive material UNITY confidential information to enter into confidentiality agreements with us.

We also protect our brand through procurement of trademark rights. As of March 1, 2019, the mark UNITY BIOTECHNOLOGY® and the UNITY BIOTECHNOLOGY® design logo are registered in both the United States and the European Union. The mark UNITY® is also registered in the European Union. In order to supplement protection of our brand, we have also registered several internet domain names.

Government Regulation

Government authorities in the United States (including federal, state and local authorities) and in other countries, extensively regulate, among other things, the manufacturing, research and clinical development, marketing, labeling and packaging, storage, distribution, post-approval monitoring and reporting, advertising and promotion, pricing, and export and import of pharmaceutical products, such as those we are developing. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources.

U.S. Government Regulation

In the United States, the FDA regulates drugs under the Federal Food, Drug, and Cosmetic Act, or FDCA, and its implementing regulations, and biologics under the FDCA and the Public Health Service Act, or PHSA, and its implementing regulations. FDA approval is required before any new unapproved drug or dosage form, including a new use of a previously approved drug, can be marketed in the United States. Drugs and biologics are also subject to other federal, state and local statutes and regulations. If we fail to comply with applicable FDA or other requirements at any time during the drug development process, clinical testing, the approval process or after approval, we may become subject to administrative or judicial sanctions. These sanctions could include the FDA's refusal to approve pending applications, license suspension or revocation, withdrawal of an approval, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties or criminal prosecution.

The process required by the FDA before drug candidates may be marketed in the United States generally involves the following:

- completion of extensive preclinical laboratory tests and preclinical animal studies, all performed in accordance with the Good Laboratory Practices, or GLP, regulations;
- submission to the FDA of an IND, which must become effective before human clinical studies may begin;
- approval by an independent IRB or ethics committee representing each clinical site before each clinical study may be initiated;
- performance of adequate and well-controlled human clinical studies to establish the safety and efficacy, or in the case of a biologic, the safety, purity and potency, of the drug candidate for each proposed indication;
- preparation of and submission to the FDA of a new drug application, or NDA, or biologics license application, or BLA, after completion of all pivotal clinical studies;
- review of the product application by an FDA advisory committee, where appropriate and if applicable;
- a determination by the FDA within 60 days of its receipt of an NDA or BLA to file the application for review;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facilities where the drug candidate is produced to assess compliance with current Good Manufacturing Practices, or cGMP; and
- FDA review and approval of an NDA or BLA prior to any commercial marketing or sale of the drug or biologic in the United States.

An IND is a request for authorization from the FDA to administer an investigational new drug product to humans. The central focus of an IND submission is on the general investigational plan and the protocol(s) for human studies. The IND also includes results of animal and *in vitro* studies assessing the toxicology, pharmacokinetics, pharmacology and pharmacodynamic characteristics of the product; chemistry, manufacturing and controls information; and any available human data or literature to support the use of the investigational new drug. An IND must become effective before human clinical studies may begin. An IND will automatically become effective 30 days after receipt by the FDA, unless before that time the FDA raises concerns or questions related to the proposed clinical studies. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before clinical studies can begin. Accordingly, submission of an IND may or may not result in the FDA allowing clinical studies to commence.

Clinical Studies

Clinical studies involve the administration of the investigational new drug to human subjects under the supervision of qualified investigators in accordance with Good Clinical Practice regulations, or GCPs, which include the requirement that all research subjects provide their informed consent for their participation in any clinical study. Clinical studies are conducted under protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring safety and the efficacy criteria to be evaluated. A protocol for each clinical study and any subsequent protocol amendments must be submitted to the FDA as part of the IND. Additionally, approval must also be obtained from each clinical study site's IRB before the studies may be initiated, and the IRB must monitor

the study until completed. There are also requirements governing the reporting of ongoing clinical studies and clinical study results to public registries.

The clinical investigation of a drug or biologic is generally divided into three or four phases. Although the phases are usually conducted sequentially, they may overlap or be combined.

- *Phase 1.* The drug or biologic is initially introduced into healthy human subjects or patients with the target disease or condition. These studies are designed to evaluate the safety, dosage tolerance, metabolism and pharmacologic actions of the investigational new drug in humans, the side effects associated with increasing doses, and if possible, to gain early evidence on effectiveness.
- *Phase 2.* The drug or biologic is administered to a limited patient population to evaluate dosage tolerance and optimal dosage, identify possible adverse side effects and safety risks and preliminarily evaluate efficacy.
- *Phase 3.* The drug or biologic is administered to an expanded patient population, generally at geographically dispersed clinical study sites to generate enough data to statistically evaluate dosage, clinical effectiveness and safety, to establish the overall benefit-risk relationship of the investigational product and to provide an adequate basis for product approval.
- *Phase 4.* In some cases, the FDA may condition approval of an NDA or BLA for a drug candidate on the sponsor's agreement to conduct additional clinical studies after approval. In other cases, a sponsor may voluntarily conduct additional clinical studies after approval to gain more information about the drug. Such post-approval studies are typically referred to as Phase 4 clinical studies.

A pivotal study is a clinical study that adequately meets regulatory agency requirements for the evaluation of a drug candidate's efficacy and safety such that it can be used to justify the approval of the product. Generally, pivotal studies are Phase 3 studies, but the FDA may accept results from Phase 2 studies if the study design provides a well-controlled and reliable assessment of clinical benefit, particularly in situations where there is an unmet medical need and the results are sufficiently robust.

The FDA, the IRB or the clinical study sponsor may suspend or terminate a clinical study at any time on various grounds, including a finding that the research subjects are being exposed to an unacceptable health risk. Additionally, some clinical studies are overseen by an independent group of qualified experts organized by the clinical study sponsor, known as a data safety monitoring board or committee. This group provides authorization for whether or not a study may move forward at designated check points based on access to certain data from the study. We may also suspend or terminate a clinical study based on evolving business objectives and/or competitive climate.

Submission of an NDA or BLA to the FDA

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, detailed investigational new drug product information is submitted to the FDA in the form of an NDA or BLA requesting approval to market the product for one or more indications. Under federal law, the submission of most NDAs and BLAs is subject to a substantial application user fee. Applications for orphan drug products are exempted from the NDA and BLA application user fees.

An NDA or BLA must include all relevant data available from pertinent preclinical and clinical studies, including negative or ambiguous results as well as positive findings, together with detailed information relating to the product's chemistry, manufacturing, controls and proposed labeling, among other things. Data can come from company-sponsored clinical studies intended to test the safety and effectiveness of a use of a product, 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 and effectiveness of the investigational product to the satisfaction of the FDA.

Once an NDA or BLA has been submitted, the FDA's goal is to review the application within ten months after it accepts the application for filing, or, if the application relates to an unmet medical need in a serious or life-threatening indication, six months after the FDA accepts the application for filing. The review process is often significantly extended by FDA requests for additional information or clarification.

Before approving an NDA or BLA, the FDA typically will inspect the facility or facilities where the product is manufactured. The FDA will not approve an application 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. Additionally, before approving an NDA or BLA, the FDA will typically inspect one or more clinical sites to assure compliance with GCP.

The FDA is required to refer an application for a novel drug or biologic to an advisory committee or explain why such referral was not made. An advisory committee is a panel of independent experts, including clinicians and other scientific experts, that reviews, evaluates and provides a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions and typically follows such recommendations.

The FDA's Decision on an NDA or BLA

After the FDA evaluates the NDA or BLA and conducts inspections of manufacturing facilities, it may issue an approval letter or a Complete Response Letter. An approval letter authorizes commercial marketing of the drug or 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 is not ready for approval. A Complete Response Letter may require additional clinical data and/or an additional pivotal Phase 3 clinical study(ies), and/or other significant, expensive and time-consuming requirements related to clinical studies, preclinical studies or manufacturing. Even if such additional information is submitted, the FDA may ultimately decide that the NDA or BLA does not satisfy the criteria for approval. The FDA could also approve the NDA or BLA with a Risk Evaluation and Mitigation Strategy, or REMS, to mitigate risks, which 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. The FDA also may condition approval on, among other things, changes to proposed labeling, development of adequate controls and specifications or a commitment to conduct one or more post-market studies or clinical studies. Such post-market testing may include Phase 4 clinical studies and surveillance to further assess and monitor the product's safety and effectiveness after commercialization. Also, new government requirements, including those resulting from new legislation, may be established, or the FDA's policies may change, which could delay or prevent regulatory approval of our products under development.

Expedited Review and Accelerated Approval Programs

The FDA has various programs, including fast track designation, breakthrough therapy designation, accelerated approval, and priority review, that are intended to expedite the development and approval of new drugs and biologics that address unmet medical needs in the treatment of serious or life-threatening diseases and conditions. To be eligible for a fast track designation, the FDA must determine, based on the request of a sponsor, that a product is intended to treat a serious or life-threatening disease or condition and demonstrates the potential to address an unmet medical need. The FDA may review sections of the NDA for a fast-track product on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the NDA, the FDA agrees to accept sections of the NDA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the NDA.

The FDA may give a priority review designation to drugs that offer major advances in treatment, or provide a treatment where no adequate therapy exists. A priority review means that the goal for the FDA to review an application is six months, rather than the standard review of ten months under current. These six- and 10-month review periods are measured from the "filing" date rather than the receipt date for NDAs for new molecular entities, which typically adds approximately two months to the timeline for review and decision from the date of submission. Most products that are eligible for fast-track designation are also likely to be considered appropriate to receive a priority review.

In addition, products studied for their safety and effectiveness in treating serious or life-threatening illnesses and that provide meaningful therapeutic benefit over existing treatments may be eligible for accelerated approval and may be approved on the basis of adequate and well-controlled clinical studies establishing that the product has 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, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity or prevalence of the condition

and the availability or lack of alternative treatments. As a condition of approval, the FDA may require a sponsor of a drug receiving accelerated approval to perform post-marketing studies to verify and describe the predicted effect on irreversible morbidity or mortality or other clinical endpoint, and the drug may be subject to accelerated withdrawal procedures.

Moreover, under the provisions of the Food and Drug Administration Safety and Innovation Act, or FDASIA, passed in July 2012, a sponsor can request designation of a drug candidate as a "breakthrough therapy." A breakthrough therapy is defined as a drug or biologic that is intended, alone or in combination with one or more other drugs or biologics, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the product may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. Drugs designated as breakthrough therapies are also eligible for the other expedited review and approval programs, including accelerated approval, priority review, and fast-track designation. The FDA must take certain actions, such as holding timely meetings and providing advice, intended to expedite the development and review of an application for approval of a breakthrough therapy.

Even if a product qualifies for one or more of these programs, the FDA may later decide that the product no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

Post-Approval Requirements

Drugs and biologics marketed pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to recordkeeping, periodic reporting, product sampling and distribution, advertising and promotion and reporting of adverse experiences with the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims are subject to prior FDA review and approval. There also are continuing, annual user fee requirements.

Manufacturers are subject to periodic unannounced inspections by the FDA and state agencies for compliance with cGMP requirements. Changes to the manufacturing process are strictly regulated and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP and impose reporting and documentation requirements upon us and any third-party manufacturers that we may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance.

Discovery of previously unknown problems with a product or the failure to comply with applicable requirements may result in restrictions on a product, manufacturer or holder of an approved NDA or BLA, including withdrawal or recall of the product from the market or other voluntary, FDA-initiated or judicial action that could delay or prohibit further marketing. Also, new government requirements, including those resulting from new legislation, may be established, or the FDA's policies may change, which could delay or prevent regulatory approval of our products under development.

The FDA may withdraw approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical studies to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product;
- complete withdrawal of the product from the market or product recalls;
- fines, warning letters or holds on post-approval clinical studies;

- refusal of the FDA to approve pending NDAs or BLAs or supplements to approved NDAs or BLAs, or suspension or revocation of product licenses or approvals;
- product seizure or detention, or refusal to permit the import or export of products; or
- injunctions or the imposition of civil or criminal penalties.

The FDA strictly regulates marketing, labeling, advertising and promotion of products that are placed on the market. Drugs may be promoted only for the approved indications and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability.

Orphan Designation and Exclusivity

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic intended to treat a rare disease or condition, defined as a disease or condition with a patient population of fewer than 200,000 individuals in the United States, or a patient population greater than 200,000 individuals in the United States and when there is no reasonable expectation that the cost of developing and making available the drug or biologic in the United States will be recovered from sales in the United States for that drug or biologic. Orphan drug designation must be requested before submitting a BLA or NDA. After the FDA grants orphan drug designation, the generic identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA.

If a product that has orphan drug designation subsequently receives the first FDA approval for a particular active ingredient for the disease for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications, including a full BLA, to market the same biologic for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity or if FDA finds that the holder of the orphan drug exclusivity has not shown that it can assure the availability of sufficient quantities of the orphan drug to meet the needs of patients with the disease or condition for which the drug was designated. Orphan drug exclusivity does not prevent the FDA from approving a different drug or biologic for the same disease or condition, or the same drug or biologic for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the BLA or NDA application user fee.

A designated orphan drug many not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. In addition, orphan drug exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or, as noted above, if the second applicant demonstrates that its product is clinically superior to the approved product with orphan exclusivity or the manufacturer of the approved product is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition.

Biosimilars and Exclusivity

The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or the Affordable Care Act, signed into law in 2010, includes a subtitle called the Biologics Price Competition and Innovation Act of 2009, or BPCIA, which created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA-licensed reference biological product. To date, only a handful of biosimilars have been licensed under the BPCIA, although numerous biosimilars have been approved in Europe. The FDA has issued several guidance documents outlining an approach to review and approval of biosimilars.

Biosimilarity, which requires that there be no clinically meaningful differences between the biological product and the reference product in terms of safety, purity and potency, can be shown through analytical studies, animal studies and a clinical study or studies. Interchangeability requires that a product is biosimilar to the reference product and the product must demonstrate that it can be expected to produce the same clinical results as the reference product in any given patient and, for products that are administered multiple times to an individual, the biologic and the reference biologic 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 biologic. However, complexities associated with the larger, and often more complex, structures of biological products, as well as the processes by which such products are manufactured, pose significant hurdles to implementation of the abbreviated approval pathway that are still being worked out by the FDA.

Under the BPCIA, an application for a biosimilar product may not be submitted to the FDA until four years following the date that the reference product was first licensed by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first licensed. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a full BLA for the competing product containing that applicant's own preclinical data and data from adequate and well-controlled clinical studies to demonstrate the safety, purity and potency of its product. The BPCIA also created certain exclusivity periods for biosimilars approved as interchangeable products. At this juncture, it is unclear whether products deemed "interchangeable" by the FDA will, in fact, be readily substituted by pharmacies, which are governed by state pharmacy law.

A biological product can also obtain pediatric market exclusivity in the United States. Pediatric exclusivity, if granted, adds six months to existing exclusivity periods and patent terms. 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 study in accordance with an FDA-issued "Written Request" for such a study.

The BPCIA is complex and continues to be interpreted and implemented by the FDA. In addition, recent government proposals have sought to reduce the 12-year reference product exclusivity period. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of recent litigation. As a result, the ultimate impact, implementation, and impact of the BPCIA is subject to significant uncertainty.

Hatch-Waxman Amendments and Exclusivity

Section 505 of the FDCA describes three types of marketing applications that may be submitted to the FDA to request marketing authorization for a new drug. A Section 505(b)(1) NDA is an application that contains full reports of investigations of safety and efficacy. A 505(b)(2) NDA is an application that contains full reports of investigations of safety and efficacy but where at least some of the information required for approval comes from investigations that were not conducted by or for the applicant and for which the applicant has not obtained a right of reference or use from the person by or for whom the investigations were conducted. This regulatory pathway enables the applicant to rely, in part, on the FDA's prior findings of safety and efficacy for an existing product, or published literature, in support of its application. Section 505(j) establishes an abbreviated approval process for a generic version of approved drug products through the submission of an Abbreviated New Drug Application, or ANDA. An ANDA provides for marketing of a generic drug product that has the same active ingredients, dosage form, strength, route of administration, labeling, performance characteristics and intended use, among other things, to a previously approved product. ANDAs are termed "abbreviated" because they are generally not required to include preclinical (animal) and clinical (human) data to establish safety and efficacy. Instead, generic applicants must scientifically demonstrate that their product is bioequivalent to, or performs in the same manner as, the innovator drug through in vitro, *in vivo* or other testing. The generic version must deliver the same amount of active ingredients into a subject's bloodstream in the same amount of time as the innovator drug and can often be substituted by pharmacists under prescriptions written for the reference listed drug. In seeking approval for a drug through an NDA, applicants are required to list with the FDA each patent with claims that cover the applicant's drug or a method of using the drug. Upon approval of a drug, each of the patents listed in the application for the drug is then published in the FDA's Approved Drug Products with Therapeutic Equivalence Evaluations, commonly known as the Orange Book. Drugs listed in the Orange Book can, in turn, be cited by potential competitors in support of approval of an ANDA or 505(b)(2) NDA.

Upon submission of an ANDA or a 505(b)(2) NDA, an applicant must certify to the FDA that (1) no patent information on the drug product that is the subject of the application has been submitted to the FDA; (2) such patent has expired; (3) the date on which such patent expires; or (4) such patent is invalid or will not be infringed upon by the manufacture, use or sale of the drug product for which the application is submitted. Generally, the ANDA or 505(b)(2) NDA cannot be approved until all listed patents have expired, except where the ANDA or 505(b)(2) NDA applicant challenges a listed patent through the last type of certification, also known as a paragraph IV certification. If the applicant does not challenge the listed patents, or indicates that it is not seeking approval of a patented method

of use, the ANDA or 505(b)(2) NDA application will not be approved until all of the listed patents claiming the referenced product have expired.

If the ANDA or 505(b)(2) NDA applicant has provided a Paragraph IV certification to the FDA, the applicant must send notice of the Paragraph IV certification to the NDA and patent holders once the application has been accepted for filing by the FDA. The NDA and patent holders may then initiate a patent infringement lawsuit in response to the notice of the paragraph IV certification. If the paragraph IV certification is challenged by an NDA holder or the patent owner(s) asserts a patent challenge to the paragraph IV certification, the FDA may not approve that application until the earlier of 30 months from the receipt of the notice of the paragraph IV certification, the expiration of the patent, when the infringement case concerning each such patent was favorably decided in the applicant's favor or settled, or such shorter or longer period as may be ordered by a court. This prohibition is generally referred to as the 30-month stay. In instances where an ANDA or 505(b)(2) NDA applicant files a paragraph IV certification, the NDA holder or patent owner(s) regularly take action to trigger the 30-month stay, recognizing that the related patent litigation may take many months or years to resolve.

The FDA also cannot approve an ANDA or 505(b)(2) application until all applicable non-patent exclusivities listed in the Orange Book for the branded reference drug have expired. For example, a pharmaceutical manufacturer may obtain five years of non-patent exclusivity upon NDA approval of a new chemical entity, or NCE, which is a drug containing an active moiety that has not been approved by FDA in any other NDA. An "active moiety" is defined as the molecule responsible for the drug substance's physiological or pharmacologic action. During that five-year exclusivity period, the FDA cannot accept for filing (and therefore cannot approve) any ANDA seeking approval of a generic version of that drug or any 505(b)(2) NDA that relies on the FDA's approval of the drug, provided that that the FDA may accept an ANDA four years into the NCE exclusivity period if the ANDA applicant also files a Paragraph IV certification.

A drug, including one approved under Section 505(b)(2), may obtain a three-year period of exclusivity for a particular condition of approval, or change to a marketed product, such as a new formulation for a previously approved product, if one or more new clinical studies (other than bioavailability or bioequivalence studies) was essential to the approval of the application and was conducted/sponsored by the applicant. Should this occur, the FDA would be precluded from approving any ANDA or 505(b)(2) application for the protected modification until after that three-year exclusivity period has run. However, unlike NCE exclusivity, the FDA can accept an application and begin the review process during the exclusivity period.

Other Healthcare Laws and Compliance Requirements

Pharmaceutical companies are subject to additional healthcare regulation and enforcement by the federal government and by authorities in the states and foreign jurisdictions in which they conduct their business. Such laws include, without limitation, state and federal anti-kickback, fraud and abuse, false claims, privacy and security and physician sunshine laws and regulations. If their operations are found to be in violation of any of such laws or any other governmental regulations that apply, they may be subject to penalties, including, without limitation, civil and criminal penalties, damages, fines, the curtailment or restructuring of operations, exclusion from participation in federal and state healthcare programs and individual imprisonment.

Coverage and Reimbursement

Sales of any product depend, in part, on the extent to which such product will be covered by third-party payors, such as federal, state and foreign government healthcare programs, commercial insurance and managed healthcare organizations and the level of reimbursement for such product by third-party payors. Decisions regarding the extent of coverage and amount of reimbursement to be provided are made on a plan-by-plan basis. These third-party payors are increasingly reducing reimbursements for medical products, drugs and services. In addition, the U.S. government, state legislatures and foreign governments have continued implementing cost-containment programs, including price controls, restrictions on coverage and reimbursement and requirements for substitution of generic products. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit sales of any product. Decreases in third-party reimbursement for any product

or a decision by a third-party payor not to cover a product could reduce physician usage and patient demand for the product and also have a material adverse effect on sales.

Healthcare Reform

In March 2010, former President Obama signed the Affordable Care Act, which substantially changed the way healthcare is financed by both governmental and private insurers in the United States, and significantly affected the pharmaceutical industry. The Affordable Care Act contains a number of provisions, including those governing enrollment in federal healthcare programs, reimbursement adjustments and fraud and abuse changes. Additionally, the Affordable Care Act increases the minimum level of Medicaid rebates payable by manufacturers of brand name drugs from 15.1% to 23.1%; requires collection of rebates for drugs paid by Medicaid managed care organizations; requires manufacturers to participate in a coverage gap discount program, under which they must agree to offer 50 percent 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; and imposes a non-deductible annual fee on pharmaceutical manufacturers or importers who sell "branded prescription drugs" to specified federal government programs.

Since its enactment, there have been judicial and Congressional challenges to certain aspects of the Affordable Care Act, and we expect there will be additional challenges and amendments to the Affordable Care Act in the future. Other legislative changes have been proposed and adopted since the Affordable Care Act was enacted, including aggregate reductions of Medicare payments to providers of 2% per fiscal year and reduced payments to several types of Medicare providers. Moreover, there has recently been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed bills designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. Individual states in the United States have also become increasingly active in implementing regulations designed to control pharmaceutical 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.

Licenses and Collaborations

Description of Ascentage Agreements

In February 2016, we entered into several related agreements with Ascentage Pharma Group Corp Limited, or, Ascentage, based in Hong Kong, China. These agreements include (i) a compound library and option agreement, which includes a template form of license agreement, (ii) a license agreement covering an initial compound, APG1252, and (iii) a research services agreement. In January 2019, we entered into another license agreement granting us development and commercialization rights to UBX1967 and the right to continue preclinical development efforts with another Ascentage-controlled Bcl-2 inhibitor compound.

Library Agreement and License Template

The compound library and option agreement, or library agreement, gives us access to Ascentage's existing collection of Bcl-2 inhibitor compounds, as well as any additional Bcl-2 inhibitor compounds developed during the term of the library agreement, in order to screen such compounds for senolytic activity. The library agreement permits us to nominate up to 15 such compounds at any given time for further evaluation and subsequently to select up to five of such selected compounds for preclinical development and an additional five as back-up compounds.. Prior to commencing IND-enabling toxicology studies on an Ascentage compound of interest, we must formally designate the compound as a development candidate under the library agreement and enter into a separate license agreement with Ascentage covering that compound on the terms set forth in the template form of license agreement. The library agreement includes exclusivity provisions that (i) prohibit us from developing Ascentage Bcl-2 compounds for oncology indications, (ii) prohibit Ascentage from researching or developing certain Bcl-2 compounds for non-oncology indications under any circumstances, and (iii) prohibit Ascentage from researching or developing certain other Bcl-2 compounds for a specified set of non-oncology indications under certain circumstances. The term of the

library agreement is determined by a formula that is linked to the term of the research services agreement, with a maximum term of six years. The library agreement may be terminated by either party due to the other party's uncured material breach of the library agreement.

Under the terms of the template form of license agreement, Ascentage will grant us the following rights with respect to a selected Ascentage compound for all non-oncology indications: (i) exclusive worldwide development rights, and (ii) exclusive commercialization rights outside of Greater China (China, Hong Kong, Macau and Taiwan). Inside Greater China, we will be obligated to commercialize the licensed Ascentage compound through a joint venture with Ascentage. Ascentage will also have the right to manufacture at least 50% of our supply requirements of the licensed compound, provided they achieve and maintain certain manufacturing quality standards. We will be obligated to make certain milestone payments in the form of shares of our common stock, subject to the equity cap described below, and other milestone payments in in the form of cash, not to exceed $38 million per licensed product, based in each case, upon the achievement of certain clinical and commercial milestones. We will also be required to make low-single digit royalty payments on net sales of the licensed product under the agreement. Our royalty payment obligations will expire on a country-by-country basis and licensed product-by-licensed product basis upon the later to occur of (a) the expiration of the last valid claim of a licensed patent covering such licensed product in such country, (b) the expiration of regulatory exclusivity for such licensed product in such country, and (c) the tenth anniversary of the first commercial sale of such licensed product in any country. We have the right to credit certain royalty payments that we pay to third parties with respect to certain licensed products against our royalty obligation to Ascentage. Any license agreement may be terminated by either party due to the other party's uncured material breach of the agreement.

Under the library agreement, we issued 133,333 shares of our common stock as an upfront license fee. Of such shares, 80% were issued to Ascentage and 20% were issued to the University of Michigan in satisfaction of Ascentage's obligation to pay a related sublicense fee to the University of Michigan. In addition to the shares issued pursuant to the APG1252 license agreement described below, we will also be obligated to issue an additional 133,333 shares of our common stock as an upfront license fee to Ascentage and the University of Michigan for each of the next two license agreements. The aggregate number of shares of our common stock we could be required to issue to Ascentage and the University of Michigan pursuant to the library agreement, the APG1252 license agreement, and any additional license agreements we enter into pursuant to the library agreement is capped at 1,333,338 shares.

APG1252 License Agreement

In conjunction with the library agreement, we entered into our first license agreement with Ascentage, which grants us the right to develop and commercialize an Ascentage compound known as APG1252 on the template license terms described above, including up to $38.0 million of potential cash milestone payments and low-single digit royalties. Under the APG1252 license agreement, Ascentage retains the right to manufacture APG1252 compounds for use in our licensed products. In connection with the APG1252 license agreement, we issued 533,335 shares of our common stock as an upfront license fee to Ascentage and the University of Michigan, in the proportion described above. The APG1252 license agreement may be terminated by either party due to the other party's uncured material breach of the APG1252 license agreement, and we may terminate for convenience on a licensed product-by-licensed product basis.

Research Agreement

In conjunction with the library agreement we also entered into a research services agreement with Ascentage under which we provide $500,000 per year in funding to Ascentage for the further development of Bcl-2 inhibitor compounds, which we retain the right to access under the library agreement. The research agreement has a term of up to four years from the effective date of February 2, 2016, provided that the research agreement may be terminated by us for convenience after the first year, by either party due to the other party's uncured material breach, and by Ascentage if we fail to make the $500,000 payment in any given year.

UBX1967 License Agreement

In January 2019, we entered into our second license agreement with Ascentage granting rights to UBX1967 (which Ascentage calls APG1197) on the template license terms described above, including up to $38.0 million of potential cash milestone payments and low-single digit royalties. Under the terms of this license agreement, Ascentage

has granted us exclusive development and commercialization rights and non-exclusive manufacturing rights to UBX1967 for all non-oncology indications outside of Greater China. Inside Greater China, we will be obligated to develop, manufacture and commercialize UBX1967 through a joint venture with Ascentage. The UBX1967 license agreement also grants us the right to continue our preclinical development efforts with another Ascentage-controlled Bcl-2 inhibitor compound. In the event we wish to pursue clinical development of the additional compound as well as UBX1967, we will be required to enter into a separate license agreement with Ascentage on the template license terms described above. In connection with the UBX1967 license agreement, we will issue 106,666 shares of common stock to Ascentage and 26,667 shares if common stock to the University of Michigan as an upfront license fee in early 2019. The UBX1967 License Agreement may be terminated by either party due to an uncured material breach of the agreement but the other party, and we may terminate for convenience on a licensed product-by-licensed product basis.

Additional License Agreements

We are party to three additional license agreements that support our senescence-related patent portfolio. These agreements are with The John Hopkins University, or JHU, an entity affiliated with the Mayo Clinic, or Mayo, and the Buck Institute for Research on Aging, or Buck, and provide us with a worldwide, exclusive, sublicensable license under those counter-parties' rights to a patent family that is co-owned by JHU, Buck, Mayo and us to develop and commercialize licensed products, including for the treatment of senescence-related diseases in therapeutic areas including osteoarthritis, ophthalmology, and pulmonary disease.

Under our November 2016 license with JHU, which relates to patents that are relevant only to osteoarthritis indications, we may be obligated to make development and sales milestone payments to JHU in the form of equity (22,033 shares of our common stock) and cash (of up to $2.6 million in the aggregate), to pay JHU a low-single digit percentage of certain sublicensing revenue, and to pay JHU a running royalty payment of less than 1% on net sales, in all cases, with respect to licensed products for the treatment of osteoarthritis, which we refer to as Royalty Products. Our obligation to pay running royalties to JHU under the agreement is subject to a non-material minimum annual royalty, and may continue on a country-by-country basis until such time as neither the manufacture, sale, or use of such Royalty Product would infringe a valid claim of a licensed patent in the applicable country. Our agreement with JHU continues on a country-by-country basis until the expiration of the last to expire licensed patent in such country (or until twenty years after the effective date if no licensed patent issues in such country). We may terminate the agreement for convenience (as a whole, with respect to a licensed product, or with respect to a particular licensed patent). Either party may terminate the agreement for the other party's uncured material breach or bankruptcy or insolvency-related events.

Under our June 2013 license with Mayo, we may be obligated to make development and sales milestone payments to Mayo of up to $10.8 million in the aggregate, to pay Mayo a percentage of certain sublicensing revenue that is between the high-single digits and the low-teens, and to pay Mayo running royalty payments ranging from less than 1% to low-single digit percentages on net sales of licensed products. Our obligation to pay running royalties to Mayo under the agreement is subject to a non-material minimum annual royalty and could potentially extend until January 1, 2037. We also issued 677,966 shares of our common stock to Mayo under this agreement. Our agreement with Mayo continues until the later of (i) the expiration of the last valid claim within the licensed patents and (ii) 13 years after first commercial sale of the first licensed product. We may terminate the agreement for convenience, and either party may terminate the agreement for the other party's uncured material breach.

Under our January 2017 license with Buck, which includes similar rights to a second patent family that is co-owned only by Buck and us, we may be obligated to make development and sales milestone payments to Buck of up to $5.4 million in the aggregate, to pay Buck a mid-single digit percentage of certain sublicensing revenue, and to pay Buck running royalty payments ranging from less than 1% to low-single digit percentages on net sales of licensed products. Our obligation to pay running royalties to Buck under the agreement is subject to a non-material minimum annual royalty and could potentially extend until January 1, 2037. We also issued 132,203 shares of our common stock to Buck under this agreement. The term of our license agreement with Buck continues until the expiration of all our payment obligations to Buck thereunder. We may terminate the agreement for convenience, and either party may terminate the agreement for the other party's uncured material breach.

Employees

As of March 1, 2019, we had 106 employees, all of whom were full-time. Greater than 65% of our employees hold advanced degrees. The majority of our employees work in our Brisbane, California, facility. None of our employees is represented by a labor union or a collective bargaining agreement.

Facilities

Our corporate headquarters are located in Brisbane, California, where we currently lease approximately 39,000 square feet of office and laboratory space pursuant to a lease dated May 13, 2016. Although this facility is sufficient for our current needs, we will require additional space by the end of 2019 to accommodate our anticipated growth. Therefore, on February 28, 2019, we entered into a lease for a new facility which we anticipate will be ready for occupancy during the fourth quarter of 2019. The new facility is located in South San Francisco, California, and is comprised of approximately 62,000 square feet of office and laboratory space. The new lease has a term of 10 years from the lease commence date. Substantially all our employees work at our current facility and will also work at the new facility.

Legal Proceedings

We are not currently involved in any litigation or legal proceedings that, in management's opinion, are likely to have any material adverse effect on our company. While we know of no imminent legal action in which we are likely to be involved, we may in the future become engaged in litigation or other legal proceedings. Regardless of the outcome, litigation can have an adverse impact due to defense fees, settlement costs, demands on management attention, and other concerns.

Financial Information About Segments

We view our operations and manage our business as one reportable segment. See Note 1 in the Notes to Financial Statements included in this Annual Report on Form 10 K. Additional information required by this item is incorporated herein by reference to Part II, Item 6, "Selected Financial Data."

About Unity

We were incorporated in the State of Delaware on March 30, 2009. Our registered trademarks include UNITY BIOTECHNOLOGY®. Other service marks, trademarks and trade names referred to in this document are the property of their respective owners.

Available Information

We are subject to the information requirements of the Securities Exchange Act of 1934, as amended, and we therefore file periodic reports, proxy statements and other information with the SEC relating to our business, financial statements and other matters. The SEC maintains an Internet site, *www.sec.gov*, that contains reports, proxy statements and other information regarding issuers such as Unity.

For more information about Unity, including free access to our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports, visit our website, *www.unitybiotechnology.com*. The information found on or accessible through our website is not incorporated into, and does not form a part of, this Form 10-K.

Item 1A. Risk Factors.

This Annual Report on Form 10-K contains forward-looking information based on our current expectations. Because our business is subject to many risks and our actual results may differ materially from any forward-looking statements made by or on behalf of us, this section includes a discussion of important factors that could affect our business, operating results, financial condition and the trading price of our common stock. This discussion should be read in conjunction with the other information in this Annual Report on Form 10-K, including our condensed financial statements and the notes accompanying those financial statements and "Management's Discussion and Analysis of Financial Condition and Results of Operations". The occurrence of any of the events or developments described below could have a material adverse effect on our business, results of operations, financial condition, prospects and stock price. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business.

Risks Related to Our Limited Operating History, Financial Condition, and Capital Requirements

We are a clinical-stage biopharmaceutical company with a limited operating history and no products approved for commercial sale. We have incurred significant losses since our inception, and we anticipate that we will continue to incur losses for the foreseeable future, which, together with our limited operating history, make it difficult to assess our future viability.

We are a clinical-stage biopharmaceutical company with a limited operating history. Biopharmaceutical product development is a highly speculative undertaking and involves a substantial degree of risk. We have not yet sought approval for commercial sale of any products and therefore have no products approved for commercial sale and have not generated any revenue from contracts with customers and have incurred losses in each year since our inception in March 2009. We have only a limited operating history upon which you can evaluate our business and prospects. In addition, we have limited experience and have not yet demonstrated an ability to successfully overcome many of the risks and uncertainties frequently encountered by companies in new and rapidly evolving fields, particularly in the biopharmaceutical industry. We initiated a Phase 1 clinical study of UBX0101, a potent senolytic small-molecule inhibitor of the MDM2/p53 interaction, in osteoarthritic patients in the second quarter of 2018. We have not yet submitted an Investigational New Drug, or IND, application or initiated a clinical study for any of our other drug candidates.

We have had significant operating losses since our inception. Our net loss for the years ended December 31, 2018 and 2017, was approximately $76.4 million and $44.7 million, respectively. As of December 31, 2018, we had an accumulated deficit of $163.3 million. Substantially all of our losses have resulted from expenses incurred in connection with our research and development programs and from general and administrative costs associated with our operations. We expect to continue to incur losses for the foreseeable future, and we anticipate these losses will increase as we continue to develop our drug candidates, conduct clinical studies and pursue research and development activities. Even if we achieve profitability in the future, we may not be able to sustain profitability in subsequent periods. Our prior losses, combined with expected future losses, have had and will continue to have an adverse effect on our stockholders' equity and working capital.

We will require substantial additional financing to achieve our goals, and a failure to obtain this capital when needed on acceptable terms, or at all, could force us to delay, limit, reduce or terminate our product development, other operations or commercialization efforts.

Since our inception, we have invested a significant portion of our efforts and financial resources in research and development activities. Preclinical studies and clinical studies for our drug candidates and additional research and development activities to discover and develop new drug candidates will require substantial funds to complete. As of December 31, 2018, we had capital resources consisting of cash, cash equivalents, and marketable securities of $171.1 million. In March and April 2018, we sold and issued an aggregate of 3,913,425 shares of our Series C convertible preferred stock at $15.3317 per share for net cash proceeds to us of approximately $59.9 million. In May 2018, we completed our initial public offering, or IPO, and received net proceeds of $75.9 million, after deducting underwriting discounts, commissions and offering expenses payable by us. We believe that we will continue to expend substantial resources for the foreseeable future in connection with the preclinical and clinical development of our lead drug candidates, UBX0101 and UBX1967, and the discovery and/or development of any other drug candidates we may choose to pursue. These expenditures will include costs associated with conducting preclinical studies and clinical studies, obtaining regulatory approvals, and manufacturing and supply, as well as marketing and selling any products

approved for sale. In addition, other unanticipated costs may arise. Because the outcome of any preclinical study or clinical study is highly uncertain, we cannot reasonably estimate the actual amounts necessary to successfully complete the development and commercialization of our lead drug candidates or any future drug candidates.

Based on our current operating plans, we expect our existing capital resources will fund our planned operating expenses into 2021. However, our operating plans may change as a result of many factors currently unknown to us, and we may need to seek additional funds sooner than planned, through public or private equity or debt financings or other sources, such as strategic collaborations. Such financing may result in dilution to stockholders, the imposition of burdensome debt covenants and repayment obligations, or other restrictions that may affect our business. In addition, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans.

Our future capital requirements depend on many factors, including:

- the scope, progress, results and costs of researching and developing UBX0101, UBX1967 or any other drug candidates, and conducting preclinical studies and clinical studies, including our ongoing Phase 1 clinical study of UBX0101, which was initiated in the second quarter of 2018;
- the timing of, and the costs involved in, obtaining regulatory approvals for our lead drug candidates or any future drug candidates;
- the number and characteristics of any additional drug candidates we develop or acquire;
- the timing and amount of any milestone payments we are required to make pursuant to our license agreements;
- the cost of manufacturing our lead drug candidates or any future drug candidates and any products we successfully commercialize;
- the cost of building a sales force in anticipation of product commercialization;
- the cost of commercialization activities if our lead drug candidates or any future drug candidates are approved for sale, including marketing, sales and distribution costs;
- our ability to maintain existing, and establish new, strategic collaborations, licensing or other arrangements and the financial terms of any such agreements, including the timing and amount of any future milestone, royalty or other payments due under any such agreement;
- any product liability or other lawsuits related to our products;
- the expenses needed to attract, hire and retain skilled personnel;
- the costs associated with being a public company;
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing our intellectual property portfolio; and
- the timing, receipt and amount of sales of any future approved products, if any.

Additional funds may not be available when we need them, on terms that are acceptable to us, or at all. If adequate funds are not available to us on a timely basis, we may be required to:

- delay, limit, reduce or terminate preclinical studies, clinical studies or other development activities for our lead drug candidates or any future drug candidate;
- delay, limit, reduce or terminate our research and development activities; or
- delay, limit, reduce or terminate our efforts to establish manufacturing and sales and marketing capabilities or other activities that may be necessary to commercialize our lead drug candidates or any future drug candidate, or reduce our flexibility in developing or maintaining our sales and marketing strategy.

We also could choose or be required to seek funds through arrangements with collaborators or others that may require us to relinquish rights to some of our technologies or drug candidates that we would otherwise pursue on our own. We do not expect to realize revenue from sales of products or royalties from licensed products in the foreseeable future, if at all, and unless and until our drug candidates are clinically tested, approved for commercialization and

successfully marketed. To date, we have primarily financed our operations through the sale of debt and equity securities. We will be required to seek additional funding in the future and currently intend to do so through collaborations, public or private equity offerings or debt financings, credit or loan facilities or a combination of one or more of these funding sources. Our ability to raise additional funds will depend on financial, economic and other factors, many of which are beyond our control. Additional funds may not be available to us on acceptable terms or at all. If we raise additional funds by issuing equity securities, our stockholders will suffer dilution and the terms of any financing may adversely affect the rights of our stockholders. In addition, as a condition to providing additional funds to us, future investors may demand, and may be granted, rights superior to those of existing stockholders. Debt financing, if available, is likely to involve restrictive covenants limiting our flexibility in conducting future business activities, and, in the event of insolvency, debt holders would be repaid before holders of our equity securities received any distribution of our corporate assets.

Due to the significant resources required for the development of our drug candidates, we must prioritize development of certain drug candidates and/or certain disease indications. We may expend our limited resources on candidates or indications that do not yield a successful product and fail to capitalize on drug candidates or indications that may be more profitable or for which there is a greater likelihood of success.

We plan to continue to develop a pipeline of drug candidates to treat age-related diseases and extend human healthspan. Our clinical development strategy is initially focused on the development of senolytic medicines designed to be administered locally into diseased tissue and we are currently advancing programs in musculoskeletal, ophthalmologic, and pulmonary disorders. We are also in the early stages of developing senolytic medicines that could be administered systemically to treat additional age-related diseases, such as kidney disease, liver disease, and neurological disorders. In addition to our efforts to eliminate senescent cells, we are also advancing other programs with the potential to extend human healthspan, including the administration of circulating youth factors.

We seek to maintain a process of prioritization and resource allocation among our programs to maintain a balance between aggressively advancing lead programs in identified indications and exploring additional indications and/or mechanisms related to diseases of aging. However, due to the significant resources required for the development of our drug candidates, we must focus on specific diseases and disease pathways and decide which drug candidates to pursue and the amount of resources to allocate to each. Our near-term objective is to demonstrate in our clinical studies that local treatment with senolytic molecules can alter the course of an age-related disease. To accomplish this goal, we initiated a Phase 1 clinical study of UBX0101 in osteoarthritic patients in the second quarter of 2018. In addition, we plan to submit an ophthalmology IND application for UBX1967 in early 2020 that, if accepted, would enable us to pursue multiple indications in age-related eye diseases.

Our decisions concerning the allocation of research, development, collaboration, management and financial resources toward particular drug candidates or therapeutic areas may not lead to the development of any viable commercial product and may divert resources away from better opportunities. Similarly, our potential decisions to delay, terminate or collaborate with third parties in respect of certain programs may subsequently also prove to be suboptimal and could cause us to miss valuable opportunities. If we make incorrect determinations regarding the viability or market potential of any of our programs or drug candidates or misread trends in the biopharmaceutical industry, particularly those segments focused on aging and healthspan, our business, financial condition and results of operations could be materially adversely affected. As a result, we may fail to capitalize on viable commercial products or profitable market opportunities, be required to forego or delay pursuit of opportunities with other drug candidates or other diseases and disease pathways that may later prove to have greater commercial potential than those we choose to pursue, or relinquish valuable rights to such drug candidates through collaboration, licensing or other royalty arrangements in cases where it may have been more advantageous for us to invest additional resources to retain development and commercialization rights.

Our operating results may fluctuate significantly, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations.

Our quarterly and annual operating results may fluctuate significantly, making it difficult for us to predict our future operating results. These fluctuations may occur due to a variety of factors, many of which are outside of our control and may be difficult to predict, including:

- the timing, cost and level of investment in research, development and, if approved, commercialization activities relating to our drug candidates, which may change from time to time;
- the timing and status of enrollment for our clinical studies;
- the cost of manufacturing our drug candidates, as well as building out our supply chain, which may vary depending on the quantity of production and the terms of our agreements with manufacturers;
- expenditures we may incur to acquire, develop or commercialize additional drug candidates and technologies;
- timing and amount of any milestone, royalty or other payments due under any collaboration or license agreement;
- future accounting pronouncements or changes in our accounting policies;
- the timing and success or failure of preclinical studies and clinical studies for our drug candidates or competing drug candidates, or any other change in the competitive landscape of our industry, including consolidation among our competitors or partners;
- the timing of receipt of approvals for our drug candidates from regulatory authorities in the United States, or U.S., and internationally;
- coverage and reimbursement policies with respect to our drug candidates, if approved, and potential future drugs that compete with our products; and
- the level of demand for our products, if approved, which may vary significantly over time.

The cumulative effects of these factors could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance.

This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If our revenue or operating results fall below the expectations of analysts or investors or below any forecasts we may provide to the market, or if the forecasts we provide to the market are below the expectations of analysts or investors, the price of our common stock could decline substantially. Such a stock price decline could occur even when we have met any previously publicly stated revenue or earnings guidance we may provide.

Risks Related to Our Business

Our core therapeutic approach to extending human healthspan is based on our understanding of cellular senescence. Utilizing senolytic molecules to treat age-related diseases is a novel therapeutic approach, which exposes us to unforeseen risks and makes it difficult to predict the time and cost of drug development and potential for regulatory approval.

We are developing a pipeline of drug candidates to treat age-related diseases and extend human healthspan. Our foundational science and lead drug candidates are based on senescence biology. We believe that we can develop drug candidates capable of eliminating accumulated senescent cells and their associated Senescence Associated Secretory Phenotype, or SASP, when administered locally. We are also in the early stages of developing senolytic medicines that could be administered systemically to treat additional other age-related diseases such as kidney disease, liver disease, and neurological disorders. In our development efforts we intend to explore senolytic medicines that use multiple modalities. However, this approach to treating age-related diseases is novel and the scientific research that forms the basis of our efforts to develop senolytic medicines is ongoing. We currently have only limited data, and no conclusive evidence in humans, that the accumulation of senescent cells and resulting exposure to SASP factors is the underlying cause of tissue damage and dysfunction associated with many age-related diseases. The indications we

are currently pursuing, including osteoarthritis, or OA, of the knee, and several age-related eye diseases, are believed to be heterogeneous and multifactorial diseases that are driven by multiple SASP factors. While evidence suggests that, in each case, individual SASP factors contribute to the disease, it is our belief that suppression of multiple factors is likely needed for a meaningful clinical benefit to be observed and we do not yet know which of the SASP factors will be most important in each disease or whether we can measure them. We have only just begun testing our senolytic molecules in humans and our current data is largely limited to animal models and preclinical cell lines, the results of which may not translate into humans. As such, there can be no assurances that even if we are able to develop senolytic medicines capable of eliminating senescent cells and their associated SASP, that such medicines would safely and effectively treat age-related diseases.

Further, while cellular senescence is a natural occurring biological process, the administration of senolytic medicines to eliminate accumulated senescent cells and their associated SASP in humans is untested and may potentially harm healthy tissue or result in unforeseen safety events. We may also ultimately discover that our senolytic molecules do not possess certain properties required for therapeutic effectiveness, or that even if found to be effective in one type of tissue, that such molecules will be effective in other tissues. In addition, given the novel nature of this therapeutic approach, designing preclinical and clinical studies to demonstrate the effect of senolytic medicines is complex and exposes us to unforeseen risks. For example, our attempts to replicate early *in vivo* findings in different animal models proved to be challenging, particularly with respect to our efforts to mimic a disease like OA, which develops over a long period of time in humans. In addition, the scientific evidence to support the feasibility of developing systemic senolytic medicines is both preliminary and limited. We may spend substantial funds attempting to develop these drug candidates and never succeed in doing so.

No regulatory authority has granted approval for a senolytic medicine. As such, we believe the U.S. Food and Drug Administration, or the FDA, has limited experience with biological senescence, which may increase the complexity, uncertainty and length of the clinical development and regulatory approval process for our drug candidates. We may never receive approval to market and commercialize any drug candidate. Even if we obtain regulatory approval, the approval may be for targets, disease indications or patient populations that are not as broad as we intended or desired or may require labeling that includes significant use or distribution restrictions or safety warnings. We may be required to perform additional or unanticipated clinical studies to obtain approval or be subject to post-marketing testing requirements to maintain regulatory approval. If our senolytic molecules prove to be ineffective, unsafe or commercially unviable, our entire senolytic platform and pipeline would have little, if any, value, which would have a material and adverse effect on our business, financial condition, results of operations and prospects.

Our business is dependent on the successful development, regulatory approval, and commercialization of our drug candidates, all of which are in early stages of development and none of which have been tested in a human subject.

We have no products approved for sale and all of our drug candidates are in early stages of development. Our first lead drug candidate, UBX0101, is currently being evaluated in a Phase 1 clinical study and we will commence IND-enabling studies with our other lead drug candidate, UBX1967 in the first quarter of 2019. UBX0101 is the only drug candidate that we have administered to humans, and as such, we face significant translational risk with our drug candidates. We may also be required by the FDA or similar foreign regulatory agencies to conduct additional preclinical studies beyond those planned to support the commencement of clinical trials. For example, one of the properties of UBX1967 is a sustained exposure in ocular tissues of interest after intravitreal injection. After engaging the FDA regarding the design of IND-enabling studies for UBX1967, we determined that the duration of these non-clinical studies will be longer than originally anticipated due to the pharmacokinetic profile, which will delay the filing of our IND until early 2020.

The success of our business, including our ability to finance our company and generate any revenue in the future, will primarily depend on the successful development, regulatory approval and commercialization of drug candidates from our senolytic medicine pipeline. However, given our early stage of development, it may be many years, if we succeed at all, before we have demonstrated the safety and efficacy of a drug candidate sufficient to warrant approval for commercialization.

In the future, we may also become dependent on other drug candidates that we may develop or acquire. The clinical and commercial success of our drug candidates and future drug candidates will depend on a number of factors, including the following:

- our ability to raise any additional required capital on acceptable terms, or at all;
- our ability to complete IND-enabling studies and successfully submit IND or comparable applications;
- timely completion of our preclinical studies and clinical studies, which may be significantly slower or cost more than we currently anticipate and will depend substantially upon the performance of third-party contractors;
- whether we are required by the FDA or similar foreign regulatory agencies to conduct additional clinical studies or other studies beyond those planned to support the approval and commercialization of our drug candidates or any future drug candidates;
- acceptance of our proposed indications and primary endpoint assessments relating to the proposed indications of our drug candidates by the FDA and similar foreign regulatory authorities;
- our ability to demonstrate to the satisfaction of the FDA and similar foreign regulatory authorities the safety, efficacy and acceptable risk to benefit profile of our lead drug candidates or any future drug candidates;
- the prevalence, duration and severity of potential side effects or other safety issues experienced with our drug candidates or future approved products, if any;
- the timely receipt of necessary marketing approvals from the FDA and similar foreign regulatory authorities;
- achieving and maintaining, and, where applicable, ensuring that our third-party contractors achieve and maintain compliance with our contractual obligations and with all regulatory requirements applicable to our lead drug candidates or any future drug candidates or approved products, if any;
- the willingness of physicians, operators of clinics and patients to utilize or adopt any of our future drug candidates to treat age-related diseases;
- the ability of third parties with whom we contract to manufacture adequate clinical study and commercial supplies of our lead drug candidates or any future drug candidates, to remain in good standing with regulatory agencies and develop, validate and maintain commercially viable manufacturing processes that are compliant with current good manufacturing practices, or cGMP;
- our ability to successfully develop a commercial strategy and thereafter commercialize our drug candidates or any future drug candidates in the U.S., and internationally, if approved for marketing, reimbursement, sale and distribution in such countries and territories, whether alone or in collaboration with others;
- the convenience of our treatment or dosing regimen;
- acceptance by physicians, payors and patients of the benefits, safety and efficacy of our drug candidates or any future drug candidates, if approved, including relative to alternative and competing treatments;
- patient demand for our drug candidates, if approved;
- our ability to establish and enforce intellectual property rights in and to our drug candidates or any future drug candidates; and
- our ability to avoid third-party patent interference, intellectual property challenges or intellectual property infringement claims.

These factors, many of which are beyond our control, could cause us to experience significant delays or be unable to obtain regulatory approvals or commercialize our drug candidates. Even if regulatory approvals are obtained, we may never achieve success in commercializing any of our drug candidates. Accordingly, we cannot provide assurances that we will be able to generate sufficient revenue through the sale of our drug candidates or any future drug candidates to continue our business or achieve profitability.

We may be unable to obtain regulatory approval for our drug candidates under applicable regulatory requirements. The denial or delay of any such approval would delay commercialization of our drug candidates and adversely impact our potential to generate revenue, our business and our results of operations.

To gain approval to market our drug candidates, we must provide the FDA and foreign regulatory authorities with clinical data that adequately demonstrate the safety and efficacy of the drug candidate for the intended indication applied for in the applicable regulatory filing. For our senolytic medicines, we must also demonstrate that eliminating senescent cells and the associated SASP will lead to the improvement of well-defined and measurable endpoints.

We have not previously submitted a new drug application, or NDA, or biologics license application, or BLA, to the FDA, or similar approval filings to comparable foreign regulatory authorities. An NDA, BLA or other relevant regulatory filing must include extensive preclinical and clinical data and supporting information to establish that the drug candidate is safe, pure and potent for each desired indication. The NDA, BLA or other relevant regulatory filing must also include significant information regarding the chemistry, manufacturing and controls for the product.

The research, testing, manufacturing, labeling, approval, sale, marketing and distribution of drug and biologic products are subject to extensive regulation by the FDA and other regulatory authorities in the U.S. and other countries, and such regulations differ from country to country. We are not permitted to market our drug candidates in the U.S. or in any foreign countries until they receive the requisite approval from the applicable regulatory authorities of such jurisdictions.

The FDA or any foreign regulatory bodies can delay, limit or deny approval of our drug candidates for many reasons, including:

- our inability to demonstrate to the satisfaction of the FDA or the applicable foreign regulatory body that any of our drug candidates is safe and effective for the requested indication;
- the FDA's or the applicable foreign regulatory agency's disagreement with our trial protocol or the interpretation of data from preclinical studies or clinical studies;
- our inability to demonstrate that the clinical and other benefits of any of our drug candidates outweigh any safety or other perceived risks;
- the FDA's or the applicable foreign regulatory agency's requirement for additional preclinical studies or clinical studies;
- the FDA's or the applicable foreign regulatory agency's failure to approve the formulation, labeling or specifications of UBX0101, UBX1967, or any of our future drug candidates;
- the FDA's or the applicable foreign regulatory agency's failure to approve the manufacturing processes or facilities of third-party manufacturers upon which we rely; or
- the potential for approval policies or regulations of the FDA or the applicable foreign regulatory agencies to significantly change in a manner that renders our clinical data insufficient for approval.

Of the large number of biopharmaceutical and pharmaceutical products in development, only a small percentage successfully complete the FDA or other regulatory approval processes and are commercialized.

In addition, disruptions at the FDA and other regulatory agencies that are unrelated to our company or our products could also cause delays to the regulatory approval process for our products. For example, over the last several years, including in December 2018 and January 2019, the U.S. government has shut down several times and certain regulatory agencies, including the FDA, have had to furlough critical employees and stop critical activities. If a prolonged government shutdown occurs, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions.

Even if we eventually complete clinical testing and receive approval from the FDA or applicable foreign agencies for any of our drug candidates, the FDA or the applicable foreign regulatory agency may grant approval contingent on the performance of costly additional clinical studies which may be required after approval. The FDA or the applicable foreign regulatory agency also may approve our lead drug candidates for a more limited indication or a

narrower patient population than we originally requested, and the FDA, or applicable foreign regulatory agency, may not approve our drug candidates with the labeling that we believe is necessary or desirable for the successful commercialization of such drug candidates.

Any delay in obtaining, or inability to obtain, applicable regulatory approval would delay or prevent commercialization of our drug candidates and would materially adversely impact our business and prospects.

Clinical development involves a lengthy and expensive process with an uncertain outcome, and results of earlier studies and trials may not be predictive of future trial results.

Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure or delay can occur at any time during the clinical study process. Success in preclinical studies and early clinical studies does not ensure that later clinical studies will be successful. A number of companies in the biotechnology, and pharmaceutical industries have suffered significant setbacks in clinical studies, even after positive results in earlier preclinical studies or clinical studies. These setbacks have been caused by, among other things, preclinical findings made while clinical studies were underway and safety or efficacy observations made in clinical studies, including previously unreported adverse events. The results of our preclinical animal studies or studies in *ex vivo* human tissues may not be predictive of the results of outcomes in human clinical studies. For example, our senolytic molecules may demonstrate different chemical and pharmacological properties in patients than they do in laboratory studies or may interact with human biological systems in unforeseen or harmful ways. Additionally, with respect to our initial clinical trials for our senolytic drug candidates. we may be unable to accurately predict whether or in what manner we will be able to measure the impact of a drug candidate on relevant SASP factors. The indications we are currently pursuing, including OA of the knee and several age-related eye diseases, are believed to be heterogeneous and multifactorial diseases that are driven by multiple SASP factors. While evidence suggests that, in each case, individual SASP factors contribute to the disease, it is our belief that suppression of multiple factors is likely needed for a meaningful clinical benefit to be observed and we do not yet know which of the SASP factors will be most important in each disease or whether we can measure them. For example, in the initial phase, or Part A, of our Phase 1 clinical of UBX0101 in patients with osteoarthritis of the knees, we sought to collect synovial fluid via simple aspiration; however, a number of patients had an insufficient amount of fluid for sampling. This led us to expand the study to include a second phase, or Part B, with an additional cohort of patients to provide an increased sample size for SASP assessment by allowing saline lavage in those patients who do not have adequate fluid to collect via simple aspiration.

Drug candidates in later stages of clinical studies may fail to show the desired pharmacological properties or safety and efficacy traits despite having progressed through preclinical studies and initial clinical studies. Notwithstanding any promising results in earlier studies, we cannot be certain that we will not face similar setbacks. Even if we are able to initiate and complete clinical studies, the results may not be sufficient to obtain regulatory approval for our drug candidates.

Although we initiated our Phase 1 clinical study of UBX0101 in osteoarthritis in the second quarter of 2018, we may experience delays in obtaining the FDA's authorization to initiate further clinical studies under the IND for UBX0101, completing ongoing studies of our other drug candidates and initiating our planned studies and trials. Additionally, we cannot be certain that studies or trials for our drug candidates will begin on time, not require redesign, enroll an adequate number of subjects on time or be completed on schedule, if at all. Clinical studies can be prolonged, delayed or terminated for a variety of reasons, including:

- the FDA or comparable foreign regulatory authorities disagreeing with or requiring changes to the design or implementation of our clinical studies;
- delays in obtaining regulatory approval to commence or continue a trial;
- reaching agreement on acceptable terms with prospective contract research organizations, or CROs, and clinical study sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- obtaining institutional review board, or IRB, approval at each trial site;
- recruiting an adequate number of suitable patients to participate in a trial;
- having subjects complete a trial or return for post-treatment follow-up;

- encountering difficulties in gathering the range of biological data from patients needed to fully assess the impact of our drug candidates, such as the challenges we encountered in collecting synovial fluid from OA patients in Part A of our Phase 1 clinical study;
- clinical sites deviating from trial protocol or dropping out of a trial;
- addressing subject safety concerns that arise during the course of a trial;
- adding a sufficient number of clinical study sites; or
- obtaining sufficient product supply of drug candidate for use in preclinical studies or clinical studies from third-party suppliers.

We may experience numerous adverse or unforeseen events during, or as a result of, preclinical studies and clinical studies that could delay or prevent our ability to receive marketing approval or commercialize our drug candidates, including:

- clinical studies of our drug candidates may produce negative or inconclusive results, and we may decide, or regulators may require us, to modify clinical study design, conduct additional clinical studies or abandon drug development programs, including all of our senolytic programs;
- the number of patients required for clinical studies of our drug candidates may be larger than we anticipate, enrollment in these clinical studies may be slower than we anticipate or participants may drop out of these clinical studies at a higher rate than we anticipate;
- our third-party contractors may fail to comply with regulatory requirements, fail to maintain adequate quality controls, or be unable to provide us with sufficient product supply to conduct and complete preclinical studies or clinical studies of our drug candidates in a timely manner, or at all;
- we or our investigators might have to suspend or terminate clinical studies of our drug candidates for various reasons, including non-compliance with regulatory requirements, a finding that our drug candidates have undesirable side effects or other unexpected characteristics, or a finding that the participants are being exposed to unacceptable health risks;
- the cost of clinical studies of our drug candidates may be greater than we anticipate;
- the quality of our drug candidates or other materials necessary to conduct preclinical studies or clinical studies of our drug candidates may be inadequate;
- regulators may revise the requirements for approving our drug candidates, or such requirements may not be as we anticipate; and
- future collaborators may conduct clinical studies in ways they view as advantageous to them but that are suboptimal for us.

If we are required to conduct additional clinical studies or other testing of our drug candidates beyond those that we currently contemplate, if we are unable to successfully complete clinical studies of our drug candidates or other testing, if the results of these trials or tests are not positive or are only moderately positive, or if there are safety concerns, we may:

- incur unplanned costs;
- be delayed in obtaining marketing approval for our drug candidates or not obtain marketing approval at all;
- obtain marketing approval in some countries and not in others;
- obtain marketing approval for indications or patient populations that are not as broad as intended or desired
- obtain marketing approval with labeling that includes significant use or distribution restrictions or safety warnings, including boxed warnings;
- be subject to additional post-marketing testing requirements; or
- have the treatment removed from the market after obtaining marketing approval.

We could also encounter delays if a clinical study is suspended or terminated by us, by the IRBs of the institutions in which such trials are being conducted, by the Data Safety Monitoring Board, or DSMB, for such trial or by the FDA or other regulatory authorities. Such authorities may suspend or terminate a clinical study due to a number of factors, including failure to conduct the clinical study in accordance with regulatory requirements or our clinical protocols, inspection of the clinical study operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a drug, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical study.

Further, conducting clinical studies in foreign countries, as we may do for certain of our drug candidates, presents additional risks that may delay completion of our clinical studies. These risks include the failure of enrolled patients in foreign countries to adhere to clinical protocol as a result of differences in healthcare services or cultural customs, managing additional administrative burdens associated with foreign regulatory schemes, as well as political and economic risks relevant to such foreign countries.

Principal investigators for our clinical studies 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 a regulatory authority concludes that the financial relationship may have affected the interpretation of the trial, the integrity of the data generated at the applicable clinical study site may be questioned and the utility of the clinical study itself may be jeopardized, which could result in the delay or rejection of the marketing application we submit. Any such delay or rejection could prevent or delay us from commercializing our current or future drug candidates.

If we experience termination or delays in the completion of any preclinical study or clinical study of our drug candidates, the commercial prospects of our drug candidates may be harmed, and our ability to generate revenues from any of these drug candidates will be delayed or unrealized. In addition, any delays in completing our clinical studies may increase our costs, slow down our drug candidate development and approval process and jeopardize our ability to commence product sales and generate revenues. Any of these occurrences may significantly harm our business, financial condition and prospects. In addition, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical studies may also ultimately lead to the denial of regulatory approval of our drug candidates. If one or more of our drug candidates or our senescence technology generally prove to be ineffective, unsafe or commercially unviable, our entire platform and pipeline would have little, if any, value, which would have a material and adverse effect on our business, financial condition, results of operations and prospects.

We may not be successful in our efforts to continue to create a pipeline of drug candidates or to develop commercially successful products. If we fail to successfully identify and develop additional drug candidates, our commercial opportunity may be limited.

We are committed to developing senolytic medicines that slow, halt or reverse age-related diseases and are currently advancing multiple senolytic molecules to address a variety of age-related diseases, including musculoskeletal, ophthalmologic and pulmonary disorders. As senolytic medicines are not limited to intervention by a single mode of action or molecular target, we believe that we can modulate a number of biologic pathways in order to trigger the beneficial elimination of senescent cells. However, our core therapeutic approach is based on our belief that the elimination of the accumulation of senescent cells and their accompanying SASP can treat a root cause of many diseases of aging, which may never be successfully validated in a human. The indications we are currently pursuing, including OA of the knee and several age-related eye diseases, are believed to be heterogeneous and multifactorial diseases that are driven by multiple SASP factors. While evidence suggests that, in each case, individual SASP factors contribute to the disease, it is our belief that suppression of multiple factors is likely needed for a meaningful clinical benefit to be observed and we do not yet know which of the SASP factors will be most important or whether we can measure them.

In addition, identifying, developing, obtaining regulatory approval and commercializing drug candidates for the treatment of age-related diseases will require substantial additional funding and is prone to the risks of failure inherent in drug development. Research programs to identify drug candidates also require substantial technical, financial and human resources, regardless of whether or not any drug candidates are ultimately identified, and even if

our preclinical research programs initially show promise in identifying potential drug candidates, they may fail to yield drug candidates for clinical development.

In addition, we believe that many age-related diseases will require the development of senolytic medicines that can be administered systemically and that the full potential to extend human healthspan will require additional non-senescence based therapeutic approaches. As a result, we intend to continue to dedicate resources and effort to better understand fundamental aging mechanisms, such as loss of circulating youth factors and mitochondrial dysfunction and translate these insights into human medicines. However, the scientific evidence to support the feasibility of developing systemic senolytic medicines is both preliminary and limited and our non-senolytic programs are based on emerging science. We therefore cannot provide any assurance that we will be able to successfully identify or acquire additional drug candidates, advance any of these additional drug candidates through the development process, successfully commercialize any such additional drug candidates, if approved, or assemble sufficient resources to identify, acquire, develop or, if approved, commercialize additional drug candidates. If we are unable to successfully identify, acquire, develop and commercialize additional drug candidates, our commercial opportunity may be limited.

It may be many years, if ever, before we develop senolytic medicines capable of systemic administration to treat systemic diseases of aging.

We are focusing initially on the development of senolytic molecules for age-related diseases that can be treated by means of local treatment and intend to continue our research into the development of systemic senolytic medicines. However, we are still at a very early stage of developing locally administered senolytic medicines, and we must establish proof-of-concept in humans for local treatment before developing a systemically administered senolytic medicine. We still face significant risks in the development of localized treatments. As a result, it may be many years before we have sufficient human data and scientific understanding to effectively pursue a systemically administered senolytic medicine, if ever.

If we encounter difficulties enrolling patients in our clinical studies, our clinical development activities could be delayed or otherwise adversely affected.

The timely completion of clinical studies 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. We may experience difficulties in patient enrollment in our clinical studies for a variety of reasons. The enrollment of patients depends on many factors, including:

- the patient eligibility criteria defined in the protocol;
- the size of the patient population required for analysis of the trial's primary endpoints;
- the proximity of patients to trial sites;
- the design of the trial;
- our ability to recruit clinical study investigators with the appropriate competencies and experience;
- clinicians' and patients' perceptions as to the potential advantages of the drug candidate being studied in relation to other available therapies, including any new drugs that may be approved for the indications we are investigating; and
- our ability to obtain and maintain patient consents.

In addition, our clinical studies may compete with other clinical studies for drug candidates that are in the same therapeutic areas as our drug candidates, and this competition will reduce the number and types of patients available to us, because some patients who might have opted to enroll in our trials may instead opt to enroll in a trial being conducted by one of our competitors. Since the number of qualified clinical investigators is limited, we may conduct some of our clinical studies at the same clinical study sites that some of our competitors use, which will reduce the number of patients who are available for our clinical studies in such clinical study site.

Further, the administration of senolytic medicines designed to eliminate senescent cells and associated SASP may result in unforeseen events, including by harming healthy tissues. As a result, it is possible that safety concerns

could negatively affect patient enrollment among the patient populations that we intend to treat, including among those in indications with a low risk of mortality. Delays in patient enrollment may result in increased costs or may affect the timing or outcome of the planned clinical studies, which could prevent completion of these trials and adversely affect our ability to advance the development of our drug candidates.

Our drug candidates may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval, limit the commercial profile of an approved label, or result in significant negative consequences following marketing approval, if any.

Undesirable side effects caused by our drug candidates could cause us or regulatory authorities to interrupt, delay or halt clinical studies and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or comparable foreign regulatory authorities. Other than in our Phase 1 clinical study of UBX0101, which was initiated in the second quarter of 2018, senolytic medicines designed to eliminate senescent cells and associated SASP have never been tested in humans. As a result, any clinical studies we initiate could reveal a high and unacceptable severity and prevalence of side effects, and it is possible that patients enrolled in such clinical studies could respond in unexpected ways. For instance, in preclinical *in vivo* animal and *ex vivo* human tissue studies, our senolytic molecules have exhibited clearance of senescent cells, however the elimination of accumulated senescent cells may result in unforeseen events, including by harming healthy cells or tissues. In addition, the entry by cells into a senescent state is a natural biological process that we believe may have protective effects, such as halting the proliferation of damaged cells. The treatment of tissues with senolytic molecules could interfere with such protective processes.

If unacceptable side effects arise in the development of our drug candidates, we, the FDA, the IRBs at the institutions in which our studies are conducted, or the DSMB could suspend or terminate our clinical studies or the FDA or comparable foreign regulatory authorities could order us to cease clinical studies or deny approval of our drug candidates for any or all targeted indications. Treatment-related side effects could also affect patient recruitment or the ability of enrolled patients to complete any of our clinical studies or result in potential product liability claims. In addition, these side effects may not be appropriately recognized or managed by the treating medical staff. We expect to have to train medical personnel using our drug candidates to understand the side effect profiles for our clinical studies and upon any commercialization of any of our drug candidates. Inadequate training in recognizing or managing the potential side effects of our drug candidates could result in patient injury or death. Any of these occurrences may harm our business, financial condition and prospects significantly.

In addition, even if we successfully advance any of our drug candidates into and through clinical studies, such trials will likely only include a limited number of subjects and limited duration of exposure to our drug candidates. As a result, we cannot be assured that adverse effects of our drug candidates will not be uncovered when a significantly larger number of patients are exposed to the drug candidate. Further, clinical studies may not be sufficient to determine the effect and safety consequences of taking our drug candidates over a multi-year period.

If any of our drug candidates receives marketing approval, and we or others later identify undesirable side effects caused by such products, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw their approval of the product;
- we may be required to recall a product or change the way such product is administered to patients;
- additional restrictions may be imposed on the marketing of the particular product or the manufacturing processes for the product or any component thereof;
- regulatory authorities may require the addition of labeling statements, such as a “black box” warning or a contraindication;
- we may be required to implement a Risk Evaluation and Mitigation Strategy, or REMS, or create a Medication Guide outlining the risks of such side effects for distribution to patients;
- we could be sued and held liable for harm caused to patients;

- the product may become less competitive; and
- our reputation may suffer.

Any of the foregoing events could prevent us from achieving or maintaining market acceptance of the particular drug candidate, if approved, and result in the loss of significant revenues to us, which would materially and adversely affect our results of operations and business. In addition, if one or more of our drug candidates or our senescence approach generally prove to be unsafe, our entire platform and pipeline could be affected, which would have a material and adverse effect on our business, financial condition, results of operations and prospects.

Even if our lead drug candidates or any future drug candidates obtain regulatory approval, they may fail to achieve the broad degree of physician and patient adoption and use necessary for commercial success.

Even if one or more of our drug candidates receive FDA or other regulatory approvals, the commercial success of any of our current or future drug candidates will depend significantly on the broad adoption and use of the resulting product by physicians and patients for approved indications. Our drug candidates may not be commercially successful for a variety of reasons, including: competitive factors, pricing or physician preference, reimbursement by insurers, the degree and rate of physician and patient adoption of our current or future drug candidates. If approved, the commercial success of our drug candidates will depend on a number of factors, including:

- the clinical indications for which the product is approved and patient demand for approved products that treat those indications;
- the safety and efficacy of our product as compared to other available therapies;
- the availability of coverage and adequate reimbursement from managed care plans, insurers and other healthcare payors for any of our drug candidates that may be approved;
- acceptance by physicians, operators of clinics and patients of the product as a safe and effective treatment;
- physician and patient willingness to adopt a new therapy over other available therapies to treat approved indications;
- overcoming any biases physicians or patients may have toward particular therapies for the treatment of approved indications;
- proper training and administration of our drug candidates by physicians and medical staff;
- public misperception regarding the use of our therapies, or public bias against “anti-aging” companies;
- patient satisfaction with the results and administration of our drug candidates and overall treatment experience, including, for example, the convenience of any dosing regimen;
- the cost of treatment with our drug candidates in relation to alternative treatments and reimbursement levels, if any, and willingness to pay for the product, if approved, on the part of insurance companies and other third-party payers, physicians and patients;
- the willingness of patients to pay for certain of our products, if approved;
- the revenue and profitability that our products may offer a physician as compared to alternative therapies;
- the prevalence and severity of side effects;
- limitations or warnings contained in the FDA-approved labeling for our products;
- the willingness of physicians, operators of clinics and patients to utilize or adopt our products as a solution;
- any FDA requirement to undertake a REMS;
- the effectiveness of our sales, marketing and distribution efforts;
- adverse publicity about our products or favorable publicity about competitive products; and
- potential product liability claims.

We cannot assure you that our current or future drug candidates, if approved, will achieve broad market acceptance among physicians and patients. Any failure by our drug candidates that obtain regulatory approval to achieve market acceptance or commercial success would adversely affect our results of operations.

We rely on third-party suppliers to manufacture preclinical supplies of our drug candidates and we intend to rely on third parties to produce clinical supplies as well as commercial supplies of any approved product. The loss of these suppliers, or their failure to comply with applicable regulatory requirements or to provide us with sufficient quantities at acceptable quality levels or prices, or at all, would materially and adversely affect our business.

We do not have the infrastructure or capability internally to manufacture supplies of our drug candidates or the materials necessary to produce our drug candidates for use in the conduct of our preclinical studies or clinical studies, and we lack the internal resources and the capability to manufacture any of our drug candidates on a preclinical, clinical or commercial scale. The facilities used by our contract manufacturers to manufacture our drug candidates are subject to various regulatory requirements and may be subject to the inspection of the FDA or other regulatory authorities. We do not control the manufacturing process of, and are completely dependent on, our contract manufacturing partners for compliance with the regulatory requirements, known as cGMPs. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or comparable regulatory authorities in foreign jurisdictions, we may not be able to rely on their manufacturing facilities for the manufacture or our drug candidates. In addition, we have limited control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or a comparable foreign regulatory authority finds these facilities inadequate for the manufacture of our drug candidates or if such facilities are subject to enforcement action in the future or are otherwise inadequate, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market our drug candidates.

We currently intend to supply all of our drug candidates in all territories for our clinical development programs. We currently rely on third parties at key stages in our supply chain. For instance, the supply chains for our lead drug candidates involve several manufacturers that specialize in specific operations of the manufacturing process, specifically, raw materials manufacturing, drug substance manufacturing, and drug product manufacturing. As a result, the supply chain for the manufacturing of our drug candidates is complicated and we expect the logistical challenges associated with our supply chain to grow more complex as our drug candidates such as UBX0101 and UBX1967, progress through the clinical trial process.

We do not have any control over the process or timing of the acquisition or manufacture of materials by our manufacturers. We generally do not begin a preclinical study and we do not intend to initiate any clinical studies unless we believe we have access to a sufficient supply of a drug candidate to complete such study or trial. In addition, any significant delay in, or quality control problems with respect to, the supply of a drug candidate, or the raw material components thereof, for an ongoing study or trial could considerably delay completion of our preclinical studies or future clinical studies, product testing and potential regulatory approval of our drug candidates.

We have not yet engaged any manufacturers for the commercial supply of our drug candidates. Although we intend to enter into such agreements prior to commercial launch of any of our drug candidates, we may be unable to enter into any such agreement or do so on commercially reasonable terms, which could have a material adverse impact upon our business. Moreover, if there is a disruption to one or more of our third-party manufacturers' or suppliers' relevant operations, or if we are unable to enter into arrangements for the commercial supply of our drug candidates, we will have no other means of producing our lead drug candidates until they restore the affected facilities or we or they procure alternative manufacturing facilities or sources of supply. Our ability to progress our preclinical and clinical programs could be materially and adversely impacted if any of the third-party suppliers upon which we rely were to experience a significant business challenge, disruption or failure due to issues such as financial difficulties or bankruptcy, issues relating to other customers such as regulatory or quality compliance issues, or other financial, legal, regulatory or reputational issues.

Additionally, any damage to or destruction of our third-party manufacturers' or suppliers' facilities or equipment may significantly impair our ability to manufacture our drug candidates on a timely basis.

In addition, to manufacture our lead drug candidates in the quantities that we believe would be required to meet anticipated market demand, our third-party manufacturers would likely need to increase manufacturing capacity and, in some cases, we would need to secure alternative sources of commercial supply, which could involve significant challenges and may require additional regulatory approvals. In addition, the development of commercial-scale manufacturing capabilities may require us and our third-party manufacturers to invest substantial additional funds and hire and retain the technical personnel who have the necessary manufacturing experience. Neither we nor our third-party manufacturers may successfully complete any required increase to existing manufacturing capacity in a timely manner, or at all. If our manufacturers or we are unable to purchase the raw materials necessary for the manufacture of our drug candidates on acceptable terms, at sufficient quality levels, or in adequate quantities, if at all, the commercial launch of our lead drug candidates or any future drug candidates would be delayed or there would be a shortage in supply, which would impair our ability to generate revenues from the sale of such drug candidates, if approved.

We depend on third-party suppliers for key raw materials used in our manufacturing processes, and the loss of these third-party suppliers or their inability to supply us with adequate raw materials could harm our business.

We rely on third-party suppliers for the raw materials required for the production of our drug candidates. Our dependence on these third-party suppliers and the challenges we may face in obtaining adequate supplies of raw materials involve several risks, including limited control over pricing, availability, and quality and delivery schedules. As a small company, our negotiation leverage is limited and we are likely to get lower priority than our competitors who are larger than we are. We cannot be certain that our suppliers will continue to provide us with the quantities of these raw materials that we require or satisfy our anticipated specifications and quality requirements. Any supply interruption in limited or sole sourced raw materials could materially harm our ability to manufacture our drug candidates until a new source of supply, if any, could be identified and qualified. We may be unable to find a sufficient alternative supply channel in a reasonable time or on commercially reasonable terms. Any performance failure on the part of our suppliers could delay the development and potential commercialization of our drug candidates, including limiting supplies necessary for clinical studies and regulatory approvals, which would have a material adverse effect on our business.

We rely on third parties in the conduct of critical portions of our preclinical studies and intend to rely on third parties in the conduct of critical portions of our future clinical studies. If these third parties do not successfully carry out their contractual duties, fail to comply with applicable regulatory requirements or meet expected deadlines, we may be unable to obtain regulatory approval for our drug candidates.

We currently do not have the ability to independently conduct preclinical studies that comply with the regulatory requirements known as good laboratory practice, or GLP, requirements. We also do not currently have the ability to independently conduct any clinical studies. The FDA and regulatory authorities in other jurisdictions require us to comply with regulations and standards, commonly referred to as good clinical practice, or GCP, requirements for conducting, monitoring, recording and reporting the results of clinical studies, in order to ensure that the data and results are scientifically credible and accurate and that the trial subjects are adequately informed of the potential risks of participating in clinical studies. We rely on medical institutions, clinical investigators, contract laboratories and other third parties, such as CROs, to conduct GLP-compliant preclinical studies and GCP-compliant clinical studies on our drug candidates properly and on time. While we have agreements governing their activities, we control only certain aspects of their activities and have limited influence over their actual performance. The third parties with whom we contract for execution of our GLP-compliant preclinical studies and our GCP-compliant clinical studies play a significant role in the conduct of these studies and trials and the subsequent collection and analysis of data. These third parties are not our employees and, except for restrictions imposed by our contracts with such third parties, we have limited ability to control the amount or timing of resources that they devote to our programs. Although we rely on these third parties to conduct our GLP-compliant preclinical studies and GCP-compliant clinical studies, we remain responsible for ensuring that each of our GLP preclinical studies and clinical studies is conducted in accordance with its investigational plan and protocol and applicable laws and regulations, and our reliance on the CROs does not relieve us of our regulatory responsibilities.

Many of the third parties with whom we contract may also have relationships with other commercial entities, potentially including our competitors, for whom they may also be conducting clinical studies or other drug

development activities that could harm our competitive position. If the third parties conducting our preclinical studies or our clinical studies do not adequately perform their contractual duties or obligations, experience significant business challenges, disruptions or failures, do not meet expected deadlines, terminate their agreements with us or need to be replaced, or if the quality or accuracy of the data they obtain is compromised due to their failure to adhere to our protocols or to GCPs, or for any other reason, we may need to enter into new arrangements with alternative third parties. This could be difficult, costly or impossible, and our preclinical studies or clinical studies may need to be extended, delayed, terminated or repeated. As a result we may not be able to obtain regulatory approval in a timely fashion, or at all, for the applicable drug candidate, our financial results and the commercial prospects for our drug candidates would be harmed, our costs could increase, and our ability to generate revenues could be delayed.

We face significant competition in an environment of rapid technological and scientific change, and our drug candidates, if approved, will face significant competition and our failure to effectively compete may prevent us from achieving significant market penetration. Most of our competitors have significantly greater resources than we do and we may not be able to successfully compete.

The biotechnology and pharmaceutical industries in particular are characterized by rapidly advancing technologies, intense competition and a strong emphasis on developing proprietary therapeutics. Numerous companies are engaged in the development, patenting, manufacturing and marketing of healthcare products competitive with those that we are developing. We face competition from a number of sources, such as pharmaceutical companies, generic drug companies, biotechnology companies and academic and research institutions, many of which have greater financial resources, marketing capabilities, sales forces, manufacturing capabilities, research and development capabilities, clinical study expertise, intellectual property portfolios, experience in obtaining patents and regulatory approvals for drug candidates and other resources than we do. Some of the companies that offer competing products also have a broad range of other product offerings, large direct sales forces and long-term customer relationships with our target physicians, which could inhibit our market penetration efforts. Mergers and acquisitions in the pharmaceutical industry may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical study sites and patient registration for clinical studies, as well as in acquiring technologies complementary to, or necessary for, our programs. In addition, certain of our drug candidates, if approved, may compete with other products that treat age-related diseases, including over-the-counter, or OTC, treatments, for a share of some patients' discretionary budgets and for physicians' attention within their clinical practices.

We are aware of other companies seeking to develop treatments to prevent or treat aging-related diseases through various biological pathways, including Calico and resTORbio. Within our three leading senolytic programs, our drug candidates would compete against current therapies from a wide range of companies and technologies, including:

- Musculoskeletal diseases, including osteoarthritis: current standard of care treatments (though not disease-modifying and focused on symptom management) include anti-inflammatory drugs (Ibruprofen, Diclofenac, Celecoxib), analgesic pain relief (Acetaminophen), or narcotic pain relief (Tramadol).
- Ophthalmology diseases, including diabetic retinopathy: potentially disease-modifying therapeutics are being sold and developed by several pharmaceutical and biotechnology companies, including Roche/Genentech and Regeneron.
- Pulmonary disease, including idiopathic pulmonary fibrosis: therapeutics are being sold and developed by several pharmaceutical and biotechnology companies and academic institutions, including Genentech, Boehringer-Ingelheim, Cytokinetics and Mallinckrodt, and are in various stages of clinical studies.

Further, we believe that potential competitors may be able to develop senolytic medicines utilizing well-established molecules and pathways, which could enable the development of competitive drug candidates utilizing the same cellular senescence biological theories.

Certain alternative treatments offered by competitors may be available at lower prices and may offer greater efficacy or better safety profiles. Furthermore, currently approved products could be discovered to have application

for treatment of age-related diseases generally, which could give such products significant regulatory and market timing advantages over any of our drug candidates. Our competitors also may obtain FDA, EMA or other regulatory approval for their products more rapidly than we may obtain approval for ours and may obtain orphan product exclusivity from the FDA for indications our drug candidates are targeting, which could result in our competitors establishing a strong market position before we are able to enter the market. Newly developed systemic or non-systemic treatments that replace existing therapies that currently are only utilized in patients suffering from severe disease may also have lessened side effects or reduced prices compared to current therapies, which make them more attractive for patients suffering from mild to moderate disease. Even if a generic or OTC product is less effective than our drug candidates, it may be more quickly adopted by physicians and patients than our competing drug candidates based upon cost or convenience.

The successful commercialization of our drug candidates will depend in part on the extent to which governmental authorities and health insurers establish adequate coverage, reimbursement levels and pricing policies. Failure to obtain or maintain coverage and adequate reimbursement for our drug candidates, if approved, could limit our ability to market those products and decrease our ability to generate revenue.

The availability and adequacy of coverage and reimbursement by governmental healthcare programs such as Medicare and Medicaid, private health insurers and other third-party payors are essential for most patients to be able to afford prescription medications such as our drug candidates, assuming FDA approval. Our ability to achieve acceptable levels of coverage and reimbursement for products by governmental authorities, private health insurers and other organizations will have an effect on our ability to successfully commercialize our drug candidates. Assuming we obtain coverage for our drug candidates by a third-party payor, the resulting reimbursement payment rates may not be adequate or may require co-payments that patients find unacceptably high. We cannot be sure that coverage and reimbursement in the U.S., the EU or elsewhere will be available for our drug candidates or any product that we may develop, and any reimbursement that may become available may be decreased or eliminated in the future.

Third-party payors increasingly are challenging prices charged for pharmaceutical products and services, and many third-party payors may refuse to provide coverage and reimbursement for particular drugs or biologics when an equivalent generic drug, biosimilar or a less expensive therapy is available. It is possible that a third-party payor may consider our drug candidates as substitutable and only offer to reimburse patients for the cost of the less expensive product. Even if we show improved efficacy or improved convenience of administration with our drug candidates, pricing of existing third- party therapeutics may limit the amount we will be able to charge for our drug candidates. These payors may deny or revoke the reimbursement status of a given product or establish prices for new or existing marketed products at levels that are too low to enable us to realize an appropriate return on our investment in our drug candidates. If reimbursement is not available or is available only at limited levels, we may not be able to successfully commercialize our drug candidates, and may not be able to obtain a satisfactory financial return on our investment in the development of drug candidates.

There is significant uncertainty related to the insurance coverage and reimbursement of newly- approved products. In the U.S., third-party payors, including private and governmental payors, such as the Medicare and Medicaid programs, play an important role in determining the extent to which new drugs and biologics will be covered. The Medicare and Medicaid programs increasingly are used as models in the U.S. for how private payors and other governmental payors develop their coverage and reimbursement policies for drugs and biologics. Some third-party payors may require pre-approval of coverage for new or innovative devices or drug therapies before they will reimburse healthcare providers who use such therapies. We cannot predict at this time what third-party payors will decide with respect to the coverage and reimbursement for our drug candidates.

No uniform policy for coverage and reimbursement for products exists among third-party payors in the U.S.. Therefore, coverage and reimbursement for products can differ significantly from payor to payor. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our drug candidates to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance. Furthermore, rules and regulations regarding reimbursement change frequently, in some cases on short notice, and we believe that changes in these rules and regulations are likely.

Outside the U.S., international operations are generally subject to extensive governmental price controls and other market regulations, and we believe the increasing emphasis on cost-containment initiatives in Europe and other countries have and will continue to put pressure on the pricing and usage of our drug candidates. In many countries, the prices of medical products are subject to varying price control mechanisms as part of national health systems. Other countries allow companies to fix their own prices for medical products, 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 drug candidates. Accordingly, in markets outside the U.S., the reimbursement for our drug candidates may be reduced compared with the U.S. and may be insufficient to generate commercially-reasonable revenue and profits.

Moreover, increasing efforts by governmental and third-party payors in the U.S. and abroad to cap or reduce healthcare costs may cause such organizations to limit both coverage and the level of reimbursement for newly approved products and, as a result, they may not cover or provide adequate payment for our drug candidates. We expect to experience pricing pressures in connection with the sale of our drug candidates due to the trend toward managed health care, the increasing influence of health maintenance organizations and additional legislative changes. The downward pressure on healthcare costs in general, particularly prescription drugs and biologics and surgical procedures and other treatments, has become intense. As a result, increasingly high barriers are being erected to the entry of new products.

We currently have no sales organization. If we are unable to establish sales capabilities on our own or through third parties, we may not be able to market and sell our drug candidates effectively in the U.S. and foreign jurisdictions, if approved, or generate product revenue.

We currently do not have a marketing or sales organization. In order to commercialize our drug candidates in the U.S. and foreign jurisdictions, we must build our marketing, sales, distribution, managerial and other non-technical capabilities or make arrangements with third parties to perform these services, and we may not be successful in doing so. If any of our drug candidates receive regulatory approval, we expect to establish a sales organization with technical expertise and supporting distribution capabilities to commercialize each such drug candidate, which will be expensive and time consuming. We have no prior experience in the marketing, sale and distribution of pharmaceutical products and there are significant risks involved in building and managing a sales organization, including our ability to hire, retain, and incentivize qualified individuals, generate sufficient sales leads, provide adequate training to sales and marketing personnel, and effectively manage a geographically dispersed sales and marketing team. Any failure or delay in the development of our internal sales, marketing and distribution capabilities would adversely impact the commercialization of these products. We may choose to collaborate with third parties that have direct sales forces and established distribution systems, either to augment our own sales force and distribution systems or in lieu of our own sales force and distribution systems. If we are unable to enter into such arrangements on acceptable terms or at all, we may not be able to successfully commercialize our drug candidates. If we are not successful in commercializing our drug candidates or any future drug candidates, either on our own or through arrangements with one or more third parties, we may not be able to generate any future product revenue and we would incur significant additional losses.

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

As of March 1, 2019, we had 106 full-time employees. We will need to continue to expand our managerial, operational, finance and other resources in order to manage our operations and clinical studies, continue our development activities and commercialize our lead drug candidates or any future drug candidates. Our management and personnel, systems and facilities currently in place may not be adequate to support this future growth. Our need to effectively execute our growth strategy requires that we:

- manage our clinical studies effectively;
- identify, recruit, retain, incentivize and integrate additional employees, including sales personnel;
- manage our internal research, development and operational efforts effectively while carrying out our contractual obligations to third parties; and
- continue to improve our operational, financial and management controls, reports systems and procedures.

If we fail to attract and retain senior management and key scientific personnel, we may be unable to successfully develop our lead drug candidates or any future drug candidates, conduct our clinical studies and commercialize our current or any future drug candidates.

Our success depends in part on our continued ability to attract, retain and motivate highly qualified management, clinical and scientific personnel. We are highly dependent upon our senior management, particularly our President, Nathaniel E. David, and our Chief Executive Officer, Keith R. Leonard, as well as our senior scientists and other members of our senior management team. The loss of services of any of these individuals could delay or prevent the successful development of our product pipeline, initiation or completion of our planned clinical studies or the commercialization of our lead drug candidates or any future drug candidates.

Competition for qualified personnel in the biotechnology and pharmaceuticals field is intense due to the limited number of individuals who possess the skills and experience required by our industry. We will need to hire additional personnel as we expand our clinical development and if we initiate commercial activities. We may not be able to attract and retain quality personnel on acceptable terms, or at all. In addition, to the extent we hire personnel from competitors, we may be subject to allegations that they have been improperly solicited or that they have divulged proprietary or other confidential information, or that their former employers own their research output.

If product liability lawsuits are brought against us, we may incur substantial liabilities and may be required to limit commercialization of our current or future drug candidates.

We face an inherent risk of product liability as a result of the clinical testing of our drug candidates and will face an even greater risk if we commercialize any products. For example, we may be sued if any product we develop allegedly causes injury or is found to be otherwise unsuitable during product testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, and a failure to warn of dangers inherent in the product, negligence, strict liability, and a breach of warranty. Claims could also be asserted under state consumer protection acts. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of our drug candidates.

Even a successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in:

- decreased demand for our current or future drug candidates;
- injury to our reputation;
- withdrawal of clinical study participants;
- costs to defend the related litigation;
- a diversion of management's time and our resources;
- substantial monetary awards to trial participants or patients;
- regulatory investigations, product recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenue; and
- the inability to commercialize our current or any future drug candidates.

Our inability to obtain and maintain sufficient product liability insurance at an acceptable cost and scope of coverage to protect against potential product liability claims could prevent or inhibit the commercialization of our current or any future drug candidates we develop. We currently carry product liability insurance covering our clinical studies. Although we maintain such insurance, any claim that may be brought against us could result in a court judgment or settlement in an amount that is not covered, in whole or in part, by our insurance or that is in excess of the limits of our insurance coverage. Our insurance policies also have various exclusions and deductibles, and we may be subject to a product liability claim for which we have no coverage. We will have to pay any amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient funds to pay such amounts. Moreover, in the future, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses. If and

when we obtain approval for marketing any of our drug candidates, we intend to expand our insurance coverage to include the sale of such drug candidate; however, we may be unable to obtain this liability insurance on commercially reasonable terms or at all.

Our existing collaborations as well as additional collaboration arrangements that we may enter into in the future may not be successful, which could adversely affect our ability to develop and commercialize our drug candidates.

We utilize external collaborations and currently maintain approximately ten active early-stage research and discovery focused collaborations. In the future, we may seek additional collaboration arrangements for the commercialization, or potentially for the development, of certain of our drug candidates depending on the merits of retaining commercialization rights for ourselves as compared to entering into collaboration arrangements. To the extent that we decide to enter into additional collaboration agreements in the future, we may face significant competition in seeking appropriate collaborators. Moreover, collaboration arrangements are complex and time-consuming to negotiate, document, implement and maintain and challenging to manage. We may not be successful in our efforts to prudently manage our existing collaborations or to enter new ones should we chose to do so. The terms of new collaborations, or other arrangements that we may establish may not be favorable to us.

The success of our collaboration arrangements will depend heavily on the efforts and activities of our collaborators and partners. Collaborations are subject to numerous risks, which may include risks that:

- collaborators and partners have significant discretion in determining the efforts and resources that they will apply to collaborations and they may not devote the level of effort or resources we expect;
- collaborators may not pursue development and commercialization of our drug candidates or may elect not to continue or renew development or commercialization programs based on clinical study results, changes in their strategic focus due to their acquisition of competitive products or their internal development of competitive products, availability of funding or other external factors, such as a business combination that diverts resources or creates competing priorities;
- collaborators may delay clinical studies, provide insufficient funding for a clinical study program, stop a clinical study, abandon a drug candidate, repeat or conduct new clinical studies or require a new formulation of a drug candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our products or drug candidates;
- a collaborator with marketing, manufacturing and distribution rights to one or more products may not commit sufficient resources to or otherwise not perform satisfactorily in carrying out these activities;
- we could grant exclusive rights to our collaborators that would prevent us from collaborating with others;
- collaborators may not properly maintain or defend our intellectual property rights or may use our intellectual property or proprietary information in a way that gives rise to actual or threatened litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential liability;
- disputes may arise between us and a collaborator that cause the delay or termination of the research, development or commercialization of our current or future drug candidates or that result in costly litigation or arbitration that diverts management attention and resources;
- collaborations may be terminated, resulting in a need for additional capital to pursue further development or commercialization of the applicable current or future drug candidates;
- collaborators may own or co-own intellectual property covering products that results from our collaborating with them, and in such cases, we would not have the exclusive right to develop or commercialize such intellectual property;
- disputes may arise with respect to the ownership of any intellectual property developed pursuant to our collaborations; and
- a collaborator’s sales and marketing activities or other operations may not be in compliance with applicable laws resulting in civil or criminal proceedings.

Unfavorable global economic or political conditions could adversely affect our business, financial condition or results of operations.

Our results of operations could be adversely affected by general conditions in the global economy and in the global financial markets. Furthermore, the market for products with the potential to treat age-related diseases, particularly those affecting large populations in a wide range of geographic locations, may be particularly vulnerable to unfavorable economic conditions. A global financial crisis or a global or regional political disruption could cause extreme volatility in the capital and credit markets. A severe or prolonged economic downturn or political disruption could result in a variety of risks to our business, including weakened demand for our lead drug candidates or any future drug candidates, if approved, and our ability to raise additional capital when needed on acceptable terms, if at all. A weak or declining economy or political disruption could also strain our manufacturers or suppliers, possibly resulting in supply disruption, or cause our customers to delay making payments for our services. Any of the foregoing could harm our business and we cannot anticipate all of the ways in which the political or economic climate and financial market conditions could adversely impact our business.

We or the third parties upon whom we depend may be adversely affected by earthquakes or other natural disasters and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.

Our corporate headquarters and other facilities are located in the San Francisco Bay Area, which in the past has experienced both severe earthquakes and wildfires. Although we carry earthquake insurance, it is limited in scope. Earthquakes, wildfires or other natural disasters could severely disrupt our operations, and have a material adverse effect on our business, results of operations, financial condition and prospects.

If a natural disaster, power outage or other event occurred that prevented us from using all or a significant portion of our headquarters, that damaged critical infrastructure, such as our enterprise financial systems or manufacturing resource planning and enterprise quality systems, or that otherwise disrupted operations, it may be difficult or, in certain cases, impossible, for us to continue our business for a substantial period of time. The disaster recovery and business continuity plans we have in place currently are limited and are unlikely to prove adequate in the event of a serious disaster or similar event. We may incur substantial expenses as a result of the limited nature of our disaster recovery and business continuity plans, which, particularly when taken together with our lack of earthquake insurance, could have a material adverse effect on our business.

Furthermore, integral parties in our supply chain are similarly vulnerable to natural disasters or other sudden, unforeseen and severe adverse events. If such an event were to affect our supply chain, it could have a material adverse effect on our business.

Significant disruptions of information technology systems or breaches of data security could materially adversely affect our business, results of operations and financial condition.

We collect and maintain information in digital form that is necessary to conduct our business, and we are increasingly dependent on information technology systems and infrastructure to operate our business. In the ordinary course of our business, we collect, store and transmit large amounts of confidential information, including intellectual property, proprietary business information and personal information. It is critical that we do so in a secure manner to maintain the confidentiality and integrity of such confidential information. We have established physical, electronic and organizational measures to safeguard and secure our systems to prevent a data compromise, and rely on commercially available systems, software, tools, and monitoring to provide security for our information technology systems and the processing, transmission and storage of digital information. We have also outsourced elements of our information technology infrastructure, and as a result a number of third-party vendors may or could have access to our confidential information. Our internal information technology systems and infrastructure, and those of our current and any future collaborators, contractors and consultants and other third parties on which we rely, are vulnerable to damage from computer viruses, malware, natural disasters, terrorism, war, telecommunication and electrical failures, cyber-attacks or cyber-intrusions over the Internet, attachments to emails, persons inside our organization, or persons with access to systems inside our organization.

The risk of a security breach or disruption, particularly through cyber-attacks or cyber intrusion, including by computer hackers, foreign governments and cyber terrorists, has generally increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased. In addition, the prevalent use of mobile devices that access confidential information increases the risk of data security breaches, which could lead to the loss of confidential information or other intellectual property. The costs to us to mitigate network security problems, bugs, viruses, worms, malicious software programs and security vulnerabilities could be significant, and while we have implemented security measures to protect our data security and information technology systems, our efforts to address these problems may not be successful, and these problems could result in unexpected interruptions, delays, cessation of service and other harm to our business and our competitive position. If such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our product development programs. For example, the loss of clinical study data from completed or ongoing or planned clinical studies could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data.

Moreover, if a computer security breach affects our systems or results in the unauthorized release of personally identifiable information, our reputation could be materially damaged. In addition, such a breach may require notification to governmental agencies, the media or individuals pursuant to various federal and state privacy and security laws, if applicable, including the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Clinical Health Act of 2009, and its implementing rules and regulations, as well as regulations promulgated by the Federal Trade Commission and state breach notification laws. We would also be exposed to a risk of loss or litigation and potential liability, which could materially adversely affect our business, results of operations and financial condition.

Our employees and independent contractors, including principal investigators, consultants, commercial collaborators, service providers and other vendors may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements, which could have an adverse effect on our results of operations.

We are exposed to the risk that our employees and independent contractors, including principal investigators, consultants, any future commercial collaborators, service providers and other vendors may engage in misconduct or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or other unauthorized activities that violate the laws and regulations of the FDA and other similar regulatory bodies, including those laws that require the reporting of true, complete and accurate information to such regulatory bodies; manufacturing standards; U.S. federal and state healthcare fraud and abuse, data privacy laws and other similar non-U.S. laws; or laws that require the true, complete and accurate reporting of financial information or data. Activities subject to these laws also involve the improper use or misrepresentation of information obtained in the course of clinical studies, the creation of fraudulent data in our preclinical studies or clinical studies, or illegal misappropriation of product, which could result in regulatory sanctions and cause serious harm to our reputation. 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 be in compliance with such laws or regulations. In addition, we are subject to the risk that a person or government 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 and financial results, including, without limitation, the imposition of significant civil, criminal and administrative penalties, damages, monetary fines, disgorgements, possible exclusion from participation in Medicare, Medicaid and other U.S. healthcare programs, individual imprisonment, other sanctions, 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.

Our business involves the use of hazardous materials and we and our third-party manufacturers and suppliers must comply with environmental laws and regulations, which can be expensive and restrict how we do business.

Our research and development activities and our third-party manufacturers' and suppliers' activities involve the controlled storage, use and disposal of hazardous materials owned by us, including the components of our product and drug candidates and other hazardous compounds. We and any third-party manufacturers and suppliers we engage

are subject to numerous federal, state and local environmental, health and safety laws, regulations and permitting requirements, including those governing laboratory procedures; the generation, handling, use, storage, treatment, and disposal of hazardous and regulated materials and wastes; the emission and discharge of hazardous materials into the ground, air and water; and employee health and safety. Our operations involve the use of hazardous and flammable materials, including chemicals and biological and radioactive materials. Our operations also produce hazardous waste. In some cases, these hazardous materials and various wastes resulting from their use are stored at our and our manufacturers' facilities pending their use and disposal. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination, which could cause an interruption of our commercialization efforts, research and development efforts and business operations, environmental damage resulting in costly clean-up and liabilities under applicable laws and regulations governing the use, storage, handling and disposal of these materials and specified waste products.

Although we believe that the safety procedures utilized by our third-party manufacturers for handling and disposing of these materials generally comply with the standards prescribed by these laws and regulations, we cannot guarantee that this is the case or eliminate the risk of accidental contamination or injury from these materials. Under certain environmental laws, we could be held responsible for costs relating to any contamination at our current or past facilities and at third-party facilities. In such an event, we may be held liable for any resulting damages and such liability could exceed our resources and state or federal or other applicable authorities may curtail our use of certain materials and/or interrupt our business operations. 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.

Compliance with applicable environmental laws and regulations may be expensive, and current or future environmental laws and regulations may impair our research, product development and manufacturing efforts. In addition, we cannot entirely eliminate the risk of accidental injury or contamination from these materials or wastes. 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, this insurance may not provide adequate coverage against potential liabilities. We do not carry specific biological or hazardous waste insurance coverage, and our property, casualty, and general liability insurance policies specifically exclude coverage for damages and fines arising from biological or hazardous waste exposure or contamination. Accordingly, in the event of contamination or injury, we could be held liable for damages or be penalized with fines in an amount exceeding our resources, and our clinical studies or regulatory approvals could be suspended, which could have a material adverse effect on our business, results of operations and financial condition.

Risks Related to Intellectual Property

Our senolytic medicine platform and any future products that we commercialize could be alleged to infringe patent rights and other proprietary rights of third parties, which may require costly litigation and, if we are not successful, could cause us to pay substantial damages and/ or limit our ability to commercialize our products.

Our commercial success depends on our ability to develop, manufacture and market our senolytic medicines and future drug candidates and use our proprietary technology without infringing the patents and other proprietary rights of third parties. Intellectual property disputes can be costly to defend and may cause our business, operating results and financial condition to suffer. We operate in an industry with extensive intellectual property litigation. As the biopharmaceutical and pharmaceutical industries expand and more patents are issued, the risk increases that there may be patents issued to third parties that relate to our products and technology of which we are not aware or that we may need to challenge to continue our operations as currently contemplated.

Whether merited or not, we may face allegations that we have infringed the trademarks, copyrights, patents and other intellectual property rights of third parties, including patents held by our competitors or by non-practicing entities. We may also face allegations that our employees have misappropriated the intellectual property rights of their former employers or other third parties.

Litigation may make it necessary to defend ourselves by determining the scope, enforceability and validity of third-party proprietary rights, or to establish our proprietary rights. Regardless of whether claims that we are infringing patents or other intellectual property rights have merit, the claims can be time consuming, divert management attention

and financial resources and are costly to evaluate and defend. Results of any such litigation are difficult to predict and may require us to stop treating certain conditions, obtain licenses or modify our products and features while we develop non-infringing substitutes, or may result in significant settlement costs. For example, litigation can involve substantial damages for infringement (and if the court finds that the infringement was willful, we could be ordered to pay treble damages and the patent owner's attorneys' fees), and the court could prohibit us from selling or licensing our products unless the third party licenses rights to us, which it is not required to do at a commercially reasonable price or at all. If a license is available from a third party, we may have to pay substantial royalties, upfront fees or grant cross-licenses to intellectual property rights for our products. We may also have to redesign our products so they do not infringe third-party intellectual property rights, which may not be possible at all or may require substantial monetary expenditures and time, during which our products may not be available for manufacture, use, or sale.

In addition, patent applications in the U.S. and many international jurisdictions are typically not published until 18 months after the filing of certain priority documents (or, in some cases, are not published until they issue as patents) and publications in the scientific literature often lag behind actual discoveries. Thus, we cannot be certain that others have not filed patent applications or made public disclosures relating to our technology or our contemplated technology. A third party may have filed, and may in the future file, patent applications covering our products or technology similar to ours. Any such patent application may have priority over our patent applications or patents, which could further require us to obtain rights to issued patents covering such technologies. If another party has filed a U.S. patent application on inventions similar to ours, depending on whether the timing of the filing date falls under certain patent laws, we may have to participate in a priority contest (such as an interference proceeding) declared by the U.S. Patent and Trademark Office, to determine priority of invention in the U.S. The costs of patent and other proceedings could be substantial, and it is possible that such efforts would be unsuccessful if it is determined that the other party had independently arrived at the same or similar invention prior to our own invention, resulting in a loss of our U.S. patent position with respect to such inventions.

From time to time, we may be subject to legal proceedings and claims in the ordinary course of business with respect to intellectual property. Although we are not currently subject to any claims from third parties asserting infringement of their intellectual property rights, in the future, we may receive claims from third parties asserting infringement of their intellectual property rights. Future litigation may be necessary to establish our intellectual property rights or to defend ourselves by determining the scope, enforceability and validity of third-party intellectual property rights. There can be no assurance with respect to the outcome of any current or future litigation brought by or against us, and the outcome of any such litigation could have a material adverse impact on our business, operating results and financial condition. Litigation is inherently unpredictable and outcomes are uncertain. Further, as the costs and outcome of these types of claims and proceedings can vary significantly, it is difficult to estimate potential losses that may occur. Accordingly, we are unable at this time to estimate the effects of these potential future lawsuits on our financial condition, operations or cash flows.

Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. Even if resolved in our favor, litigation or other legal proceedings relating to intellectual property claims may cause us to incur significant expenses, and could distract our technical and management personnel from their normal responsibilities. 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 material adverse effect on the price of our common stock. Finally, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise the funds necessary to continue our operations.

If we are unable to obtain, maintain and enforce intellectual property protection directed to our senolytic medicine platform and any future technologies that we develop, others may be able to make, use, or sell products substantially the same as ours, which could adversely affect our ability to compete in the market.

As of March 2019, we own, co-own, or have an exclusive license or option in certain fields of use to more than 100 patents and pending applications in the United States and foreign jurisdictions. This portfolio includes 27 issued U.S. patents, 33 pending U.S. applications (including 13 provisional applications), and over 30 granted or pending applications in foreign jurisdictions.

We have not pursued or maintained, and may not pursue or maintain in the future, patent protection for our products in every country or territory in which we may sell our products. In addition, we cannot be sure that any of our pending patent applications or pending trademark applications will issue or that, if issued, they will issue in a form that will be advantageous to us. The U.S. Patent and Trademark Office, or the USPTO, international patent offices or judicial bodies may deny or significantly narrow claims made under our patent applications and our issued patents may be successfully challenged, may be designed around, or may otherwise be of insufficient scope to provide us with protection for our commercial products. Further, the USPTO, international trademark offices or judicial bodies may deny our trademark applications and, even if published or registered, these trademarks may not effectively protect our brand and goodwill. Like patents, trademarks also may be successfully opposed or challenged.

We cannot be certain that the steps we have taken will prevent unauthorized use or unauthorized reverse engineering of our technology. Moreover, third parties may independently develop technologies that are competitive with ours and such competitive technologies may or may not infringe our intellectual property. The enforcement of our intellectual property rights also depends on the success of our legal actions against these infringers in the respective country or forum, but these actions may not be successful. As with all granted intellectual property, such intellectual property may be challenged, invalidated or circumvented, may not provide specific protection and/or may not prove to be enforceable in actions against specific alleged infringers.

The market for biopharmaceuticals, pharmaceuticals and treatments for age-related diseases is highly competitive and subject to rapid technological change. Our success depends, in part, upon our ability to maintain a competitive position in the development and protection of technologies and products for use in these fields and upon our ability to obtain, maintain and enforce our intellectual property rights in connection therewith. We seek to obtain and maintain patents and other intellectual property rights to restrict the ability of others to market products that misappropriate our technology and/or infringe our intellectual property to unfairly and illegally compete with our products. If we are unable to protect our intellectual property and proprietary rights, our competitive position and our business could be harmed, as third parties may be able to make, use, or sell products that are substantially the same as ours without incurring the sizeable development and licensing costs that we have incurred, which would adversely affect our ability to compete in the market.

We use a combination of patents, trademarks, know-how, confidentiality procedures and contractual provisions to protect our proprietary technology. However, these protections may not be adequate and may not provide us with any competitive advantage. For example, patents may not issue from any of our currently pending or any future patent applications, and our issued patents and any future patents that may issue may not survive legal challenges to their scope, validity or enforceability, or provide significant protection for us.

If we or one of our current or future collaborators were to initiate legal proceedings against a third party to enforce a patent covering one of our lead drug candidates or future drug candidates, the defendant could counterclaim that our patent is invalid and/or unenforceable. In patent litigation in the U.S., defendant counterclaims alleging invalidity and/or unenforceability are commonplace.

Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness or non-enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO, or made a misleading statement, during prosecution. Third parties may also raise similar claims before the USPTO, even outside the context of litigation. The outcome following legal assertions of invalidity and unenforceability is unpredictable.

With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on our drug candidates. Such a loss of patent protection would have a material adverse impact on our business.

Even if our patents are determined by a court to be valid and enforceable, they may not be interpreted sufficiently broadly to prevent others from marketing products similar to ours or designing around our patents. For example, third parties may be able to make products that are similar to ours but that are not covered by the claims of our patents. Third parties may assert that we or our licensors were not the first to make the inventions covered by our

issued patents or pending patent applications. The claims of our issued patents or patent applications when issued may not cover our proposed commercial technologies or the future products that we develop. We may not have freedom to commercialize unimpeded by the patent rights of others. Third parties may have dominating, blocking, or other patents relevant to our technology of which we are not aware. There may be prior public disclosures or art that could be deemed to invalidate one or more of our patent claims. Further, we may not develop additional proprietary technologies in the future, and, if we do, they may not be patentable.

Patent law can be highly uncertain and involve complex legal and factual questions for which important principles remain unresolved. In the U.S. and in many international jurisdictions, policy regarding the breadth of claims allowed in patents can be inconsistent. The U.S. Supreme Court and the Court of Appeals for the Federal Circuit have made, and will likely continue to make, changes in how the patent laws of the U.S. are interpreted. Similarly, international courts have made, and will likely continue to make, changes in how the patent laws in their respective jurisdictions are interpreted. We cannot predict future changes in the interpretation of patent laws or changes to patent laws that might be enacted into law by U.S. and international legislative bodies. Those changes may materially affect our patents, our ability to obtain patents or the patents and patent applications of our licensors.

Patent reform legislation in the U.S. could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents. For example, on September 16, 2011, the Leahy-Smith America Invents Act, or Leahy-Smith Act, was signed into law. The Leahy-Smith Act included a number of significant changes to U.S. patent law. These include provisions that affect the way patent applications are prosecuted, redefine prior art, may affect patent litigation, and switch the U.S. patent system from a "first-to-invent" system to a "first-to-file" system. Under a "first-to-file" system, assuming the other requirements for patentability are met, the first inventor to file a patent application generally will be entitled to the patent on an invention regardless of whether another inventor had made the invention earlier. The U.S. Patent and Trademark Office recently developed new regulations and procedures to govern administration of the

Leahy-Smith Act, and many of the substantive changes to patent law associated with the Leahy-Smith Act, and in particular, the first-to-file provisions, only became effective on March 16, 2013. The Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, which could have a material adverse effect on our business and financial condition.

In addition, we have a number of international patents and patent applications, and expect to continue to pursue patent protection in many of the significant markets in which we intend to do business. The laws of some international jurisdictions may not protect intellectual property rights to the same extent as laws in the U.S., and many companies have encountered significant difficulties in obtaining, protecting, and defending such rights in international jurisdictions. If we encounter such difficulties or we are otherwise precluded from effectively protecting our intellectual property rights in international jurisdictions, our business prospects could be substantially harmed.

Varying filing dates in international countries may also permit intervening third parties to allege priority to certain technology.

Patent terms may be shortened or lengthened by, for example, terminal disclaimers, patent term adjustments, supplemental protection certificates, and patent term extensions. Patent term extensions and supplemental protection certificates, and the like, may be impacted by the regulatory process and may not significantly lengthen patent term. Non-payment or delay in payment of patent fees or annuities, delay in patent filings or delay in extension filing (including any patent term extension or adjustment filing), whether intentional or unintentional, may also result in the loss of patent rights important to our business. Certain countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to other parties. In addition, many countries limit the enforceability of patents against other parties, including government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of any patents.

In addition to the protection afforded by patents, we rely on confidentiality agreements to protect confidential information and proprietary know-how that is not patentable or that we elect not to patent, processes for which patents are difficult to enforce and any other elements of our drug candidate discovery and development processes that involve proprietary know-how, information or technology that is not covered by patents. We seek to protect our proprietary

technology and processes, in part, by entering into confidentiality agreements with our employees, consultants, scientific advisors and contractors. We cannot guarantee that we have entered into such agreements with each party that may have or have had access to our confidential information or proprietary technology and processes. We also seek to preserve the integrity and confidentiality of our data and other confidential information by maintaining physical security of our premises and physical and electronic security of our information technology systems. While we have confidence in these individuals, organizations and systems, agreements or security measures may be breached and detecting the disclosure or misappropriation of confidential information and enforcing a claim that a party illegally disclosed or misappropriated confidential information is difficult, expensive and time-consuming, and the outcome is unpredictable. Further, we may not be able to obtain adequate remedies for any breach. In addition, our confidential information may otherwise become known or be independently discovered by competitors, in which case 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. We may in the future rely on trade secret protection, which would be subject to the risks identified above with respect to confidential information.

Monitoring unauthorized use of our intellectual property is difficult and costly. From time to time, we review our competitors' products, and may in the future seek to enforce our patents or other rights against potential infringement. However, the steps we have taken to protect our proprietary rights may not be adequate to prevent misappropriation of our intellectual property. We may not be able to detect unauthorized use of, or take appropriate steps to enforce, our intellectual property rights. Our competitors may also independently develop similar technology. Any inability to meaningfully protect our intellectual property could result in competitors offering products that incorporate our product or service features, which could reduce demand for our products. In addition, we may need to defend our patents from third-party challenges, such as (but not limited to) interferences, derivation proceedings, re-examination proceedings, post-grant review, inter partes review, third-party submissions, oppositions, nullity actions or other patent proceedings. We may need to initiate infringement claims or litigation.

Adverse proceedings such as litigation can be expensive, time consuming and may divert the efforts of our technical and managerial personnel, which could in turn harm our business, whether or not we receive a determination favorable to us. In addition, in an infringement proceeding, a court or other judicial body may decide that the patent we seek to enforce is invalid or unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that the patent in question does not cover the technology in question. An adverse result in any litigation could put one or more of our patents at risk of being invalidated or interpreted narrowly. Some of our competitors may be able to devote significantly more resources to intellectual property litigation, and may have significantly broader patent portfolios to assert against us if we assert our rights against them. Further, because of the substantial discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be disclosed or otherwise compromised during litigation.

We may not be able to correctly estimate or control our future operating expenses in relation to obtaining intellectual property, enforcing intellectual property and/or defending intellectual property, which could affect operating expenses. Our operating expenses may fluctuate significantly in the future as a result of a variety of factors, including the costs of preparing, filing, prosecuting, defending, and enforcing patent and trademark claims and other intellectual property-related costs, including adverse proceedings (such as litigation) costs.

Our intellectual property agreements with third parties may be subject to disagreements over contract interpretation, which could narrow the scope of our rights to the relevant intellectual property or technology or increase our financial or other obligations to our licensors.

Certain provisions in our intellectual property agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could affect the scope of our rights to the relevant intellectual property or technology, or affect financial or other obligations under the relevant agreement, either of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

In addition, while it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who in fact conceives or develops intellectual property that we regard as our own. Our assignment agreements may not be self-executing or may be breached, and

we may be forced to bring claims against third parties, or defend claims they may bring against us, to determine the ownership of what we regard as our intellectual property.

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

We may also be subject to claims that former employees, collaborators or other third parties have an ownership interest in our patents or other intellectual property. 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 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 distraction to management and other employees.

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

Filing, prosecuting and defending patents on drug candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the U.S. can be less extensive than those in the U.S. 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 U.S.. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the U.S., or from selling or importing products made using our inventions in and into the U.S. or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not 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 U.S. These products may compete with our products 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 and other intellectual property protection, particularly those relating to biopharmaceuticals, which could make it difficult for us to stop the infringement of our patents 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.

If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be adversely affected.

Our registered or unregistered trademarks or trade names may be challenged, infringed, circumvented, declared generic or conflict with third-party rights. We may not be able to protect our rights to these trademarks and trade names, which we need to build name recognition by potential partners or customers in our markets of interest. In addition, third parties may file first for our trademarks in certain countries. If they succeeded in registering such trademarks, and if we were not successful in challenging such third-party rights, we may not be able to use these trademarks to market our products in those countries. In such cases, over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then our marketing abilities may be impacted.

If we are unable to protect the confidentiality of our proprietary information and know-how, the value of our technology and products could be adversely affected.

We may not be able to protect our proprietary information and technology adequately. Although we use reasonable efforts to protect our proprietary information, technology, and know-how, our employees, consultants,

contractors and outside scientific advisors may unintentionally or willfully disclose our information to competitors. Enforcing a claim that a third party illegally obtained and is using any of our proprietary information, technology or know-how is expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the U.S. are sometimes less willing to protect proprietary information, technology, and know-how. We rely, in part, on non-disclosure and confidentiality agreements with our employees, consultants and other parties to protect our proprietary information, technology, and know-how. These agreements may be breached and we may not have adequate remedies for any breach. Moreover, others may independently develop similar or equivalent proprietary information, and third parties may otherwise gain access to our proprietary knowledge.

Risks Related to Government Regulation

Even if we obtain regulatory approval for a drug candidate, our products will remain subject to regulatory scrutiny.

If our drug candidates are approved, they will be subject to ongoing regulatory requirements for manufacturing, labeling, packaging, storage, advertising, promotion, sampling, record-keeping, conduct of post-marketing studies, and submission of safety, efficacy, and other post-market information, including both federal and state requirements in the U.S. and requirements of comparable foreign regulatory authorities.

Manufacturers and manufacturers' facilities are required to comply with extensive FDA and comparable foreign regulatory authority requirements, including ensuring that quality control and manufacturing procedures conform to cGMP regulations. As such, we and our contract manufacturers will be subject to continual review and inspections to assess compliance with cGMP and adherence to commitments made in any approved marketing application. Accordingly, we and others with whom we work must continue to expend time, money, and effort in all areas of regulatory compliance, including manufacturing, production, and quality control.

We will have to comply with requirements concerning advertising and promotion for our products. Promotional communications with respect to prescription drugs and biologics are subject to a variety of legal and regulatory restrictions and must be consistent with the information in the product's approved label. As such, we may not promote our products for indications or uses for which they do not have approval. The holder of an approved application must submit new or supplemental applications and obtain approval for certain changes to the approved product, product labeling, or manufacturing process. We could also be asked to conduct post-marketing clinical studies to verify the safety and efficacy of our products in general or in specific patient subsets. An unsuccessful post-marketing study or failure to complete such a study could result in the withdrawal of marketing approval.

If a regulatory agency discovers previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, or disagrees with the promotion, marketing or labeling of a product, such regulatory agency may impose restrictions on that product or us, including requiring withdrawal of the product from the market. If we fail to comply with applicable regulatory requirements, a regulatory agency or enforcement authority may, among other things:

- issue warning letters;
- impose civil or criminal penalties;
- suspend or withdraw regulatory approval;
- suspend any of our clinical studies;
- refuse to approve pending applications or supplements to approved applications submitted by us;
- impose restrictions on our operations, including closing our contract manufacturers' facilities; or
- seize or detain products, or require a product recall.

Any government investigation of alleged violations of law could require us to expend significant time and resources in response, and could generate negative publicity. Any failure to comply with ongoing regulatory requirements may significantly and adversely affect our ability to commercialize and generate revenue from our

products. If regulatory sanctions are applied or if regulatory approval is withdrawn, the value of our company and our operating results will be adversely affected.

Moreover, the policies of the FDA and of other regulatory authorities may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our drug candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative or executive action, either in the U.S. or abroad. For example, certain policies of the Trump administration may impact our business and industry.

Namely, the Trump administration has taken several executive actions, including the issuance of a number of Executive Orders, that could impose significant burdens on, or otherwise materially delay, the FDA's ability to engage in routine oversight activities such as implementing statutes through rulemaking, issuance of guidance, and review and approval of marketing applications. It is difficult to predict how these orders will be implemented, and the extent to which they will impact the FDA's ability to exercise its regulatory authority. If these executive actions impose restrictions on the FDA's ability to engage in oversight and implementation activities in the normal course, our business may be negatively impacted. In addition, 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 and we may not achieve or sustain profitability.

If any of our small molecule drug candidates obtain regulatory approval, additional competitors could enter the market with generic versions of such drugs, which may result in a material decline in sales of affected products.

Under the Drug Price Competition and Patent Term Restoration Act of 1984, or the Hatch-Waxman Act, a pharmaceutical manufacturer may file an abbreviated new drug application, or ANDA, seeking approval of a generic version of an approved, small molecule innovator product. Under the Hatch-Waxman Act, a manufacturer may also submit a new drug application, or NDA, under section 505(b)(2) of the Federal Food, Drug, and Cosmetic Act that references the FDA's prior approval of the small molecule innovator product. A 505(b)(2) NDA product may be for a new or improved version of the original innovator product. The Hatch-Waxman Act also provides for certain periods of regulatory exclusivity, which preclude FDA approval (or in some circumstances, FDA filing and review) of an ANDA or 505(b)(2) NDA. In addition to the benefits of regulatory exclusivity, an innovator NDA holder may have patents claiming the active ingredient, product formulation or an approved use of the drug, which would be listed with the product in the FDA publication, "Approved Drug Products with Therapeutic Equivalence Evaluations," known as the Orange Book. If there are patents listed in the Orange Book for a product, a generic or 505(b)(2) applicant that seeks to market its product before expiration of the patents must include in their applications what is known as a "Paragraph IV" certification, challenging the validity or enforceability of, or claiming non-infringement of, the listed patent or patents. Notice of the certification must be given to the patent owner and NDA holder and if, within 45 days of receiving notice, either the patent owner or NDA holder sues for patent infringement, approval of the ANDA or 505(b)(2) NDA is stayed for up to 30 months.

Accordingly, if any of our small molecule drug candidates, such as UBX0101 or UBX1967, are approved, competitors could file ANDAs for generic versions of our small molecule drug products or 505(b)(2) NDAs that reference our small molecule drug products. If there are patents listed for our small molecule drug products in the Orange Book, those ANDAs and 505(b)(2) NDAs would be required to include a certification as to each listed patent indicating whether the ANDA applicant does or does not intend to challenge the patent. We cannot predict which, if any, patents in our current portfolio or patents we may obtain in the future will be eligible for listing in the Orange Book, how any generic competitor would address such patents, whether we would sue on any such patents, or the outcome of any such suit.

We may not be successful in securing or maintaining proprietary patent protection for products and technologies we develop or license. Moreover, if any of our owned or in-licensed patents that are listed in the Orange Book are successfully challenged by way of a Paragraph IV certification and subsequent litigation, the affected product could immediately face generic competition and its sales would likely decline rapidly and materially.

Any biologic, or large molecule, drug candidates for which we intend to seek approval may face competition sooner than anticipated.

If we are successful in achieving regulatory approval to commercialize any biologic drug candidate faster than our competitors, such drug candidates may face competition from biosimilar products. In the U.S., large molecule drug candidates are regulated by the FDA as biologic products subject to approval under the biologics license application, or BLA, pathway. The Biologics Price Competition and Innovation Act of 2009, or BPCIA, creates an abbreviated pathway for the approval of biosimilar and interchangeable biologic products following the approval of an original BLA. The abbreviated regulatory pathway establishes legal authority for the FDA to review and approve biosimilar biologics, including the possible designation of a biosimilar as "interchangeable" based on its similarity to an existing brand product. Under the BPCIA, an application for a biosimilar product cannot be approved by the FDA until 12 years after the original branded product was approved under a BLA. The law is complex and is still being interpreted and implemented by the FDA. As a result, its ultimate impact, implementation, and meaning are subject to uncertainty.

Moreover, the extent to which a biosimilar product, once approved, will be substituted for any one of our reference products in a way that is similar to traditional generic substitution for non-biologic products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing. In addition, a competitor could decide to forego the biosimilar approval path and submit a full BLA after completing its own preclinical studies and clinical studies. In such cases, any exclusivity to which we may be eligible under the BPCIA would not prevent the competitor from marketing its product as soon as it is approved.

If competitors are able to obtain marketing approval for biosimilars referencing our large molecule drug candidates, if approved, such products may become subject to competition from such biosimilars, with the attendant competitive pressure and potential adverse consequences. Such competitive products may be able to immediately compete with us in each indication for which our drug candidates may have received approval.

We may seek orphan drug designation for certain future drug candidates, but we may be unable to obtain such designations or to maintain the benefits associated with orphan drug designation, including market exclusivity, which may cause our revenue, if any, to be reduced.

We may pursue orphan drug designation for certain of our future drug candidates. Under the Orphan Drug Act, the FDA may designate a drug or biologic product as an orphan drug if it is intended to treat a rare disease or condition, defined as a patient population of fewer than 200,000 in the U.S., or a patient population greater than 200,000 in the U.S. where there is no reasonable expectation that the cost of developing the drug will be recovered from sales in the U.S. In the European Union, the EMA's Committee for Orphan Medicinal Products, or COMP, grants orphan drug designation to promote the development of products that are intended for the diagnosis, prevention, or treatment of a life-threatening or chronically debilitating condition affecting not more than five in 10,000 persons in the European Union. Additionally, designation is granted for products intended for the diagnosis, prevention, or treatment of a life-threatening, seriously debilitating or serious and chronic condition when, without incentives, it is unlikely that sales of the drug in the European Union would be sufficient to justify the necessary investment in developing the drug or biological product or where there is no satisfactory method of diagnosis, prevention, or treatment, or, if such a method exists, the medicine must be of significant benefit to those affected by the condition.

In the U.S., orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical study costs, tax advantages, and application fee waivers. In addition, if a product receives the first FDA approval for the indication for which it has orphan designation, the product is entitled to orphan drug exclusivity, which means the FDA may not approve any other application to market the same drug for the same indication for a period of seven years, except in limited circumstances, such as a showing of clinical superiority over the product with orphan exclusivity or where the manufacturer is unable to assure sufficient product quantity for the orphan patient population. 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 following drug or biological 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.

Even if we obtain orphan drug designation, we may not be the first to obtain marketing approval for any particular orphan indication due to the uncertainties associated with developing pharmaceutical products. Further, even if we obtain orphan drug exclusivity for a drug candidate, that exclusivity may not effectively protect the product from competition because different drugs with different active moieties can be approved for the same condition. Even

after an orphan drug is approved, the FDA or EMA can subsequently approve the same drug with the same active moiety for the same condition if the FDA or EMA concludes that the later drug is clinically superior in that it is safer, more effective, or makes a major contribution to patient care. Orphan drug designation neither shortens the development time or regulatory review time of a drug or biologic nor gives the drug or biologic any advantage in the regulatory review or approval process.

Enacted and future healthcare legislation may increase the difficulty and cost for us to obtain marketing approval of and commercialize our drug candidates and may affect the prices we may set.

In the U.S., the EU and other jurisdictions, there have been, and we expect there will continue to be, a number of legislative and regulatory changes and proposed changes to the healthcare system that could affect our future results of operations. In particular, there have been and continue to be a number of initiatives at the U.S. federal and state levels that seek to reduce healthcare costs and improve the quality of healthcare. For example, in March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively the Affordable Care Act, was enacted, which substantially changed the way healthcare is financed by both governmental and private insurers. Among the provisions of the Affordable Care Act, those of greatest importance to the pharmaceutical and biotechnology industries include the following:

- an annual, non-deductible fee payable by any entity that manufactures or imports certain branded prescription drugs and biologic agents (other than those designated as orphan drugs), which is apportioned among these entities according to their market share in certain government healthcare programs;
- a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% 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;
- new requirements to report certain financial arrangements with physicians and teaching hospitals, including reporting "transfers of value" made or distributed to prescribers and other healthcare providers and reporting investment interests held by physicians and their immediate family members;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program to 23.1% and 13.0% of the average manufacturer price for branded and generic drugs, respectively;
- 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;
- extension of a manufacturer's Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to certain individuals with income at or below 133% of the federal poverty level, thereby potentially increasing a manufacturer's Medicaid rebate liability;
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research;
- creation of the Independent Payment Advisory Board, which, once empaneled, will have the authority to recommend certain changes to the Medicare program that could result in reduced payments for prescription drugs and those recommendations could have the effect of law unless overruled by a supermajority vote of Congress; and
- establishment of a Center for Medicare Innovation at the Centers for Medicare & Medicaid Services, or CMS, to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending.

Since its enactment, there have been judicial and Congressional challenges to certain aspects of the Affordable Care Act, and we expect there will be additional challenges and amendments to the Affordable Care Act in the future. The current presidential administration and Congress will likely continue to seek to modify, repeal, or otherwise invalidate all, or certain provisions of, the Affordable Care Act. It is uncertain the extent to which any such changes may impact our business or financial condition.

In addition, other legislative changes have been proposed and adopted in the U.S. since the Affordable Care Act was enacted. In August 2011, the Budget Control Act of 2011, among other things, led to aggregate reductions of Medicare payments to providers of 2% per fiscal year. These reductions went into effect in April 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2025 unless additional action is taken by Congress. In January 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, 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.

Individual states in the U.S. have also become 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. Legally-mandated price controls on payment amounts by third-party payors or other restrictions could harm our business, results of operations, financial condition and prospects. In addition, regional healthcare 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 healthcare programs. This could reduce the ultimate demand for our drug candidates or put pressure on our product pricing. Moreover, payment methodologies may be subject to changes in healthcare legislation and regulatory initiatives. For example, CMS may develop new payment and delivery models, such as bundled payment models. In addition, recently there has been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products.

In the EU, similar political, economic and regulatory developments may affect our ability to profitably commercialize our drug candidates, if approved. In addition to continuing pressure on prices and cost containment measures, legislative developments at the EU or member state level may result in significant additional requirements or obstacles that may increase our operating costs. The delivery of healthcare in the EU, including the establishment and operation of health services and the pricing and reimbursement of medicines, is almost exclusively a matter for national, rather than EU, law and policy. National governments and health service providers have different priorities and approaches to the delivery of health care and the pricing and reimbursement of products in that context. In general, however, the healthcare budgetary constraints in most EU member states have resulted in restrictions on the pricing and reimbursement of medicines by relevant health service providers. Coupled with ever-increasing EU and national regulatory burdens on those wishing to develop and market products, this could prevent or delay marketing approval of our drug candidates, restrict or regulate post-approval activities and affect our ability to commercialize our drug candidates, if approved. In markets outside of the U.S. and EU, reimbursement and healthcare payment systems vary significantly by country, and many countries have instituted price ceilings on specific products and therapies.

We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action in the U.S., the EU or any other jurisdiction. If we or any third parties we may engage are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we or such third parties are not able to maintain regulatory compliance, our drug candidates may lose any regulatory approval that may have been obtained and we may not achieve or sustain profitability.

Our business operations and current and future relationships with investigators, healthcare professionals, consultants, third-party payors, patient organizations and customers will be subject to applicable healthcare regulatory laws, which could expose us to penalties.

Our business operations and current and future arrangements with investigators, healthcare professionals, consultants, third-party payors, patient organizations and customers, may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations. These laws may constrain the business or financial arrangements and relationships through which we conduct our operations, including how we research, market, sell and distribute our drug candidates, if approved.

Such laws include:

- the U.S. federal Anti-Kickback Statute, which prohibits, among other things, persons or entities from knowingly and willfully soliciting, offering, receiving or providing any remuneration (including any kickback, bribe, or certain rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, 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 U.S. federal and state healthcare programs such as Medicare and Medicaid. 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 U.S. federal false claims and civil monetary penalties laws, including the civil False Claims Act, which, among other things, impose criminal and civil penalties, including through civil whistleblower or qui tam actions, against individuals or entities for knowingly presenting, or causing to be presented, to the U.S. federal government, claims for payment or approval that are false or fraudulent, knowingly making, using or causing to be made or used, a false record or statement material to a false or fraudulent claim, or from knowingly making a false statement to avoid, decrease or conceal an obligation to pay money to the U.S. federal government. In addition, the government may assert that a claim including items and services resulting from a violation of the U.S. federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act;
- the U.S. federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which imposes criminal and civil liability for, among other things, knowingly and willfully executing, or attempting to execute, 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 U.S. 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;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 and its implementing regulations, which also imposes certain obligations, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information without appropriate authorization by covered entities subject to the rule, such as health plans, healthcare clearinghouses and healthcare providers as well as their business associates that perform certain services involving the use or disclosure of individually identifiable health information;
- the FDCA, which prohibits, among other things, the adulteration or misbranding of drugs, biologics and medical devices;
- the U.S. Public Health Service Act, which prohibits, among other things, the introduction into interstate commerce of a biological product unless a biologics license is in effect for that product;
- the U.S. Physician Payments Sunshine Act and its implementing regulations, which 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 annually to the government information related to certain payments and other transfers of value to physicians and teaching hospitals, as well as ownership and investment interests held by the physicians described above and their immediate family members;

- analogous U.S. 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 and regulations that require drug manufacturers to file reports relating to pricing and marketing information, which requires tracking gifts and other remuneration and items of value provided to healthcare professionals and entities; and state laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts; and
- similar healthcare laws and regulations in the EU and other jurisdictions, including reporting requirements detailing interactions with and payments to healthcare providers.

Ensuring that our internal operations and future business arrangements with third parties comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities will conclude that our business practices do not comply with current or future statutes, regulations, agency guidance or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of the laws described above or any other governmental laws and regulations that may apply to us, we may be subject to significant penalties, including civil, criminal and administrative penalties, damages, fines, exclusion from government-funded healthcare programs, such as Medicare and Medicaid or similar programs in other countries or jurisdictions, disgorgement, individual imprisonment, contractual damages, reputational harm, diminished profits and the curtailment or restructuring of our operations. Further, defending against any such actions can be costly, time-consuming and may require significant personnel resources. Therefore, even if we are successful in defending against any such actions that may be brought against us, our business may be impaired.

Recent U.S. tax legislation and future changes to applicable U.S. tax laws and regulations may have a material adverse effect on our business, financial condition and results of operations.

Changes in laws and policy relating to taxes may have an adverse effect on our business, financial condition and results of operations. For example, the U.S. government recently enacted significant tax reform, and certain provisions of the new law for tax years beginning after December 31, 2017 may adversely affect us. Changes include, but are not limited to, a federal corporate tax rate decrease to 21%, a reduction to the maximum deduction allowed for net operating losses generated in tax years after December 31, 2017, eliminating carrybacks of net operating losses, and providing for indefinite carryforwards for losses generated in tax years after December 31, 2017. The legislation is unclear in many respects and could be subject to potential amendments and technical corrections, and will be subject to interpretations and implementing regulations by the Treasury and Internal Revenue Service, any of which could mitigate or increase certain adverse effects of the legislation. In addition, it is unclear how these U.S. federal income tax changes will affect state and local taxation. Generally, future changes in applicable U.S. tax laws and regulations, or their interpretation and application could have an adverse effect on our business, financial conditions and results of operations.

Risks Related to Ownership of Our Common Stock

Our stock price may be volatile and you may not be able to resell shares of our common stock at or above the price you paid.

The trading price of our common stock may be highly volatile and may be subject to wide fluctuations in response to various factors, some of which are beyond our control.

These factors include those discussed in this "Risk Factors" section of this report and others such as:

- results from, and any delays in, commencing, conducting or completing our clinical studies for our lead drug candidates, or any other future clinical development programs;

- announcements by academic or other third parties challenging the fundamental premises underlying our approach to treating age-related diseases and/or drug development;
- announcements of regulatory approval or disapproval of our current or any future drug candidates;
- failure or discontinuation of any of our research and development programs;
- announcements relating to future licensing, collaboration, or development agreements;
- delays in the commercialization of our current or any future drug candidates;
- public misperception regarding the use of our therapies, or public bias of against “anti-aging” companies;
- acquisitions and sales of new products, technologies, or businesses;
- manufacturing and supply issues related to our drug candidates for clinical studies or future drug candidates for commercialization;
- quarterly variations in our results of operations or those of our future competitors;
- changes in earnings estimates or recommendations by securities analysts;
- announcements by us or our competitors of new products, significant contracts, commercial relationships, acquisitions, or capital commitments;
- developments with respect to intellectual property rights;
- our commencement of, or involvement in, litigation;
- changes in financial estimates or guidance, including our ability to meet our future revenue and operating profit or loss estimates or guidance;
- any major changes in our board of directors or management;
- new legislation in the U.S. relating to the sale or pricing of pharmaceuticals;
- FDA or other U.S. or foreign regulatory actions affecting us or our industry;
- product liability claims or other litigation or public concern about the safety of our drug candidates;
- market conditions in the pharmaceutical, biopharmaceutical and biotechnology sectors; and
- general economic conditions in the U.S. and abroad.

In addition, the stock markets in general, and the markets for pharmaceutical, biopharmaceutical, and biotechnology stocks in particular, have experienced extreme volatility that may have been unrelated to the operating performance of the issuer. These broad market fluctuations may adversely affect the trading price or liquidity of our common stock. In the past, when the market price of a stock has been volatile, holders of that stock have sometimes instituted securities class action litigation against the issuer. If any of our stockholders were to bring such a lawsuit against us, we could incur substantial costs defending the lawsuit and the attention of our management would be diverted from the operation of our business.

An active, liquid and orderly market for our common stock may not develop and may not be maintained.

Prior to our initial public offering in May 2018, there was no public market for shares of our common stock. Although our common stock is listed on the Nasdaq Global Select Market, an active trading market for our common stock may never be sustained on the Nasdaq Global Select or any other exchange in the future. The lack of an active market may impair your ability to sell your shares at the time you wish to sell them or at a price that you consider reasonable. An inactive market may also impair our ability to raise capital by selling shares and may impair our ability to acquire other businesses, applications, or technologies using our shares as consideration.

If securities or industry analysts do not publish research or reports about our business, or if they issue an adverse or misleading opinion regarding our stock, our stock price and trading volume could decline.

The trading market for our common stock is influenced by the research and reports that industry or securities analysts publish about us or our business. We only recently obtained research coverage by securities and industry analysts. If no additional new or few securities or industry analysts commence coverage of us, the trading price for our stock would be negatively impacted. In the event any of the analysts who cover us issue an adverse or misleading opinion regarding us, our business model, our intellectual property or our stock performance, or if our clinical studies and operating results fail to meet the expectations of analysts, our stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

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, and we intend to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy 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. In addition, as an "emerging growth company" the JOBS Act allows us to delay adoption of new or revised accounting pronouncements applicable to public companies until such pronouncements are made applicable to private companies. We have elected to use this extended transition period under the JOBS Act. As a result, our financial statements may not be comparable to the financial statements of issuers who are required to comply with the effective dates for new or revised accounting standards that are applicable to public companies, which may make comparison of our financials to those of other public companies more difficult.

We cannot predict if investors will find our common stock less attractive because we will rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile. We may take advantage of these reporting exemptions until we are no longer an emerging growth company. We will remain an emerging growth company until the earlier of (1) the last day of the year following the fifth anniversary of the consummation of our IPO, (2) the last day of the year in which we have total annual gross revenue of at least $1.07 billion, (3) the last day of the year in which we are deemed to be a "large accelerated filer" as defined in Rule 12b-2 under the Exchange Act, which would occur if the market value of our common stock held by non-affiliates exceeded $700.0 million as of the last business day of the second fiscal quarter of such year or (4) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period.

If we sell shares of our common stock in future financings, stockholders may experience immediate dilution and, as a result, our stock price may decline.

We may from time to time issue additional shares of common stock at a discount from the current trading price of our common stock. As a result, our stockholders would experience immediate dilution upon the purchase of any shares of our common stock sold at such discount. In addition, as opportunities present themselves, we may enter into financing or similar arrangements in the future, including the issuance of debt securities, preferred stock or common stock. If we issue common stock or securities convertible into common stock, our common stockholders would experience additional dilution and, as a result, our stock price may decline

Our principal stockholders and management own a significant percentage of our stock and will be able to exert significant control over matters subject to stockholder approval.

As of December 31, 2018, our executive officers, directors, holders of 5% or more of our capital stock and their respective affiliates beneficially owned approximately 66.1% of our voting stock. Therefore, these stockholders have the ability to influence us through this ownership position. These stockholders may be able to determine all matters requiring stockholder approval. For example, these stockholders may be able to control elections of directors,

amendments of our organizational documents, or approval of any merger, sale of assets, or other major corporate transaction. This may prevent or discourage unsolicited acquisition proposals or offers for our common stock that you may feel are in your best interest as one of our stockholders.

Sales of a substantial number of shares of our common stock in the public market could cause our stock price to fall.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock. Moreover, holders of approximately 15.7 million shares of our common stock have rights, subject to certain conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. We have registered and intend to continue to register all shares of common stock that we may issue under our equity compensation plans. Once we register these shares, they can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates.

We incur increased costs as a result of operating as a public company, and our management devote substantial time to new compliance initiatives. We may fail to comply with the rules that apply to public companies, including Section 404 of the Sarbanes-Oxley Act of 2002, which could result in sanctions or other penalties that would harm our business.

We have incurred and will continue to incur significant legal, accounting and other expenses as a public company, including costs resulting from public company reporting obligations under the Exchange Act and regulations regarding corporate governance practices. The listing requirements of the Nasdaq Global Select Market and the rules of the Securities and Exchange Commission, or SEC, require that we satisfy certain corporate governance requirements relating to director independence, filing annual and interim reports, stockholder meetings, approvals and voting, soliciting proxies, conflicts of interest and a code of conduct. Our management and other personnel have devoted and will need to devote a substantial amount of time to ensure that we comply with all of these requirements. Moreover, the reporting requirements, rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costlier. Any changes we make to comply with these obligations may not be sufficient to allow us to satisfy our obligations as a public company on a timely basis, or at all. These reporting requirements, rules and regulations, coupled with the increase in potential litigation exposure associated with being a public company, could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors or board committees or to serve as executive officers, or to obtain certain types of insurance, including directors' and officers' insurance, on acceptable terms.

We are subject to Section 404 of The Sarbanes-Oxley Act of 2002, or Section 404, and the related rules of the SEC, which generally require our management and independent registered public accounting firm to report on the effectiveness of our internal control over financial reporting. Beginning with the second annual report that we will be required to file with the SEC, Section 404 requires an annual management assessment of the effectiveness of our internal control over financial reporting. However, for so long as we remain an emerging growth company as defined in the JOBS Act, we intend to take advantage of certain exemptions from various reporting requirements that are applicable to public companies that are not emerging growth companies, including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404. Once we are no longer an emerging growth company or, if prior to such date, we opt to no longer take advantage of the applicable exemption, we will be required to include an opinion from our independent registered public accounting firm on the effectiveness of our internal controls over financial reporting.

To date, we have never conducted a review of our internal control for the purpose of providing the reports required by these rules. During the course of our review and testing, we may identify deficiencies and be unable to remediate them before we must provide the required reports.

Furthermore, if we have a material weakness in our internal controls over financial reporting, we may not detect errors on a timely basis and our financial statements may be materially misstated. We or our independent registered public accounting firm may not be able to conclude on an ongoing basis that we have effective internal control over financial reporting, which could harm our operating results, cause investors to lose confidence in our reported financial information and cause the trading price of our stock to fall. In addition, as a public company we will be required to file accurate and timely quarterly and annual reports with the SEC under the Exchange Act. In order to report our results of operations and financial statements on an accurate and timely basis, we will depend in part on CROs to provide timely and accurate notice of their costs to us. Any failure to report our financial results on an accurate and timely basis could result in sanctions, lawsuits, delisting of our shares from The Nasdaq Global Select Market or other adverse consequences that would materially harm to our business.

Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited.

We have incurred substantial losses during our history and do not expect to become profitable in the near future, and we may never achieve profitability. To the extent that we continue to generate taxable losses, unused losses will carry forward to offset a portion of future taxable income, if any, until such unused losses expire, if ever. Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, if a corporation undergoes an "ownership change," generally defined as a greater than 50 percentage point change (by value) in its equity ownership by certain stockholders over a three-year period, the corporation's ability to use its pre-change net operating loss carryforwards, or NOLs, and other pre-change tax attributes (such as research and development tax credits) to offset its post- change income or taxes may be limited. We may have experienced ownership changes prior to December 31, 2018, and may experience ownership changes in the future as a result of subsequent shifts in our stock ownership (some of which shifts are outside our control). As a result, if we earn net taxable income, our ability to use our pre-change NOLs to offset such taxable income could be subject to limitations. Similar provisions of state tax law may also apply. As a result, even if we attain profitability, we may be unable to use a material portion of our NOLs and other tax attributes.Additionally, the Tax Act, which was enacted on December 22, 2017, significantly reforms the Code, including changes to the rules governing net operating loss carryforwards arising in tax years ending after December 31, 2017. For net operating loss carryforwards, the Tax Act limits a taxpayer's ability to utilize such carryforwards to 80% of taxable income. In addition, net operating loss carryforwards arising in tax years ending after December 31, 2017 can be carried forward indefinitely, but carryback is generally prohibited. Net operating loss carryforwards generated by us before January 1, 2018 will not be subject to the taxable income limitation and will continue to have a twenty- year carryforward period. However, the changes in the carryforward and carryback periods as well as the new limitation on use of net operating losses may significantly impact our ability to use net operating loss carryforwards generated after December 31, 2017, as well as the timing of any such use, and could adversely affect our results of operations.

Provisions in our charter documents and under Delaware law could discourage a takeover that stockholders may consider favorable and may lead to entrenchment of management.

Our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that could delay or prevent changes in control or changes in our management without the consent of our board of directors. These provisions include the following:

- a classified board of directors with three-year staggered terms, which may delay the ability of stockholders to change the membership of a majority of our board of directors;
- no cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- the exclusive right of our board of directors to elect a director to fill a vacancy created by the expansion of the board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;
- the ability of our board of directors to authorize the issuance of shares of preferred stock and to determine the price and other terms of those shares, including preferences and voting rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquiror;
- the ability of our board of directors to alter our amended and restated bylaws without obtaining stockholder approval;

- the required approval of at least 66 2/3% of the shares entitled to vote at an election of directors to adopt, amend or repeal our amended and restated bylaws or repeal the provisions of our amended and restated certificate of incorporation regarding the election and removal of directors;
- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- the requirement that a special meeting of stockholders may be called only by the chief executive officer or the president or the board of directors, which may delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors; and
- advance notice procedures that stockholders must comply with in order to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential acquiror from conducting a solicitation of proxies to elect the acquiror's own slate of directors or otherwise attempting to obtain control of us.

We are also subject to the anti-takeover provisions contained in Section 203 of the Delaware General Corporation Law. Under Section 203, a corporation may not, in general, engage in a business combination with any holder of 15% or more of its capital stock unless the holder has held the stock for three years or, among other exceptions, the board of directors has approved the transaction.

Claims for indemnification by our directors and officers may reduce our available funds to satisfy successful third-party claims against us and may reduce the amount of money available to us.

Our amended and restated certificate of incorporation and amended and restated bylaws provide that we will indemnify our directors and officers, in each case to the fullest extent permitted by Delaware law.

In addition, as permitted by Section 145 of the Delaware General Corporation Law, our amended and restated bylaws and our indemnification agreements that we have entered into with our directors and officers provide that:

- We will indemnify our directors and officers for serving us in those capacities or for serving other business enterprises at our request, to the fullest extent permitted by Delaware law. Delaware law provides that a corporation may indemnify such person if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the registrant and, with respect to any criminal proceeding, had no reasonable cause to believe such person's conduct was unlawful.
- We may, in our discretion, indemnify employees and agents in those circumstances where indemnification is permitted by applicable law.
- We are required to advance expenses, as incurred, to our directors and officers in connection with defending a proceeding, except that such directors or officers shall undertake to repay such advances if it is ultimately determined that such person is not entitled to indemnification. We will not be obligated pursuant to our amended and restated bylaws to indemnify a person with respect to proceedings initiated by that person against us or our other indemnitees, except with respect to proceedings authorized by our board of directors or brought to enforce a right to indemnification.
- The rights conferred in our amended and restated bylaws are not exclusive, and we are authorized to enter into indemnification agreements with our directors, officers, employees and agents and to obtain insurance to indemnify such persons.
- We may not retroactively amend our amended and restated bylaw provisions to reduce our indemnification obligations to directors, officers, employees and agents.

We do not currently intend to pay dividends on our common stock, and, consequently, your ability to achieve a return on your investment will depend on appreciation in the price of our common stock.

We do not currently intend to pay any cash dividends on our common stock for the foreseeable future. We currently intend to invest our future earnings, if any, to fund our growth. Therefore, you are not likely to receive any dividends on your common stock for the foreseeable future. Since we do not intend to pay dividends, your ability to receive a return on your investment will depend on any future appreciation in the market value of our common stock. There is no guarantee that our common stock will appreciate or even maintain the price at which our holders have purchased it.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

.Our corporate headquarters are located in Brisbane, California, where we currently lease approximately 39,000 square feet of office and laboratory space pursuant to a lease dated May 13, 2016. Although this facility is sufficient for our current needs, we will require additional space by the end of 2019 to accommodate our anticipated growth. Therefore, on February 28, 2019, we entered into a lease for a new facility which we anticipate will be ready for occupancy during the fourth quarter of 2019. The new facility is located in South San Francisco, California, and is comprised of approximately 62,00 square feet of office and laboratory space. The new lease has a term of 10 years from the lease commence date. Substantially all our employees work at our current facility and will also work at the new facility..

Item 3. Legal Proceedings.

We are not currently a party to any material litigation or other material legal proceedings.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market Information for Common Stock

Our common stock has been listed on The Nasdaq Global Select Market under the symbol "UBX" since May 3, 2018. As of March 1, 2019, there were 98 holders of record of our common stock. Because many of our shares of common stock are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of beneficial owners of our common stock represented by these record holders.

Dividend Policy

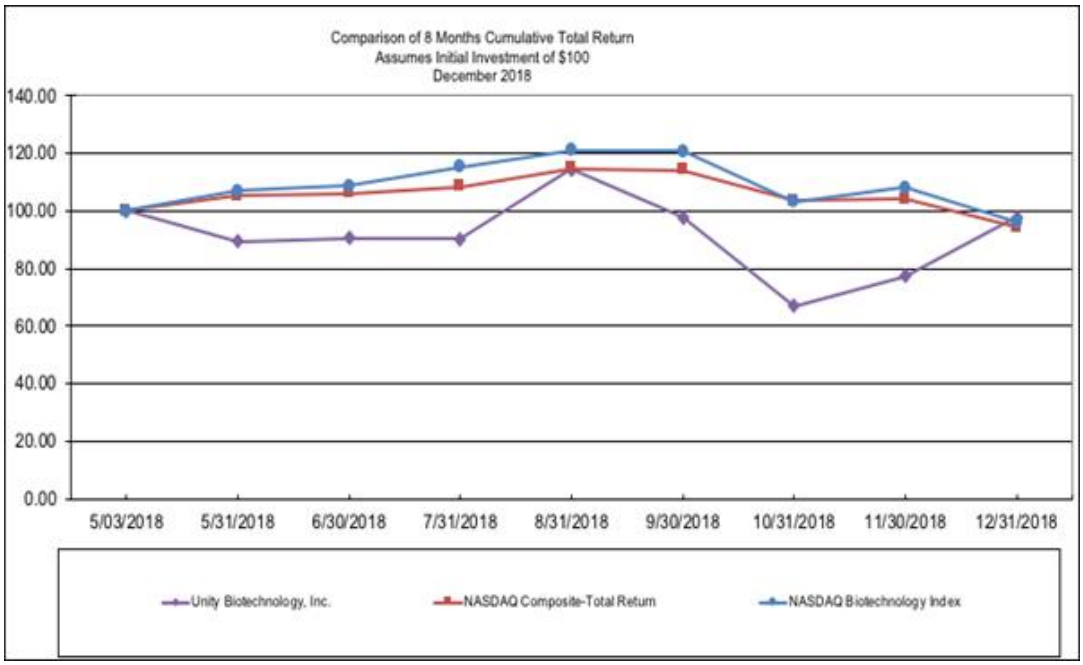
We have never declared or paid any cash dividends on our common stock or any other securities. We anticipate that we will retain all available funds and any future earnings, if any, for use in the operation of our business and do not anticipate paying cash dividends in the foreseeable future. In addition, future debt instruments may materially restrict our ability to pay dividends on our common stock. Payment of future cash dividends, if any, will be at the discretion of the board of directors after taking into account various factors, including our financial condition, operating results, current and anticipated cash needs, the requirements of current or then-existing debt instruments and other factors the board of directors deems relevant.

Performance Graph

This graph is not "soliciting material" or deemed "filed" with the SEC for purposes of Section 18 of the Exchange Act, or otherwise subject to liabilities under that Section, and shall not be deemed incorporated by reference into any filing of Unity Biotechnology, Inc. under the Securities Act of 1933, as amended (the "Securities Act"), whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

The following graph compares the cumulative total return on our common stock relative to the cumulative total returns of the Nasdaq Composite Index and the Nasdaq Biotechnology Index. Pursuant to applicable Securities and Exchange Commission rules, all values assume reinvestment of the full amount of all dividends, however no dividends have been declared on our common stock to date. The stockholder returns shown on the graph below are

based on historical results and are not necessarily indicative of future performance, and we do not make or endorse any predictions as to future stockholder returns.



Sales of Unregistered Securities

From January 1, 2018 through December 31, 2018, we sold and issued the following unregistered securities, which share numbers have been adjusted, as appropriate, for the 1-for-2.95 reverse stock split that occurred on April 20, 2018:

1. Prior to filing our registration statement on Form S-8 in May 2018, we granted stock options and stock awards to employees, directors and consultants under our 2013 Stock Incentive Plan, as amended, covering an aggregate of 6,640,219 shares of common stock, at a weighted-average average exercise price of $2.60 per share. Of these, options covering an aggregate of 155,519 shares were cancelled without being exercised and 143,181 unvested shares were repurchased concurrent with employee terminations.
2. Prior to filing our registration statement on Form S-8 in May 2018, we sold an aggregate of 2,161,731 shares of common stock to employees, directors and consultants for cash consideration in the aggregate amount of $0.1 million upon the exercise of stock options.
3. In March and April 2018, we authorized 11,554,669 and issued 3,913,425 shares of Series C convertible preferred stock, $0.0001 par value, original issue price of $15.3317 per share, for cash proceeds of approximately $59.9 million.
4. In May 2018, upon the closing of our IPO, all 32,073,149 shares of our then-outstanding convertible preferred stock automatically converted into 32,073,149 shares of common stock.

Use of Proceeds from our Initial Public Offering of Common Stock

On May 2, 2018, the U.S. Securities and Exchange Commission declared effective our registration statement on Form S-1 (File No. 333-224163), as amended, filed in connection with our initial public offering (IPO). There has been no material change in the planned use of proceeds from our IPO from that described in the related prospectus dated May 2, 2018, filed with the SEC pursuant to Rule 424(b)(4) under the Securities Act of 1933, as amended.

Repurchase of Shares or of Company Equity Securities

None.

Item 6. Selected Financial Data.

You should read the following selected historical financial data below together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our audited financial statements, related notes and other financial information included elsewhere in this report. The selected financial data in this section are not intended to replace the financial statements and are qualified in their entirety by the audited financial statements and related notes included elsewhere in this report.

We derived our selected statements of operations data for the years ended December 31, 2018, 2017 and 2016 and the balance sheet data as of December 31, 2018, 2017 and 2016 from our audited financial statements included elsewhere in this report. Our historical results are not necessarily indicative of the results that may be expected in any future period. The selected financial data below should be read in conjunction with the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and related notes included elsewhere in this report.

	Year Ended December 31,		
	2018	2017	2016
	(in thousands, except share and per share data)		
Statement of Operations Data:			
Contribution revenue	$ —	$ 1,382	$ —
Operating expenses:			
Research and development	58,907	37,373	13,707
General and administrative	16,016	9,617	5,137
Fair value of contingent consideration	4,542	—	—
Total operating expenses	79,465	46,990	18,844
Loss from operations	(79,465)	(45,608)	(18,844)
Loss on extinguishment of promissory notes	—	—	(9,377)
Interest income (expense), net	3,312	1,055	(2,183)
Other expense, net	(245)	(103)	—
Net loss	$ (76,398)	$ (44,656)	$ (30,404)
Net loss per share, basic and diluted(1)	$ (2.70)	$ (13.97)	$ (11.42)
Weighted average number of shares used in computing net loss per share, basic and diluted(1)	28,269,907	3,197,516	2,662,841

(1) See Note12 to our audited financial statements for an explanation of the calculations of our basic and diluted net loss per common share and the weighted-average number of common shares used in the computation of the per share amounts.

	As of December 31,		
	2018	2017	2016
	(in thousands)		
Balance Sheet Data:			
Cash and cash equivalents	$ 15,399	$ 7,298	$ 89,286
Marketable securities	155,736	84,330	—
Working capital	156,383	80,983	89,718
Total assets	181,375	102,024	96,648
Convertible preferred stock	—	173,956	131,089
Accumulated deficit	(163,278)	(86,880)	(42,224)
Total stockholders' equity (deficit)	160,693	(83,113)	(41,536)

Item 7. 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 the section entitled "Selected Financial Data" and our audited financial statements and related notes included elsewhere in this report. This discussion and other parts of this report contain forward-looking statements that involve risks and uncertainties, such as our plans, objectives, expectations, intentions and beliefs. Our actual results could differ materially from those discussed in these forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those identified below and those discussed in the section entitled "Risk Factors" included elsewhere in this report.

Overview

We are a biotechnology company engaged in researching and developing therapeutics to extend healthspan by slowing, halting or reversing age-related diseases. Our initial focus is on creating senolytic medicines to selectively eliminate senescent cells and thereby treat age-related diseases, such as musculoskeletal, opthalmologic and pulmonary diseases.

Since the commencement of our operations, we have invested a significant portion of our efforts and financial resources in research and development activities, and we have incurred net losses each year since inception. Our net losses were $76.4 million and $44.7 million for the years ended December 31, 2018 and 2017, respectively. We do not have any products approved for sale, and we have never generated any revenue from contracts with customers. As of December 31, 2018, we had an accumulated deficit of $163.3 million, and we do not expect positive cash flows from operations in the foreseeable future. We expect to continue to incur net operating losses for at least the next several years as we continue our research and development efforts, advance our drug candidates through preclinical and clinical development, seek regulatory approval, prepare for and, if approved, proceed to commercialization.

Prior to our initial public offering, or IPO, we had funded our operations primarily from the issuance and sale of convertible preferred stock and convertible promissory notes. In May 2018, we completed our IPO pursuant to which we issued 5,000,000 shares of our common stock at a price of $17.00 per share. We received proceeds of approximately $75.9 million, after deducting underwriting discounts, commissions, and offering-related transaction costs from the IPO.

We do not expect to generate revenue from any drug candidates that we develop until we obtain regulatory approval for one or more of such drug candidates and commercialize our products or enter into collaborative agreements with third parties. Substantially all of our net losses have resulted from costs incurred in connection with our research and development programs and from general and administrative costs associated with our operations. As a result, we will need to raise additional capital. If sufficient funds on acceptable terms are not available when needed, we could be required to significantly reduce our operating expenses and delay, reduce the scope of, or eliminate one or more of our development programs.

We rely on third parties in the conduct of our preclinical studies and clinical trials and for manufacturing and supply of our drug candidates. We have no internal manufacturing capabilities, and we will continue to rely on third parties, many of whom are single-source suppliers, for our preclinical and clinical trial materials, as well as the commercial supply of our products. In addition, we do not yet have a marketing or sales organization or commercial infrastructure. Accordingly, we will incur significant expenses to develop a marketing and sales organization and commercial infrastructure in advance of generating any product sales.

Components of Our Results of Operations

Research and Development Expenses

Research and development expenses consist primarily of costs incurred for the development of our drug candidates, which include:

- personnel-related expenses, including salaries, benefits and stock-based compensation for personnel contributing to research and development activities;
- laboratory expenses including supplies and services;
- expenses incurred under agreements with third-party contract manufacturing organizations, contract research organizations, research and development service providers, academic research institutions, and consultants;
- expenses related to license and sponsored research agreements;
- clinical trial expenses; and
- facilities and other allocated expenses, including expenses for rent and facilities maintenance, and depreciation and amortization.

We expect our research and development expenses to increase as we advance our drug candidates into and through preclinical and clinical trials and pursue regulatory approval of our drug candidates. The process of conducting the clinical trials required to obtain regulatory approval is costly and time-consuming. Clinical trials generally become larger and costlier to conduct as they advance into later stages and we are required to make estimates for expense accruals related to clinical trial expenses. The actual probability of success for our drug candidates may be affected by a variety of factors including: the safety and efficacy of our drug candidates, early clinical data, investment in our clinical program, the ability of collaborators, if any, to successfully develop any drug candidates we license to them, competition, manufacturing capability and commercial viability. We may never succeed in achieving regulatory approval for any of our drug candidates. Program costs that are direct external expenses are tracked on a program-by-program basis once they enter clinical studies. Due to the early-stage nature of our lead programs, the costs of our programs are not material. As a result of the uncertainties discussed above, we are unable to determine the duration and completion costs of our research and development projects or when and to what extent we will generate revenue from the commercialization and sale of our drug candidates.

General and Administrative Expenses

Our general and administrative expenses consist primarily of personnel costs, allocated facilities costs and other expenses for outside professional services, including legal, audit and accounting services, and depreciation and amortization expense related to property and equipment. Personnel costs consist of salaries, benefits, insurance and stock-based compensation. We expect to continue to incur additional expenses associated with operating as a public company, including expenses related to compliance with the rules and regulations of the Securities and Exchange Commission and standards applicable to companies listed on a national securities exchange, additional insurance expenses, investor relations activities and other administrative and professional services. We also expect to increase the size of our administrative headcount to support the growth of our business and operate as a public company.

Fair Value of Contingent Consideration

Our license agreements include contingent consideration in the form of the obligation to issue additional shares of our common stock based if we achieve certain milestones. To determine whether such contingent consideration constitutes an asset acquisition, we assess whether it meets the definition of a derivative and/or whether it can be classified within stockholders' equity, until such time that equity classification criteria are met or the milestones expire. As of December 31, 2018, we have recorded a liability related to contingent consideration because the net settlement criteria required for the contingent consideration to be defined as a derivative had been met whereas the equity classification criteria had not been met. The derivative related to this contingent consideration is measured at fair value as of each balance sheet date with the related change in fair value being reflected in operating expenses. The contingent consideration expense is driven by the change in the estimated fair value of the liability, which is

determined using a probability-weighted valuation approach model that reflects the probability and timing of future issuances common shares.

Interest Income

Interest income is primarily related to interest earned on our marketable securities for the years ended December 31, 2018, 2017 and 2016.

Results of Operations

Comparison of the Years Ended December 31, 2018 and 2017

The following table sets forth the significant components of our results of operations (in thousands):

	Year Ended December 31,		
	2018	2017	Increase/ (Decrease)
Summary of Operations Data:			
Contribution revenue	$ —	$ 1,382	$ (1,382)
Operating expenses:			
Research and development	58,907	37,373	21,534
General and administrative	16,016	9,617	6,399
Change in fair value of contingent consideration	4,542	—	4,542
Total operating expenses	79,465	46,990	32,475
Loss from operations	(79,465)	(45,608)	(33,857)
Interest income	3,312	1,055	2,257
Other expense, net	(245)	(103)	(142)
Net loss	$ (76,398)	$ (44,656)	$ (31,742)

Contribution Revenue

Contribution revenue for the year ended December 31, 2017 was related to funding we recognized from a third-party organization in 2017 for the performance of certain research and development activities in pursuit of that organization's philanthropic mission. We did not engage in similar activities in 2018, therefore we did not recognize any contribution revenue for the year ended December 31, 2018.

Research and Development

Research and development expenses increased by $21.5 million, to $58.9 million for the year ended December 31, 2018 from $37.4 million for the year ended December 31, 2017. The increase was primarily due to increases of $11.3 million for personnel-related expenses, of which $4.3 million was related to non-cash stock-based compensation, $7.8 million for direct research and development activities and $2.4 million for facilities-related costs.

General and Administrative

General and administrative expenses increased by $6.4 million, to $16.0 million for the year ended December 31, 2018 from $9.6 million for the year ended December 31, 2017. The increase was primarily due to increases of $4.8 million for personnel related expenses, of which $2.1 million was related to non-cash stock-based compensation, $1.9 million in professional services expenses primarily related to activities in preparation of becoming a public company, $0.5 million in insurance expense and $0.5 million for facilities-related costs. The increases were partially offset by a $1.3 million in unconditional funding provided to academic institutions.

Change in fair value of contingent consideration

Expenses related to the change in fair value of contingent consideration was $4.5 million for the year ended December 31, 2018. The contingent consideration expense was due to a change in the estimated fair value of the liability under our license agreements as the probability of milestone events requiring settlement through the issuance of shares of our common stock increase. The fair value is determined using a probability-weighted valuation approach model which considers our stock price and the probability and timing of the achievement of certain milestones at the balance sheet date.

Interest Income

Our interest income was $3.3 million for the year ended December 31, 2018, as compared to $1.1 million for the year ended December 31, 2017, as we invested our cash and proceeds from our Series C financing and IPO in marketable securities.

Comparison of the years ended December 31, 2017 and 2016

The following table sets forth the significant components of our results of operations:

	Year Ended December 31,		Increase/ (Decrease)
	2017	2016	
	(in thousands)		
Summary of Operations Data:			
Contribution revenue	$ 1,382	$ —	$ 1,382
Operating expenses:			
Research and development	37,373	13,707	23,666
General and administrative	9,617	5,137	4,480
Total operating expenses	46,990	18,844	28,146
Loss from operations	(45,608)	(18,844)	(26,764)
Loss on extinguishment of promissory notes	—	(9,377)	9,377
Interest income (expense), net	1,055	(2,183)	3,238
Other expense, net	(103)	—	(103)
Net loss	$ (44,656)	$ (30,404)	$ (14,252)

Contribution Revenue

Contribution revenue for the year ended December 31, 2017 was related to funding we recognized from a third-party organization in 2017 for the performance of certain research and development activities in pursuit of that organization's philanthropic mission.

Research and Development

Research and development expenses increased by $23.7 million from $13.7 million for the year ended December 31, 2016 to $37.4 million for the year ended December 31, 2017. The increase was primarily due to an increase of $10.4 million for direct research and development costs related to consultants, third-party contract research organizations, and preclinical studies as we expanded and continued to progress our development programs. Additionally, we had a $8.6 million increase in personnel-related expenses, of which $1.5 million related to stock-based compensation due to an increase in our headcount, an increase of $1.9 million in lab supplies as we expanded our lab space, $1.0 million in facility-related costs, and a $1.0 million increase in depreciation and amortization primarily related to leasehold improvements associated with our new space.

General and Administrative

General and administrative expenses increased by $4.5 million from $5.1 million for the year ended December 31, 2016 to $9.6 million for the year ended December 31, 2017. The increase was primarily due to an increase in personnel-related expenses of $2.9 million, of which $1.3 million related to stock-based compensation, as a result of an increase in our headcount and an increase of $1.3 million related to unconditional funding provided to academic institutions in 2017.

Loss on Extinguishment of Promissory Notes

We recognized a loss on extinguishment of promissory notes issued in July, September, and October 2016 of $9.4 million upon the settlement of such notes in 2016 for shares of Series B convertible preferred stock.

Interest Income (Expense), net

Our interest income was $1.1 million for the year ended December 31, 2017 as we invested our cash in marketable securities.

We recognized interest expense of $2.2 million for the year ended December 31, 2016 primarily related to the discount created from a contingent beneficial conversion on the February, April, and May 2016 promissory notes which was recognized upon the conversion of such notes in 2016 into shares of Series B preferred stock.

Liquidity, Capital Resources and Capital Requirements

Sources of Liquidity

We have incurred net losses each year since inception. We do not have any products approved for sale and have never generated any revenue from product sales. Historically, we have incurred operating losses as a result of ongoing efforts to develop our drug candidates, including conducting ongoing research and development, preclinical studies and providing general and administrative support for these operations. As of December 31, 2018, we had an accumulated deficit of $163.3 million, and we do not expect positive cash flows from operations in the foreseeable future. We expect our operating losses and net cash used in operating activities will increase over at least the next several years as we continue our research and development activities, advance our drug candidates through preclinical and clinical testing and move into later and more costly stages of drug development, hire personnel and prepare for regulatory submissions and the commercialization of our drug candidates.

We have historically financed our operations primarily through issuance and sale of common stock, convertible preferred stock and convertible promissory notes and will continue to be dependent upon equity and/or debt financing until we are able to generate positive cash flows from our operations. In March 2018, we sold 3,590,573 shares of Series C convertible preferred stock at $15.3317 per share for proceeds of $54.9 million. In April 2018, we sold 322,852 shares of Series C convertible preferred stock at $15.3317 per share for additional proceeds of $5.0 million. In May 2018, we completed our IPO and received net proceeds of $75.9 million, after deducting underwriting discounts, commissions and offering expenses payable by us. As of December 31, 2018, we had $171.1 million in cash, cash equivalents and marketable securities.

Future Funding Requirements

To date we have not generated any revenue for contracts with customers and have only received a contribution from a third-party organization for certain research and development activities to support their philanthropic mission. We expect to continue to incur significant losses for the foreseeable future, and we expect the losses to increase as we continue the development of, and seek regulatory approvals for, our drug candidates, and begin to commercialize any approved products. We are subject to all of the risks typically related to the development of new drug candidates, and we may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business. Moreover, following the completion of our IPO, we have incurred additional ongoing costs associated with operating as a public company. We anticipate that we will need substantial additional funding in connection with our continuing operations.

Until we can generate a sufficient amount of revenue from the commercialization of our drug candidates or from collaborative agreements with third parties, if ever, we expect to finance our future cash needs through public or private equity or debt financings. Additional capital may be raised through the sale of our equity securities, incurring debt, entering into licensing, collaboration agreements with partners, receiving research contributions, grants or other sources of financing to fund our operations. There can be no assurance that sufficient funds will be available to us on attractive terms or at all. If we are unable to obtain additional funding from these or other sources, it may be necessary to significantly reduce our rate of spending through reductions in staff and delaying, scaling back, or stopping certain research and development programs. Insufficient liquidity may also require us to relinquish rights to drug candidates at an earlier stage of development or on less favorable terms than we would otherwise choose.

Since our inception, we have incurred significant losses and negative cash flows from operations. We have an accumulated deficit of $163.3 million through December 31, 2018. We expect to incur substantial additional losses in the future as we conduct and expand our research and development activities. We believe that our existing cash, cash equivalents and marketable securities will be sufficient to enable us to fund our projected operations through at least the next 12 months. Based on our current operating plans, we expect our existing capital resources will fund our planned operating expenses into 2021, including through clinical data readout from our Phase 1 clinical study of UBX0101 and data readouts from additional Phase 1 clinical studies of our lead program for ophthalmologic diseases.

We have based our projections of operating capital requirements on assumptions that may prove to be incorrect and we may use all our available capital resources sooner than we expect. Because of the numerous risks and uncertainties associated with research, development and commercialization of biotechnology products, we are unable to estimate the exact amount of our operating capital requirements. Our future funding requirements will depend on many factors, including, but not limited to:

- the scope, progress, results and costs of researching and developing UBX0101, UBX1967 or any other drug candidates, and conducting preclinical studies and clinical trials, including our ongoing Phase 1 clinical study of UBX0101, which was initiated in the second quarter of 2018;
- the timing of, and the costs involved in, obtaining regulatory approvals for our lead drug candidates or any future drug candidates;
- the number and characteristics of any additional drug candidates we develop or acquire;
- the timing and amount of any milestone payments we are required to make pursuant to our license agreements;
- the cost of manufacturing our lead drug candidates or any future drug candidates and any products we successfully commercialize;
- the cost of building a sales force in anticipation of product commercialization;
- the cost of commercialization activities if our lead drug candidates or any future drug candidates are approved for sale, including marketing, sales and distribution costs;
- our ability to establish and maintain strategic collaborations, licensing or other arrangements and the financial terms of any such agreements, including the timing and amount of any future milestone, royalty or other payments due under any such agreement;
- any product liability or other lawsuits related to our products;
- the expenses needed to attract, hire and retain skilled personnel;
- the costs associated with being a public company;
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing our intellectual property portfolio; and
- the timing, receipt and amount of sales of any future approved or cleared products, if any.

Cash Flows

The following table sets forth a summary of the primary sources and uses of cash and restricted cash for each of the periods presented below (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Cash used in operating activities	$ (56,623)	$ (38,358)	$ (16,398)
Cash used in investing activities	(72,206)	(86,305)	(2,744)
Cash provided by financing activities	136,930	42,775	107,938
Net increase (decrease) in cash and restricted cash	$ 8,101	$ (81,888)	$ 88,796

Operating Activities

Cash used in operating activities of $56.6 million for the year ended December 31, 2018 consisted primarily of a net loss of $76.4 million adjusted for net non-cash charges of $14.6 million and net changes to our operating assets and liabilities of $5.1 million. Our non-cash charges consisted primarily of $9.4 million in stock-based compensation, $4.5 million change in fair value of contingent consideration and $2.2 million in depreciation and amortization, partially offset by a $1.0 million in amortization of premium and discounts on marketable securities and $0.6 million in accretion of our tenant improvement allowance. The net change in our operating assets and liabilities consisted of a decrease of $1.4 million in contribution receivable, and increases of $2.2 million in accounts payable, $1.6 million in accrued compensation and $1.4 million in accrued liabilities and other current liabilities, partially offset by a decrease of $0.6 million in other long-term assets and $0.8 million in prepaid expenses and other current assets.

Cash used in operating activities of $38.4 million for the year ended December 31, 2017 consisted primarily of a net loss of $44.7 million, which was partially offset by non-cash charges of $4.0 million and a decrease in our net operating assets of $2.3 million. Our non-cash charges primary consisted of $1.3 million for depreciation and amortization expense and $3.0 million for stock-based compensation expense. The decrease in our net operating assets of $2.3 million was primarily due to an increase in accrued compensation of $1.6 million related to our bonus accrual and increases in accounts payable of $1.2 million and accrued and other current liabilities of $1.3 million as we expand our operations, partially offset by an increase in our contribution receivable of $1.4 million.

Cash used in operating activities of $16.4 million for the year ended December 31, 2016 consisted primarily of a net loss of $30.4 million, which was partially offset by non-cash charges of $12.0 million and a decrease in our net operating assets of $2.0 million. Our non-cash charges primarily consisted of $9.4 million for loss on extinguishment of our July, September, and October 2016 promissory notes and $2.2 million for interest expense related to our February, April and May 2016 promissory notes. The decrease in our net operating assets was due primarily to an increase in accrued and other current liabilities of $1.0 million primarily related to deferred rent for our facility lease entered into in 2016 and an increase in our accrued compensation of $0.5 million.

Investing Activities

Cash used in investing activities of $72.2 million for the year ended December 31, 2018 was related to purchases of marketable securities of $204.1 million, purchases of property and equipment of $1.2 million and the purchase of an investment in stock of $0.5 million, which were offset by maturities of marketable securities of $133.6 million.

Cash used in investing activities of $86.3 million for the year ended December 31, 2017 was related to purchases of marketable securities of $134.5 million and purchases of property and equipment of $1.7 million, which were partially offset by maturities of marketable securities of $49.8 million.

Cash used in investing activities of $2.7 million for the year ended December 31, 2016 was related to the purchases of property and equipment of $2.2 million and the purchase of an investment in stock of $0.5 million.

Financing Activities

Cash provided by financing activities of $136.9 million for the year ended December 31, 2018 was primarily related to net proceeds from our sale of common stock in our IPO of $75.9 million, net proceeds from issuance of Series C convertible preferred stock of $59.9 million, proceeds from repayment of recourse notes of $0.9 million, and proceeds from issuance of common stock upon exercise of stock options of $0.4 million.

Cash provided by financing activities of $42.8 million for the year ended December 31, 2017 was primarily related to net proceeds from the issuance of shares of our convertible preferred stock.

Cash provided by financing activities of $107.9 million for the year ended December 31, 2016 was primarily related to net proceeds of $91.0 million from the issuance of shares of our convertible preferred stock and proceeds of $16.9 million from the issuance of convertible promissory notes which have since been converted into or settled with shares of convertible preferred stock.

Contractual Obligations and Other Commitments

The following table summarizes our contractual obligations as of December 31, 2018:

	Payments due by period				
	Less than 1 year	1 to 3 years	3 to 5 years	More than 5 years	Total
	(in thousands)				
Contractual obligations:					
Operating lease(1)	$ 2,012	$ 4,207	$ 1,621	$ —	$ 7,840
Capital lease	78	46	—	—	124
Total contractual obligations	$ 2,090	$ 4,253	$ 1,621	$ —	$ 7,964

(1) Our contractual obligations and commitments primarily relate to our facilities lease agreement. We have a lease for laboratory and office space in Brisbane, California. The current lease is for approximately 39,000 square feet and the lease period expires in October 2022.

We are party to various license agreements pursuant to which we have in-licensed rights to various technologies, including patents, research "know-how" and proprietary research tools, for the discovery, research, development and commercialization of drug products to treat age-related diseases. The license agreements obligate us to make certain milestone payments related to specified clinical development and sales milestone events, as well as tiered royalties in the low-single digits based on sales of licensed products. This table does not include any milestone payments or royalty payments to third parties as the amounts, timing and likelihood of such payments are not known. See Note 5 to our financial statements "License Agreements" for additional information.

In February 2019, we entered into a lease agreement for approximately 62,655 rentable square feet of office and laboratory space in South San Francisco, California. The term of the lease agreement will commence on the later of: (i) the earlier to occur of (a) October 1, 2019, and (b) the date upon which we begin conducting business on the premises, and (ii) the date the landlord's construction and tenant improvements have been completed. The lease has an initial term of ten years from the commencement date, and we have an option to extend the initial term for an additional eight years at the then fair rental value as determined pursuant to the lease agreement. The total base rent for the first twelve months will be $5.25 per rental square foot and will escalate by approximately 3.5% annually beginning from the 13th month of the lease agreement. We will also be responsible for the operating expenses and tax expenses allocated to the building, and the operating expenses and tax expenses attributable to the common areas. The landlord will provide us with a tenant improvement allowance of up to a maximum amount of approximately $7.8 million, and we have the right to use up to approximately $2.8 million as an additional tenant improvement allowance that must be paid back as described in the lease agreement. In connection with the execution of the lease agreement, we delivered a letter of credit of approximately $0.9 million to the landlord.

Off-Balance Sheet Arrangements

We have not entered into any off-balance sheet arrangements. While we have an investment in a variable interest entity, its purpose is not to provide off-balance sheet financing.

Critical Accounting Polices and Estimates

This discussion and analysis of our financial condition and results of operations is based on our financial statements, which have been prepared in accordance with GAAP. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. While our significant accounting policies are described in more detail in the notes to our financial statements included elsewhere in this prospectus, we believe that the following accounting policies are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates.

Research and Development Expenses

Costs related to research and development of drug candidates are charged to research and development expense as incurred. Research and development costs include, but are not limited to, payroll and personnel expenses for personnel contributing to research and development activities, laboratory supplies, outside services, licenses acquired to be used in research and development and allocated overhead, including rent, equipment, depreciation and utilities. Payments made prior to the receipt of goods or services to be used in research and development are deferred and recognized as expense in the period in which the related goods are received or services are rendered. Such payments are evaluated for current or long-term classification based on when they will be realized.

We have and may continue to enter into license agreements to access and utilize certain technology. We evaluate if the license agreement is an acquisition of an asset or a business. To date none of our license agreements have been considered to be an acquisition of a business. For asset acquisitions, the upfront payments to acquire such licenses, as well as any future milestone payments made before product approval, are immediately recognized as research and development expense when due, provided there is no alternative future use of the rights in other research and development projects. These license agreements may also include contingent consideration in the form of cash and additional issuances of our common stock.

Contingent Consideration Liability

We have entered into license agreements to access and utilize certain intellectual property and technology and may enter into additional license agreements in the future. In each case, we evaluate if the license agreement results in the acquisition of an asset or a business. To date, none of our license agreements have been considered an acquisition of a business. If a license agreement is deemed to constitute an asset acquisition, the upfront payments to acquire such licenses, as well as any future milestone payments made before product approval, are immediately recognized as research and development expense when due, provided there is no alternative future use of the rights in other research and development projects. Several of our license agreements also include contingent consideration in the form of an obligation to issue additional shares of our common stock if we achieve certain milestones. To determine whether such contingent consideration constitutes anasset acquisition, we assess on a continuous basis whether the contingent consideration meets the definition of a derivative and/or whether it can be classified within stockholders' equity, until such time that equity classification criteria are met or the milestones expireThe derivative related to the contingent consideration arising from our license agreements is measured at fair value as of each balance sheet date with the related change in fair value being reflected in operating expenses. Upon a reassessment event that results in the contingent consideration no longer meeting the definition of a derivative and/or meeting equity classification critera, the final change in fair value of the insutrment is recorded within operating expenses and the liability is reclassified into stockholders' equity.

We value the contingent consideration liability using a probability-weighted valuation approach model that reflects the probability and timing of achieving the milestones which trigger the obligation to issue additional shares of common stock. The probability of achieving the defined milestones for each licensed product is estimated on a quarterly basis by our management team. The total contingent consideration may change significantly over time as preclinical and/or clinical development progresses and additional data is obtained, impacting our assumptions regarding the probability of successfully achieving the relevant milestones and the time frame in which they are

expected to be achieved. For example, significant increases in the estimated probability of achieving a milestone would result in a significantly higher fair value measurement, while significant decreases in the estimated probability of achieving a milestone would result in a significantly lower fair value measurement. Judgment is employed in determining these assumptions at each subsequent period. Updates to assumptions could have a significant impact on our results of operations in any given period. Actual results may differ from estimates.

We believe the fair values used to record contingent consideration liability are based upon reasonable estimates and assumptions given the facts and circumstances as of the related valuation dates.

Variable Interest Entities

At the inception of each arrangement that we enter into with a third party entity, and at each reporting date thereafter, we assess whether we are the primary beneficiary of that arrangement such that it constitutes a variable interest entity, or VIE. This assessment is based on our power to direct the activities of the third party that most significantly impact the third party's economic performance and our obligation to absorb losses or the right to receive benefits from the third party that could potentially be significant to it.

Stock-Based Compensation

We recognize compensation costs related to stock options granted to employees and nonemployees based on the estimated fair value of the awards on the date of grant, and we recognize forfeitures as they occur. For awards that vest solely based on service conditions or a combination of service and performance conditions, we estimate the grant date fair value, and the resulting stock-based compensation expense, using the Black-Scholes option-pricing model. The grant date fair value of the awards is generally recognized on a straight-line basis over the requisite service period, which is typically their vesting period. Forfeitures are recognized as they occur.

Prior to our IPO, the fair value of our shares of common stock underlying the stock options was the responsibility of and determined by our Board. Because there was no public market for our common stock, the Board determined the fair value of common stock at the time of grant of the option by considering a number of objective and subjective factors, including, among others: the prices at which we sold shares of our convertible preferred stock to outside investors in arms-length transactions; the rights, preferences and privileges of our convertible preferred stock relative to those of our common stock; our results of operations, financial position and capital resources; current business conditions and projections; the lack of marketability of our common stock; the hiring of key personnel and the experience of management; progress of our research and development activities; our stage of development and material risks related to its business; the fact that the option grants involve illiquid securities in a private company; and the likelihood of achieving a liquidity event, such as an initial public offering or sale, in light of prevailing market conditions.

Following the IPO, the market traded price of the shares of common stock underlying the stock options is the fair value of our stock as reported on The Nasdaq Global Select Market on the grant date.

The Black-Scholes option-pricing model requires the use of highly subjective assumptions to determine the fair value of stock-based awards. These assumptions include:

- Expected term—The expected term represents the period that the stock-based awards are expected to be outstanding. We use, due to insufficient historical data, the simplified method to determine the expected term, which is based on the average of the time-to-vesting and the contractual life of the options.
- Expected volatility—Due to our limited trading history for our common stock, the expected volatility is estimated based on the average historical volatilities of common stock of comparable publicly traded entities over a period equal to the expected term of the stock option grants. The comparable companies are chosen based on their size, stage in the product development cycle or area of specialty. We will continue to apply this process until a sufficient amount of historical information regarding the volatility of our own stock price becomes available.

- Risk-free interest rate—The risk-free interest rate is based on the U.S. Treasury yield in effect at the time of grant for zero-coupon U.S. Treasury notes with maturities approximately equal to the expected term of the awards.
- Expected dividend—We have never paid dividends on our common stock and have no plans to pay dividends on our common stock. Therefore, we used an expected dividend yield of zero.

For options granted to non-employee consultants, the fair value of these options is also remeasured using the Black-Scholes option-pricing model reflecting consistent assumptions as applied to employee options in each of the reported periods, other than the expected term, which is assumed to be the remaining contractual life of the option.

We have also granted stock options to certain key employees that vest in conjunction with certain performance and market conditions. We estimate the fair value of these awards using a lattice model, taking into consideration the market conditions. No expense will be recorded related to these awards until the achievement of the performance condition becomes probable. Once the achievement of the performance condition becomes probable, expense related to these awards is recognized using the accelerated attribution method with a cumulative catch-up adjustment over the derived service period relating to the market conditions, if the market conditions have not been met. As these awards vest in their entirety upon achievement of the market conditions, any unrecognized expense would be accelerated if the market conditions are achieved prior to the completion of the derived service period.

We will continue to use judgment in evaluating the expected volatility, expected terms and forfeiture rates utilized for our stock-based compensation expense calculations on a prospective basis. In addition to the Black-Scholes assumptions, we estimate our forfeiture rate based on an analysis of our actual forfeitures and we will continue to evaluate the adequacy of the forfeiture rate based on actual forfeiture experience, analysis of employee turnover behavior and other factors. The impact from any forfeiture rate adjustment would be recognized in full in the period of adjustment, and if the actual number of future forfeitures differs from our estimates, we might be required to record adjustments to stock-based compensation in future periods.

As of December 31, 2018, we had $20.6 million of unrecognized compensation expense related to unvested stock options, which is expected to be recognized over an estimated weighted-average period of 4.1 years. For stock option awards subject to ratable vesting, we recognize compensation cost on a straight-line basis over the service period for the entire award. In future periods, our stock-based compensation expense is expected to increase as a result of recognizing our existing unrecognized stock-based compensation for awards that will vest and as we issue additional stock-based awards to attract and retain our employees.

Income Taxes

We use the asset and liability method of accounting for income taxes, in which deferred tax assets and liabilities are recognized for future tax consequences attributable to the differences between the financial statement carrying amounts of existing assets and liabilities, their respective tax bases, net operating loss carryforwards, and credit carryforwards. Deferred tax assets and liabilities are measured using the enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be reversed. Current income tax expense or benefit represents the amount of income taxes expected to be payable or refundable for the current year. The effect on deferred tax assets and liabilities of a change in tax rates is recognized as income in the period that includes the enactment date. We record a valuation allowance to reduce our deferred tax assets to reflect the net amount that we believe is more likely than not to be realized. Realization of our deferred tax assets is dependent on the generation of future taxable income, the amount and timing of which are uncertain. The valuation allowance requires an assessment of both positive and negative evidence when determining whether it is more likely than not that deferred tax assets are recoverable. Based upon the weight of available evidence at December 31, 2018, we continue to maintain a full valuation allowance against all of our deferred tax assets after management considered all available evidence both positive and negative, including but not limited to our historical operating results, income or loss in recent periods, cumulative income in recent years, forecasted earnings, future taxable income, and significant risk and uncertainty related to forecasts..

We recognize the tax effects of an uncertain tax position only if it is more likely than not to be sustained based solely on its technical merits as of the reporting date and only in an amount more likely than not to be sustained upon review by the tax authorities. We recognize interest accrued and penalties related to unrecognized tax benefits in our tax

provision. We evaluate uncertain tax positions on a quarterly basis. The evaluations are based on a number of factors, including changes in facts and circumstances, changes in tax law, correspondence with tax authorities during the course of the audit, and effective settlement of audit issues. To the extent that the final tax outcome of these matters is different than the amounts recorded, such differences will impact the income tax provision in the period in which such determination is made. The resolution of our uncertain income tax positions is dependent on uncontrollable factors such as law changes, new case law, and the willingness of the income tax authorities to settle, including the timing thereof and other factors. Although we do not anticipate significant changes to our uncertain income tax positions in the next twelve months, items outside of our control could cause our uncertain income tax positions to change in the future, which would be recorded in our statements of operations. Our provision for income taxes includes the effects of any accruals that we believe are appropriate, as well as the related net interest and penalties.

On December 22, 2017, the Tax Cuts and Jobs Act ("Tax Act") was signed into law. The Tax Act lowered the Federal corporate tax rate from 35% to 21% and made numerous other tax law changes. The Company has measured deferred tax assets at the enacted tax rate expected to apply when these temporary differences are expected to be realized or settled. U.S. GAAP requires companies to recognize the effect of tax law changes in the period of enactment.

As a result of the impact of the Tax Act, in December 2017, the SEC staff issued Staff Accounting Bulletin No. 118 (SAB 118), Income Tax Accounting Implications of the Tax Act or TCJA, which allows SEC registrants to record provisional amounts during a measurement period not to extend beyond one year of the enactment date. Since the Act was passed late in the fourth quarter of 2017, and ongoing guidance and accounting interpretation are expected over the next 12 months, Management considers its accounting of the various tax laws impacted by the Tax Act to be reasonable despite any forthcoming guidance. Any subsequent adjustment to these amounts will be adjusted accordingly as further guidance comes out. In the fourth quarter of 2018, we completed our analysis to determine the effect of the Tax Act and no material adjustments were recognized as of December 31, 2018.

As of December 31, 2018, our total deferred tax assets were $38 million. Due to our lack of earnings history and uncertainties surrounding our ability to generate future taxable income, the net deferred tax assets have been fully offset by a valuation allowance. The deferred tax assets were primarily comprised of federal and state tax net operating losses, and Research and Development Credits. Utilization of NOLs may be limited by the "ownership change" rules, as defined in Section 382 of the Code. The Company has engaged a third party to perform a Section 382 analysis covering from inception in 2010 to December 31, 2018 balance sheet reporting date. The Company has had various rounds of funding since inception (Series A-1, A-2, B) that have resulted in a change in ownership which limits the amount of net operating losses that may be used in the future. The Company has written off any deferred tax assets that will not be accessible due to the limitation from Section 382/383 with a corresponding adjustment to the valuation allowance..

JOBS Act Accounting Election

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies.

We have elected to use this extended transition period to enable us to comply with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

Recent Accounting Pronouncements

See Note 2 to our Financial Statements "Summary of Significant Accounting Policies" for information.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

We are exposed to market risks in the ordinary course of our business. These risks primarily relate to interest rate sensitivities. We had cash, cash equivalents and marketable securities of $171.1 million as of December 31, 2018, which consist of bank deposits, money market funds, and marketable securities. The primary objective of our investment activities is to preserve capital to fund our operations. We also seek to maximize income from our investments without assuming significant risk. Because our investments are primarily short-term in duration, we believe that our exposure to interest rate risk is not significant, and a 1% movement in market interest rates would not have a significant impact on the total value of our portfolio. We had no debt outstanding as of December 31, 2018.

Item 8. Financial Statements and Supplementary Data.

UNITY BIOTECHNOLOGY, INC.
Index to Financial Statements

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of
Unity Biotechnology, Inc.

Opinion on the Financial Statements

We have audited the accompanying balance sheets of Unity Biotechnology, Inc. (the Company) as of December 31, 2018 and 2017, and related statements of operations and comprehensive loss, statements of convertible preferred stock and stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2018, 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 at December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years ended December 31, 2018 in conformity with U.S. generally accepted accounting principles.

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 include 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/ Ernst & Young LLP

We have served as the Company's auditor since 2017.

Redwood City, California
March 6, 2019,

UNITY BIOTECHNOLOGY, INC.
Balance Sheets
(in thousands, except share and per share amounts)

	December 31, 2018	December 31, 2017
Assets		
Current assets:		
Cash and cash equivalents	$ 15,399	$ 7,298
Contribution receivable	—	1,382
Short-term marketable securities	155,736	79,212
Prepaid expenses and other current assets	1,830	988
Total current assets	172,965	88,880
Property and equipment, net	6,238	6,958
Long-term marketable securities	—	5,118
Restricted cash	550	550
Other long-term assets	1,622	518
Total assets	$ 181,375	$ 102,024
Liabilities, Convertible Preferred Stock, and Stockholders' Equity (Deficit)		
Current liabilities:		
Accounts payable	$ 4,847	$ 2,378
Accrued compensation	3,791	2,181
Accrued and other current liabilities	4,990	3,338
Settlement liability	2,059	—
Contingent consideration liability	895	—
Total current liabilities	16,582	7,897
Deferred rent, net of current portion	2,467	3,166
Contingent consideration liability, net of current portion	1,588	—
Other non-current liabilities	45	118
Total liabilities	20,682	11,181
Commitments and contingencies (Note 7)		
Convertible preferred stock, $0.0001 par value; 10,000,000 and 91,739,149 shares authorized as of December 31, 2018 and 2017, respectively; 0 and 28,159,724 shares issued and outstanding as of December 31, 2018 and 2017, respectively; aggregate liquidation preference of $0 and $190,825 as of December 31, 2018 and 2017, respectively	—	173,956
Stockholders' equity (deficit):		
Common stock, $0.0001 par value; 300,000,000 and 122,000,000 shares authorized as of December 31, 2018 and 2017, respectively; 42,414,294 and 4,830,389 shares issued and outstanding as of December 31, 2018 and 2017, respectively	4	1
Additional paid-in capital	324,663	4,072
Related party promissory notes for purchase of common stock	(201)	(202)
Employee promissory notes for purchase of common stock	(400)	—
Accumulated other comprehensive loss	(95)	(104)
Accumulated deficit	(163,278)	(86,880)
Total stockholders' equity (deficit)	160,693	(83,113)
Total liabilities, convertible preferred stock, and stockholders' equity (deficit)	$ 181,375	$ 102,024

See accompanying notes to the financial statements.

UNITY BIOTECHNOLOGY, INC.
Statements of Operations and Comprehensive Loss
(in thousands, except share and per share amounts)

	Year ended December 31,		
	2018	2017	2016
Contribution revenue	$ —	$ 1,382	$ —
Operating expenses:			
Research and development	58,907	37,373	13,707
General and administrative	16,016	9,617	5,137
Change in fair value of contingent consideration	4,542	—	—
Total operating expenses	79,465	46,990	18,844
Loss from operations	$ (79,465)	$ (45,608)	$ (18,844)
Loss on extinguishment of promissory notes	—	—	(9,377)
Interest income (expense), net	3,312	1,055	(2,183)
Other expense, net	(245)	(103)	—
Net loss	$ (76,398)	$ (44,656)	$ (30,404)
Other comprehensive loss			
Unrealized gain (loss) on marketable securities, net of tax	9	(104)	—
Comprehensive loss	$ (76,389)	$ (44,760)	$ (30,404)
Net loss per share, basic and diluted	$ (2.70)	$ (13.97)	$ (11.42)
Weighted average number of shares used in computing net loss per share, basic and diluted	28,269,907	3,197,516	2,662,841

See accompanying notes to the financial statements.

UNITY BIOTECHNOLOGY, INC.
Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit)
(in thousands, except share amounts)

	Convertible Preferred Stock		Common Stock		Additional Paid-In	Related Party Promissory Notes for Purchase of	Employee Promissory Notes for Purchase of	Accumulated Other Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Shares	Amount	Capital	Common Stock	Common Stock	Loss	Deficit	Equity (Deficit)
Balances at December 31, 2015	**8,713,925**	**$ 7,579**	**2,054,204**	**$ 1**	**$ 123**	**$ (49)**	**$ —**	**$ —**	**$ (11,820)**	**$ (11,745)**
Issuance of Series A-2 convertible preferred stock at $0.876 per share for cash, net of issuance costs of $1	4,671,430	4,092	—	—	—	—	—	—	—	—
Issuance of Series B convertible preferred stock at $12.125 per share for cash, net of issuance costs of $214	11,235,260	119,418	—	—	—	—	—	—	—	—
Issuance of common stock upon exercise of stock options, net of amount related to early exercised options of $408	—	—	1,436,902	—	38	—	—	—	—	38
Vesting of early exercised options	—	—	—	—	58	—	—	—	—	58
Issuance of restricted stock	—	—	76,271	—	—	—	—	—	—	—
Common stock granted to third parties	—	—	736,161	—	446	—	—	—	—	446
Stock-based compensation	—	—	—	—	224	—	—	—	—	224
Receipt of promissory note from related party for purchase of common stock	—	—	—	—	—	(153)	—	—	—	(153)
Net loss	—	—	—	—	—	—	—	—	(30,404)	(30,404)
Balances at December 31, 2016	**24,620,615**	**$ 131,089**	**4,303,538**	**$ 1**	**$ 889**	**$ (202)**	**$ —**	**$ —**	**$ (42,224)**	**$ (41,536)**
Issuance of Series B convertible preferred stock at $12.125 per share for cash, net of issuance costs of $43	3,539,109	42,867	—	—	—	—	—	—	—	—
Issuance of common stock upon exercise of stock options, net of amount related to early exercised options of $5	—	—	43,727	—	8	—	—	—	—	8
Vesting of early exercised options	—	—	—	—	97	—	—	—	—	97
Issuance of restricted stock	—	—	625,931	—	—	—	—	—	—	—
Common stock granted to third party	—	—	12,711	—	44	—	—	—	—	44
Stock-based compensation	—	—	—	—	3,034	—	—	—	—	3,034
Unrealized loss on marketable securities, net of tax	—	—	—	—	—	—	—	(104)	—	(104)
Repurchase of early exercised shares of common stock	—	—	(155,518)	—	—	—	—	—	—	—
Net loss	—	—	—	—	—	—	—	—	(44,656)	(44,656)
Balances at December 31, 2017	**28,159,724**	**$ 173,956**	**4,830,389**	**$ 1**	**$ 4,072**	**$ (202)**	**$ —**	**$ (104)**	**$ (86,880)**	**$ (83,113)**
Issuance of Series C convertible preferred stock at $15.3317 per share for cash, net of issuance costs of $119	3,913,425	59,881	—	—	—	—	—	—	—	—
Issuance of common stock upon initial public offering, net of issuance costs of $9,149	—	—	5,000,000	1	75,851	—	—	—	—	75,852
Conversion of Series A-1, A-2, B and C convertible preferred stock to common stock	(32,073,149)	(233,837)	32,073,149	2	233,837	—	—	—	—	233,839
Issuance of common stock upon exercise of warrants and stock options, net of amount related to early exercised options of $1,212	—	—	510,756	—	374	—	—	—	—	374
Vesting of early exercised stock options	—	—	—	—	584	—	—	—	—	584
Stock-based compensation	—	—	—	—	9,441	—	—	—	—	9,441
Unrealized gain on available-for-sale marketable securities, net of tax	—	—	—	—	—	—	—	9	—	9
Receipt of promissory note from related party for purchase of common stock	—	—	—	—	—	(390)	—	—	—	(390)
Receipt of promissory note from employee for purchase of common stock	—	—	—	—	—	—	(400)	—	—	(400)
Repayment of promissory note from related party	—	—	—	—	504	391	—	—	—	895
Net loss	—	—	—	—	—	—	—	—	(76,398)	(76,398)
Balances at December 31, 2018	**—**	**$ —**	**42,414,294**	**$ 4**	**$ 324,663**	**$ (201)**	**$ (400)**	**$ (95)**	**$ (163,278)**	**$ 160,693**

See accompanying notes to the financial statements.

UNITY BIOTECHNOLOGY, INC.
Statements of Cash Flows
(in thousands)

	Year Ended December 31,		
	2018	2017	2016
Operating activities			
Net loss	$ (76,398)	$ (44,656)	$ (30,404)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	2,180	1,304	153
Net accretion and amortization of premium and discounts on marketable securities	(955)	182	—
Stock-based compensation	9,441	3,034	224
Loss on extinguishment of promissory notes	—	—	9,377
Non-cash interest expense	—	—	2,223
Loss on disposal of property and equipment	45	15	—
Common stock granted to third party	—	44	447
Accretion of tenant improvement allowance	(605)	(605)	(403)
Change in fair value of contingent consideration for license agreements	4,542	—	—
Changes in operating assets and liabilities:			
Contribution receivable	1,382	(1,382)	—
Prepaid expenses and other current assets	(842)	(746)	(229)
Other long-term assets	(604)	23	(41)
Accounts payable	2,228	1,198	198
Accrued compensation	1,610	1,607	504
Accrued liabilities and other current liabilities	1,446	1,258	1,046
Deferred rent, net of current portion	(93)	366	27
Other non-current liabilities	—	—	480
Net cash used in operating activities	(56,623)	(38,358)	(16,398)
Investing activities			
Purchase of marketable securities	(204,086)	(134,465)	—
Maturities of marketable securities	133,644	49,849	—
Purchase of investment in stock	(500)	—	(500)
Purchase of property and equipment	(1,264)	(1,689)	(2,244)
Net cash used in investing activities	(72,206)	(86,305)	(2,744)
Financing activities			
Proceeds from issuance of convertible promissory notes payable	—	—	16,887
Proceeds from issuance of convertible preferred stock, net of issuance costs	59,881	42,867	90,956
Proceeds from issuance of common stock upon exercise of stock options, net of repurchases	374	(37)	95
Proceeds from initial public offering, net of issuance costs	79,055	—	—
Payment of initial public offering costs	(3,201)	—	—
Proceeds from repayment of recourse notes	895	—	—
Payments made on capital lease obligations	(74)	(55)	—
Net cash provided by financing activities	136,930	42,775	107,938
Net increase (decrease) in cash, cash equivalents and restricted cash	8,101	(81,888)	88,796
Cash, cash equivalents and restricted cash at beginning of year	7,848	89,736	940
Cash, cash equivalents and restricted cash at end of year	$ 15,949	$ 7,848	$ 89,736
Supplemental Disclosures of Non-Cash Investing and Financing Activities			
Conversion and settlement of convertible notes and accrued interest into convertible preferred stock	$ —	$ —	$ 15,667
Property and equipment included in accounts payable	$ 241	$ 314	$ 98
Property and equipment acquired under capital leases	$ —	$ 243	$ —
Lessor funded lease incentives included in property and equipment	$ —	$ 3,881	$ —
Receipt of promissory note for purchase of common stock	$ 400	$ —	$ —
Receipt of promissory note from related party for purchase of common stock	$ 390	$ —	$ 153

See accompanying notes to the financial statements.

1. Organization

Description of Business

Unity Biotechnology, Inc. (the "Company") is a biotechnology company engaged in the research and development of therapeutics to extend human healthspan. The Company devotes substantially all of its time and efforts to performing research and development, raising capital and recruiting personnel. The Company is located in Brisbane, California and was incorporated in the State of Delaware in 2009.

Need for Additional Capital

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. Since inception, the Company has incurred net losses and negative cash flows from operations. During the year ended December 31, 2018, the Company incurred a net loss of $76.4 million and used $56.6 million of cash in operations. At December 31, 2018, the Company had an accumulated deficit of $163.3 million and does not expect positive cash flows from operations in the foreseeable future. The Company has historically financed its operations primarily through the issuance and sale of convertible preferred stock and convertible promissory notes. To date, none of the Company's drug candidates have been approved for sale and therefore the Company has not generated any revenue from contracts with customers. The Company has evaluated and concluded there are no conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for a period of one year following the date that these financial statements are issued. Management expects operating losses to continue for the foreseeable future. As a result, the Company will need to raise additional capital. If sufficient funds on acceptable terms are not available when needed, the Company could be required to significantly reduce its operating expenses and delay, reduce the scope of, or eliminate one or more of its development programs. Failure to manage discretionary spending or raise additional financing, as needed, may adversely impact the Company's ability to achieve its intended business objectives.

2. Summary of Significant Accounting Policies

Basis of Presentation

These financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP").

Reverse Stock Split

On April 19, 2018, the Company's board of directors approved an amendment to the Company's amended and restated certificate of incorporation to effect a 1-for-2.95 reverse split ("Reverse Split") of shares of the Company's common and convertible preferred stock, which was effected on April 20, 2018. The par value and authorized shares of common stock and convertible preferred stock were not adjusted as a result of the Reverse Split. All of the share and per share information included in the accompanying financial statements has been adjusted to reflect the Reverse Split.

Initial Public Offering

On May 7, 2018, the Company closed its initial public offering ("IPO"), of 5,000,000 shares of common stock, at an offering price to the public of $17.00 per share. The Company received net proceeds of approximately $75.9 million, after deducting underwriting discounts, commissions and offering related transaction costs of approximately $9.1 million. In connection with the IPO, all of the Company's outstanding shares of convertible preferred stock were automatically converted into 32,073,149 shares of common stock. In addition, all of the Company's convertible preferred stock warrants were converted into warrants to purchase shares of common stock.

In connection with the completion of its IPO, on May 7, 2018, the Company's certificate of incorporation was amended and restated to provide for 300,000,000 authorized shares of common stock with a par value of $0.0001 per share and 10,000,000 authorized shares of preferred stock with a par value of $0.0001 per share.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. The Company bases its estimates on historical experience and market-specific or other relevant assumptions that it believes are reasonable under the circumstances. The amounts of assets and liabilities reported in the Company's balance sheets and the amount of expenses and income reported for each of the periods presented are affected by estimates and assumptions, which are used for, but are not limited to, determining the fair value of assets and liabilities, contingent consideration liability, common stock valuation, and stock-based compensation. Actual results could differ from such estimates or assumptions.

Segments

The Company has one operating segment. The Company's chief operating decision maker, its Chief Executive Officer, manages the Company's operations on a consolidated basis for the purposes of allocating resources.

Cash, Cash Equivalents and Restricted Cash

The Company considers all highly liquid investments with original maturities of 90 days or less from the date of purchase to be cash equivalents. Cash equivalents primarily include money market funds that invest in U.S. Treasury obligations which are stated at fair value.

The Company has issued a letter of credit under a lease agreement which has been collateralized. This cash is classified as noncurrent restricted cash on the balance sheet based on the term of the underlying lease.

The following table provides a reconciliation of cash, cash equivalents, and restricted cash reported within the balance sheets that sum to the total of the same amounts shown in the statements of cash flows.

	December 31,		
	2018	2017	2016
	(in thousands)		
Cash and cash equivalents	$ 15,399	$ 7,298	$ 89,286
Restricted cash	550	550	450
Total cash, cash equivalents, and restricted cash	$ 15,949	$ 7,848	$ 89,736

Marketable Securities

The Company generally invests its excess cash in investment grade, short to intermediate-term, fixed income securities. Such investments are considered available-for-sale, and reported at fair value with unrealized gains and losses included as a component of stockholders' deficit. Marketable securities with original maturities of greater than 90 days from the date of purchase but less than one year from the balance sheet date are classified as short-term, while marketable securities with maturities in one year or beyond one year from the balance sheet date are classified as long-term. The amortized cost of debt securities is adjusted for amortization of premiums and accretion of discounts to maturity, which is included in interest income on the statements of operations and comprehensive loss. Realized gains and losses and declines in value judged to be other-than-temporary, if any, on marketable securities are included in interest income (expense), net. The cost of securities sold is determined using the specific identification method.

The Company periodically evaluates whether declines in fair values of its marketable securities below their book value are other-than-temporary. This evaluation consists of several qualitative and quantitative factors regarding the severity and duration of the unrealized loss as well as the Company's ability and intent to hold the marketable security until a forecasted recovery occurs. Additionally, the Company assesses whether it has plans to sell the security or it is more likely than not it will be required to sell any marketable securities before recovery of its amortized cost basis. Factors considered include quoted market prices, recent financial results and operating trends, implied values from any recent transactions or offers of investee securities, credit quality of debt instrument issuers, other publicly available information that may affect the value of the marketable security, duration and severity of the decline in value, and

management's strategy and intentions for holding the marketable security. To date, the Company has not recorded any impairment charges on its marketable securities related to other-than-temporary declines in market value.

Fair Value of Financial Instruments

The Company's financial instruments during the periods presented consist of cash and cash equivalents, restricted cash, contribution receivable, marketable securities, prepaid expenses and other current assets, accounts payable, accrued compensation, accrued and other current liabilities. Fair value estimates of these instruments are made at a specific point in time, based on relevant market information. These estimates may be subjective in nature and involve uncertainties and matters of significant judgment.

Concentrations of Risk

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist primarily of cash, cash equivalents, restricted cash, marketable securities and contribution receivable. Substantially all of the Company's cash and cash equivalents and restricted cash is deposited in accounts with financial institutions that management believes are of high credit quality. Such deposits have and will continue to exceed federally insured limits. The Company maintains its cash with accredited financial institutions and accordingly, such funds are subject to minimal credit risk. The Company has not experienced any losses on its cash deposits. The contribution receivable is unsecured and is concentrated with one third-party organization, and accordingly the Company may be exposed to credit risk. To date, the Company has not experienced any loss related to its contributions receivable.

The Company's investment policy limits investments to certain types of securities issued by the U.S. government, its agencies and institutions with investment-grade credit ratings and places restrictions on maturities and concentration by type and issuer. The Company is exposed to credit risk in the event of a default by the financial institutions holding its cash, cash equivalents, restricted cash and marketable securities and issuers of marketable securities to the extent recorded on the balance sheets. As of December 31, 2018, the Company had no off-balance sheet concentrations of credit risk.

The Company depends on third-party suppliers for key raw materials used in its manufacturing processes and is subject to certain risks related to the loss of these third-party suppliers or their inability to supply the Company with adequate raw materials.

Contribution Revenue and Receivables

The Company recognizes contribution revenue related to the receipt of cash from third-party resource providers not considered to be customers and where the transfer of assets is not an exchange transaction or financing of research and development. Contribution revenue and related receivables are recognized for conditional contributions as the conditions related to the contribution are relieved.

In July 2017, the Company entered an arrangement with a third-party organization under which the Company would be provided with up to $1.5 million of funding for the performance of certain research and development activities during the 90-day period following the arrangement in pursuit of the third-party organization's philanthropic mission. All conditions related to this contribution were met during 2017 and the Company recognized $1.4 million under this arrangement, which was recorded as contribution revenue in the statement of operations and a contribution receivable on the balance sheet.

Research and Development Expenses

Costs related to research, design and development of drug candidates are charged to research and development expense as incurred. Research and development costs include, but are not limited to, payroll and personnel expenses for personnel contributing to research and development activities, laboratory supplies, outside services, licenses acquired to be used in research and development and allocated overhead, including rent, equipment, depreciation and utilities. Payments made prior to the receipt of goods or services to be used in research and development are deferred and

recognized as expense in the period in which the related goods are received or services are rendered. Such payments are evaluated for current or long-term classification based on when they will be realized.

Contingent Consideration Liability

The Company has entered into and may continue to enter into, license agreements to access and utilize certain technology. In each case, the Company evaluates if the license agreement results in the acquisition of an asset or a business. To date none of the Company's license agreements have been considered an acquisition of a business. For asset acquisitions, the upfront payments to acquire such licenses, as well as any future milestone payments made before product approval, are immediately recognized as research and development expense when due, provided there is no alternative future use of the rights in other research and development projects. These license agreements also include contingent consideration in the form of additional issuances of the Company's common stock based on the achievement of certain milestones. For asset acquisitions, the Company assesses on a continuous basis whether such contingent consideration meets the definition of a derivative and can or cannot be classified within stockholders' equity, until such time that equity classification criteria are met or the milestones expire. The derivative related to this contingent consideration is measured at fair value as of each balance sheet date with the related change in fair value being reflected in operating expenses. Upon a reassessment event that results in the contingent consideration no longer meeting the definition of a derivative and/or meeting equity classification critera, the final change in fair value of the instrument is recorded within operating expenses and the liability is reclassified into stockholders' equity.

Variable Interest Entities

The Company reviews agreements it enters into with third-party entities, pursuant to which the Company may have a variable interest in the entity, in order to determine if the entity is a variable interest entity ("VIE"). If the entity is a VIE, the Company assesses whether or not it is the primary beneficiary of that entity. In determining whether the Company is the primary beneficiary of an entity, the Company applies a qualitative approach that determines whether it has both (i) the power to direct the economically significant activities of the entity and (ii) the obligation to absorb losses of, or the right to receive benefits from, the entity that could potentially be significant to that entity. If the Company determines it is the primary beneficiary of a VIE, it consolidates that VIE into the Company's financial statements. The Company's determination about whether it should consolidate such VIEs is made continuously as changes to existing relationships or future transactions may result in a consolidation or deconsolidation event.

Property and Equipment, Net

Property and equipment are stated at cost, less accumulated depreciation. Depreciation is calculated using the straight-line method over the estimated useful lives of the respective assets, generally three years. Leasehold improvements are amortized on a straight-line basis over the shorter of their estimated useful lives or the term of the lease. Depreciation and amortization begins at the time the asset is placed in service. Maintenance and repairs are charged to expense as incurred and costs of improvement are capitalized.

Impairment of Long-Lived Assets

The Company evaluates long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying value of an asset may not be fully recoverable. If indicators of impairment exist and the undiscounted future cash flows that the assets are expected to generate are less than the carrying value of the assets, the Company reduces the carrying amount of the assets through an impairment charge, to their estimated fair values based on a discounted cash flow approach or, when available and appropriate, to comparable market values. No impairment losses have been recorded for the periods presented.

Leases

The Company leases office space and laboratory facilities under non-cancelable operating lease agreements and recognizes related rent expense on a straight-line basis over the term of the lease. Incentives granted under the Company's facilities lease, including allowances to fund leasehold improvements and rent holidays, and are recognized as reductions to rental expense on a straight-line basis over the term of the lease. Lessor funded leasehold

improvement incentives not yet received are recorded in prepaid expense and other current assets on the balance sheet. The Company does not assume renewals in its determination of the lease term unless they are deemed to be reasonably assured at the inception of the lease and begins recognizing rent expense on the date that it obtains the legal right to use and control the leased space. Deferred rent consists of the difference between cash payments and the rent expense recognized.

The Company entered into capital lease agreements for certain equipment with a lease term of three years. The current portion of capital lease obligations is included in accrued and other liabilities and the noncurrent capital lease obligations is included in other noncurrent liabilities in the balance sheet.

Convertible Preferred Stock

The Company records all shares of convertible preferred stock at their respective issuance price less issuance costs on the dates of issuance. Upon the occurrence of certain change in control events that are outside the Company's control, including liquidation, sale or transfer of the Company, holders of the convertible preferred stock can cause redemption for cash. Therefore, convertible preferred stock is classified outside of stockholders' deficit on the balance sheet as events triggering the liquidation preferences are not solely within the Company's control. The carrying values of the convertible preferred stock are adjusted to their liquidation preferences when and if it becomes probable that such an event will occur.

Stock-Based Compensation

The Company measures employee and director stock-based compensation expense for all stock-based awards based on their grant date fair value. For stock-based awards with service conditions only, stock-based compensation expense is recognized over the requisite service period using the straight-line method. For awards with performance conditions, the Company evaluates the probability of achieving performance condition at each reporting date. The Company begins to recognize stock-based compensation expense using an accelerated attribution method when it is deemed probable that the performance condition will be met. Forfeitures are recognized as they occur.

The Company uses the Black-Scholes option-pricing model to estimate the fair value of stock option awards that do not contain market conditions. The Black-Scholes option-pricing model requires assumptions to be made related to the expected term of an award, expected dividends, expected volatility and risk-free rate. The Company uses the Monte Carlo simulation models to estimate the fair value of stock option awards that contain market conditions. The Monte Carlo simulation models require the use of subjective and complex assumptions which determine the fair value of such awards including price volatility of the underlying stock and derived service periods.

The Company recognizes stock-based compensation expense for stock options granted to non-employees based on the estimated fair value of the award as it is more readily measurable than the fair value of the services received. The fair value of stock options granted to non-employees is estimated at grant date and re-measured at each reporting period using the Black-Scholes option-pricing model until the awards vest and the resulting change in value, if any, is recognized in the statements of operations.

Income Taxes

The Company uses the asset and liability method of accounting for income taxes, in which deferred tax assets and liabilities are recognized for future tax consequences attributable to the differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using the enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be reversed. The effect on deferred tax assets and liabilities of a change in tax rates is recognized as income in the period that includes the enactment date. A valuation allowance is established if it is more likely than not that all or a portion of the deferred tax asset will not be realized.

The Company's tax positions are subject to income tax audits. The Company recognizes the tax benefit of an uncertain tax position only if it is more likely than not that the position is sustainable upon examination by the taxing authority, based on the technical merits. The tax benefit recognized is measured as the largest amount of benefit which is more

likely than not to be realized upon settlement with the taxing authority. The Company recognizes interest accrued and penalties related to unrecognized tax benefits in its tax provision. The Company evaluates uncertain tax positions on a regular basis. The evaluations are based on a number of factors, including changes in facts and circumstances, changes in tax law, correspondence with tax authorities during the course of the audit, and effective settlement of audit issues. The provision for income taxes includes the effects of any accruals that the Company believes are appropriate, as well as the related net interest and penalties.

Net Loss per Common Share

Basic net loss per share is calculated by dividing net loss by the weighted average number of shares outstanding for the period. Diluted net loss per share is calculated by dividing net loss by the weighted average number of shares of common stock and potential dilutive common stock equivalents outstanding during the period if the effect is dilutive. The calculation of diluted earnings (loss) per share also requires that, to the extent the presumed issuance of additional shares as contingent consideration is dilutive to earnings (loss) per share for the period, adjustments to net income or net loss used in the calculation are required to remove the change in fair value of the contingent consideration liability for the period. Likewise, adjustments to the denominator are required to reflect the related dilutive shares. In all periods presented, the Company's outstanding stock options, convertible preferred stock, early exercised common stock subject to future vesting, restricted stock accounted for as options common and preferred stock warrants and presumed issuance of additional shares as contingent consideration were excluded from the calculation of diluted net loss per share because their effects were antidilutive.

Comprehensive Loss

Comprehensive loss includes net loss and certain changes in stockholders' deficit that are excluded from net loss, primarily unrealized losses on the Company's marketable securities.

Recently Issued Accounting Pronouncements

In August 2018, the FASB issued ASU No. 2018-15, *Intangibles (Topic 350): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*, which aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. This new standard also requires customers to expense the capitalized implementation costs of a hosting arrangement that is a service contract over the term of the hosting arrangement. This standard is effective for the Company for annual reporting periods beginning after December 15, 2020, and interim periods within annual periods beginning after December 15, 2021. This new standard can be applied either retrospectively or prospectively to all implementation costs incurred after the date of adoption. The Company is currently evaluating the impact of adoption on its financial statements.

In August 2018, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement*. This ASU eliminates, modifies and adds disclosure requirements for fair value measurements. The amendments in this ASU are effective for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2019, with early adoption permitted. The Company is currently evaluating the effects of this ASU on its financial statements and related disclosures.

In August 2018, the SEC adopted amendments to certain disclosure requirements in Securities Act Release No. 33-10532, Disclosure Update and Simplification. The Company adopted these SEC amendments on November 5, 2018 and will present the analysis of changes in stockholders' equity in its interim financial statements in its March 31, 2019 Form 10-Q. The Company does not anticipate that the adoption of these SEC amendments will have a material effect on the Company's financial position, results of operations, cash flows or shareholders' equity.

In June 2018, the FASB issued ASU No. 2018-07, *Compensation – Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting*. The amendments in this ASU expand the scope of Topic 718 to include share-based payment transactions for acquiring goods and services from nonemployees. This new guidance is

effective for the Company in fiscal years beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020. Early adoption is permitted. The Company is currently evaluating the effects of this ASU on its financial statements and related disclosures.

In January 2017, the FASB issued ASU No. 2017-01, *Business Combinations (Topic 805): Clarifying the Definition of a Business*. This ASU clarifies the definition of a business when evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The guidance is effective for the Company for fiscal years beginning after December 15, 2018, and interim periods within fiscal years beginning after December 15, 2019. Early adoption is permitted. The Company does not expect the adoption of this ASU to have a significant impact on its financial statements and related disclosures.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows (Topic 230: Classification of Certain Cash Receipts and Cash Payments)*. This guidance addresses specific cash flow issues with the objective of reducing the diversity in practice for the treatment of these issues. The areas identified include: debt prepayment or debt extinguishment costs; settlement of zero-coupon debt instruments; contingent consideration payments made after a business combination; proceeds from the settlement of insurance claims; proceeds from the settlement of corporate-owned life insurance policies; distributions received from equity method investees; beneficial interests in securitization transactions; and application of the predominance principle with respect to separately identifiable cash flows. The guidance will generally be applied retrospectively and is effective for fiscal years beginning after December 15, 2018, and interim periods within fiscal years beginning after December 15, 2019. Early adoption is permitted. The Company does not expect the adoption of this ASU to have a significant impact on its financial statements.

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*, which supersedes the guidance in former ASC 840, *Leases*. The new standard, as amended by subsequent ASUs on the Topic, requires lessees to apply a dual approach, classifying leases as either finance or operating leases based on the principle of whether or not the lease is effectively a financed purchase by the lessee. This classification will determine whether lease expense is recognized based on an effective interest method or on a straight-line basis over the term of the lease. A lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months regardless of their classification. Leases with a term of 12 months or less will be accounted for similar to existing guidance for operating leases today. For the Company, this standard is effective for annual reporting periods beginning after December 15, 2019, and interim periods within annual periods beginning after December 15, 2020. Early adoption is permitted. The ASU is expected to impact the Company's financial statements as the Company has certain operating lease arrangements for which the Company is the lessee. While the Company is currently evaluating the impact of the adoption of this standard on its financial statements, the Company anticipates the recognition of additional assets and corresponding liabilities on its balance sheet related to these leases. The adoption of this accounting standard update is also expected to impact the Company's financial statement disclosures

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities*. This guidance makes amendments to the classification and measurement of financial instruments and revises the accounting related to: (1) the classification and measurement of investments in equity securities (except for investments accounted for under the equity method of accounting); and (2) the presentation of certain fair value changes for financial liabilities measured at fair value. In addition, the update also amends certain disclosure requirements associated with the fair value of financial instruments. The guidance is effective for the Company for annual periods beginning in 2019 and interim periods beginning in 2020. Early adoptions of certain amendments within the update are permitted. The Company is currently evaluating the effects of this ASU on its financial statements and related disclosures.

In May 2017, the FASB issued ASU No. 2017-09, *Compensation-Stock Compensation (Topic 718)- Scope of Modification Accounting* (ASU 2017- 09). The amendments included in this update provide guidance about which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting. The amendments in this update will be applied prospectively to an award modified on or after the adoption date. The amendments in ASU 2017-09 became effective for the Company on January 1, 2018 and the adoption of this standard did not have a material impact on the Company's financial statements.

3. Fair Value Measurements

The Company determines the fair value of financial and non-financial assets and liabilities based on the assumptions that market participants would use in pricing the asset or liability in an orderly transaction between market participants at the measurement date. The identification of market participant assumptions provides a basis for determining what inputs are to be used for pricing each asset or liability. A fair value hierarchy has been established which gives precedence to fair value measurements calculated using observable inputs over those using unobservable inputs. This hierarchy prioritized the inputs into three broad levels as follows:

- Level 1: Quoted prices in active markets for identical instruments
- Level 2: Other significant observable inputs (including quoted prices in active markets for similar instruments)
- Level 3: Significant unobservable inputs (including assumptions in determining the fair value of certain investments)

The carrying amounts of financial instruments such as cash and cash equivalents, restricted cash, contribution receivable, prepaid expenses and other current assets, accounts payable, accrued compensation, accrued and other current liabilities approximate the related fair values due to the short maturities of these instruments.

The Company's financial assets subject to fair value measurements on a recurring basis and the level of inputs used in such measurements were as follows (in thousands):

	December 31, 2018			
	Total	Level 1	Level 2	Level 3
Assets:				
Cash equivalents:				
Money market funds	$ 14,131	$ 14,131	$ —	$ —
Total cash equivalents	14,131	14,131	—	—
Short-term marketable securities:				
U.S. treasuries	34,121	—	34,121	—
U.S. and foreign commercial paper	10,635	—	10,635	—
U.S. and foreign corporate debt securities	26,533	—	26,533	—
Asset-backed securities	2,748	—	2,748	—
U.S. government debt securities	81,699	—	81,699	—
Total short-term marketable securities	155,736	—	155,736	—
Total assets subject to fair value measurements on a recurring basis	$ 169,867	$ 14,131	$ 155,736	$ —
Liabilities:				
Contingent consideration liability	$ 2,483	$ —	$ —	$ 2,483
Total liabilities subject to fair value measurements on a recurring basis	$ 2,483	$ —	$ —	$ 2,483

	December 31, 2017			
	Total	Level 1	Level 2	Level 3
Assets:				
Cash equivalents:				
Money market funds	$ 5,709	$ 5,709	$ —	$ —
Total cash equivalents	5,709	5,709	—	—
Short-term marketable securities:				
U.S. and foreign commercial paper	6,359	—	6,359	—
U.S. and foreign corporate debt securities	16,149	—	16,149	—
Asset-backed securities	14,588	—	14,588	—
U.S. government debt securities	40,362	—	40,362	—
U.S. treasuries	1,754	—	1,754	—
Total short-term marketable securities	79,212	—	79,212	—
Long-term marketable securities:				
Asset-backed securities	2,742	—	2,742	—
U.S. government debt securities	2,376	—	2,376	—
Total long-term marketable securities	5,118	—	5,118	—
Total marketable securities	84,330	—	84,330	—
Total assets subject to fair value measurements on a recurring basis	$ 90,039	$ 5,709	$ 84,330	$ —

The Company estimates the fair value of its money market funds, U.S. and foreign commercial paper, U.S. and foreign corporate debt securities, asset-backed securities, U.S. treasuries and U.S. government debt securities by taking into consideration valuations obtained from third-party pricing services. The pricing services utilize industry standard valuation models, including both income and market-based approaches, for which all significant inputs are observable, either directly or indirectly, to estimate fair value. These inputs include reported trades of and broker/dealer quotes on the same or similar securities, issuer credit spreads; benchmark securities; prepayment/default projections based on historical data; and other observable inputs.

The fair value of the contingent consideration liability includes inputs not observable in the market and thus represents a Level 3 measurement. The Company has recorded a contingent consideration liability related to two agreements executed in February 2016 with a privately held clinical-stage biopharmaceutical company: (a) a license agreement granting the Company the right to research, develop, and seek and obtain marketing approval for an initial licensed compound, and (b) a compound library and option agreement granting the Company the right to identify and take licenses to additional compounds, in each case for the treatment of indications outside of oncology (collectively, the “Commercial Agreements”). The Commercial Agreements include contingent consideration of up to an aggregate of 666,670 additional shares of common stock to be issued based on achievement of certain specified clinical development and sales milestone events. The Company valued the contingent consideration liability using a probability-weighted valuation approach model which reflects the probability and timing of future issuances of shares. The probability of achieving the defined milestones for each licensed product was estimated by the Company’s management. Total contingent consideration may change significantly as preclinical and clinical development under the Commercial Agreements progresses and additional data is obtained, impacting the Company’s assumptions regarding probabilities of successful achievement of related development and commercial milestones used to estimate the fair value of the liability and the timing in which they are expected to be achieved. For example, significant increases in the estimated probability of achieving a milestone would result in a significantly higher fair value measurement while significant decreases in the estimated probability of achieving a milestone would result in a significantly lower fair value measurement. The potential outstanding contingent consideratin value results in shares to be issued ranging from zero, if none of the milestones are achieved, to a maximum of $8.7 million at December 31, 2018 (using the Company’s stock price as of December 31, 2018). As of December 31, 2018 and 2017, none of the commercial milestones had been achieved and no royalties were due from the sales of licensed products.

As of December 31, 2018, the Company determined that the net settlement criteria of the definition of a derivative had been met for 133,333 shares of common stock to the third parties. The Company issued 106,666 of these shares

in January 2019 and will issue the remaining 26,667 shares in early 2019 and recorded a settlement liability of $2.0 million at December 31, 2018. The Company recorded a contingent consideration liability of $2.5 million at December 31, 2018 related to additional potential shares subject to the achievement of certain specified clinical development and sales milestone events under the agreements. No liability was recorded at December 31, 2017 as the net settlement criteria were not met. The following table provides a reconciliation of assets and liabilities measured at fair value on a recurring basis using significant unobservable inputs (Level 3) (in thousands):

	Amount
Balance at December 31, 2017	$ —
Additions	—
Settlements	—
Change in fair value	4,542
Balance at December 31, 2018	$ 4,542

There were no transfers within the hierarchy during the years ended December 31, 2018 and 2017.

See Note 4 for further information regarding the carrying value of the Company's financial instruments.

4. Marketable Securities

Marketable securities, which are classified as available-for-sale, consisted of the following (in thousands):

	December 31, 2018			
	Amortized Cost Basis	Unrealized Gains	Unrealized Losses	Fair Value
Cash equivalents:				
Money market funds	$ 14,131	$ —	$ —	$ 14,131
Total cash equivalents	14,131	—	—	14,131
Short-term marketable securities:				
U.S. and foreign commercial paper	10,638	—	(3)	10,635
U.S. and foreign corporate debt securities	26,552	2	(21)	26,533
Asset-backed securities	2,750	—	(2)	2,748
U.S. government debt securities	81,755	1	(57)	81,699
U.S. treasuries	34,136	1	(16)	34,121
Total short-term marketable securities	155,831	4	(99)	155,736
Total marketable securities	$ 169,962	$ 4	$ (99)	$ 169,867

	December 31, 2017			
	Amortized Cost Basis	Unrealized Gains	Unrealized Losses	Fair Value
Cash equivalents:				
Money market funds	$ 5,709	$ —	$ —	$ 5,709
Total cash equivalents	5,709	—	—	5,709
Short-term marketable securities:				
U.S. and foreign commercial paper	6,369	—	(10)	6,359
U.S. and foreign corporate debt securities	16,162	—	(13)	16,149
Asset-backed securities	14,604	—	(16)	14,588
U.S. government debt securities	40,418	—	(56)	40,362
U.S. treasuries	1,754	—	—	1,754
Total short-term marketable securities	79,307	—	(95)	79,212
Long-term marketable securities:				
Asset-backed securities	2,752	—	(10)	2,742
U.S. government debt securities	2,375	1	—	2,376
Total long-term marketable securities	5,127	1	(10)	5,118
Total marketable securities	$ 90,143	$ 1	$ (105)	$ 90,039

There have been no significant realized gains or losses on available-for-sale securities for the periods presented. Available-for-sale debt securities that were in a continuous loss position but were not deemed to be other than temporarily impaired were immaterial at both December 31, 2018 and 2017. The Company does not intend to and believes it is not more likely than not that it will be required to sell these securities before their maturities.

See Note 3 for further information regarding the fair value of the Company's financial instruments.

5. License Agreements

License and Compound Library and Option Agreement

In February 2016, the Company entered into a license agreement with a privately held clinical-stage biopharmaceutical company (the “Licensor”) to research, develop, and seek and obtain marketing approval for a licensed compound. In February 2016, in conjunction with this license agreement, the Company also entered into a compound library and option agreement with the Licensor to identify compounds with potential utility in the treatment of age-related conditions other than indications in oncology (collectively, the “Commerical Agreements”). As part of these agreements, the Company issued 533,335 shares of common stock to the Licensor and 133,333 shares of common stock to an academic institution from whom the Licensor had previously licensed the technology.

The Commercial Agreements referenced above include cash payments of up to $70.3 million as well as the equity payments of up to an aggregate 666,670 additional shares of common stock, in each case to be issued based on the Company’s achievement of certain specified clinical development and sales milestone events. The milestones include the filing of an investigational drug application, the commencement of clinical studies, Food and Drug Administration and/or European Medicines Agency approval, and a net sales threshold. The license agreement also includes tiered royalties in the low-single digits based on sales of licensed products.

In December 2018, the Company elected to advance a second compound into formal preclinical development which gave rise to an obligation under the compound library and option agreement to issue an additional 133,333 shares of common stock to the Licensor and the academic institution. In connection with the issuance of these shares, the Company issued 106,666 shares of common stock to the Licensor in January 2019 and the remaining 26,667 will be issued to the academic institution in 2019. The Company recorded a settlement liability of $2.0 million at December 31, 2018. In connection with the additional shares of common stock that the Company may be obligated to issue under the Commercial Agreements upon achievement of the specified milestones and preclinical development events, the Company recorded a contingent consideration liability of $2.5 million at December 31, 2018. As of December 31, 2017, none of those milestones or events had been achieved. As of December 31, 2018 and 2017, no royalties were due from the sales of licensed products.

In April 2016, in connection with the Commercial Agreements the Company purchased an equity interest in an affiliate of the Licensor for an aggregate purchase price of $0.5 million. The equity interest represents an insignificant level of ownership in the entity and has been recorded within other assets in the Company's balance sheet. In May 2018 these shares were exchanged for new shares of a newly formed affiliate of the Licensor as part of a reorganization of those entities. The Company also invested an additional $0.5 million in the newly formed affiliate of the Licensor in May 2018.

The Company agreed to provide funding to the Licensor for research and development work performed at a cost of up to $2.0 million through February 2020. The research and development expense under the research services agreement was $0.5 million and $0.5 million for the years ended December 31, 2018 and 2017.

Under the consolidation guidance, the Company determined that the Licensor is a VIE. The Company does not have the power to direct the activities that most significantly affect the economic performance of this entity and as such the Company is not the primary beneficiary and consolidation is not required. As of December 31, 2018 and 2017, the Company has not provided financial, or other, support to the Licensor that was not contractually required.

Other License Agreements with Research Institutions

The Company has entered into license agreements with various research institutions which have provided the Company with rights to patents, and in certain cases, research "know-how" and proprietary research tools to research, develop and commercialize drug candidates. In addition to upfront consideration paid to these various research institutions in either cash or shares of the Company's common stock, the Company may be obligated to pay milestone payments in cash or the issuance of the Company's common stock upon achievement of certain specified clinical development and/or sales events. The contingent consideration liability considered to be a derivative associated with the potential issuance of common stock related to these license agreements was not significant at December 31, 2018 or 2017. To date, none of these events has occurred and no contingent consideration, milestone or royalty payments have been recognized.

6. Balance Sheet Components

Property and Equipment, Net

Property and equipment, net, consists of the following:

	December 31,	
	2018	2017
	(in thousands)	
Laboratory equipment	$ 4,162	$ 2,614
Computer equipment	247	137
Furniture and fixtures	113	105
Leasehold improvements	5,366	5,346
Construction in progress	—	226
Total property and equipment	9,888	8,428
Less: accumulated depreciation and amortization	(3,650)	(1,470)
Total property and equipment, net	$ 6,238	$ 6,958

Depreciation expense related to property and equipment was $2.2 million, 1.3 million and $0.2 million for the years ended December 31, 2018, 2017 and 2016 respectively.

Accrued and Other Current Liabilities

Accrued and other current liabilities consist of the following:

	December 31,	
	2018	2017
	(in thousands)	
Accrued research and development	$ 1,837	$ 2,105
Deferred rent, current portion	783	702
Professional fees	26	70
Liability related to early exercise shares	885	257
Accrued other	1,459	204
	$ 4,990	$ 3,338

7. Commitments and Contingencies

Indemnifications

The Company indemnifies each of its officers and directors for certain events or occurrences, subject to certain limits, while the officer or director is or was serving at the Company's request in such capacity, as permitted under Delaware law and in accordance with the Company's amended and restated certificate of incorporation and bylaws. The term of the indemnification period lasts as long as an officer or director may be subject to any proceeding arising out of acts or omissions of such officer or director in such capacity.

The maximum amount of potential future indemnification is unlimited; however, the Company currently holds director and officer liability insurance. This insurance allows the transfer of risk associated with the Company's exposure and may enable the Company to recover a portion of any future amounts paid. The Company believes that the fair value of these indemnification obligations is minimal. Accordingly, the Company has not recognized any liabilities relating to these obligations for any period presented.

Operating Lease

In May 2016, the Company executed a non-cancellable lease agreement for office and laboratory space in Brisbane, California which commenced in May 2016 and continues through October 2022. The lease agreement includes an escalation clause for increased rent and a renewal provision allowing the Company to extend this lease for an additional four years by giving the landlord written notice of the election to exercise the option at least fifteen months prior to the original expiration of the lease term. The lease provides for monthly base rent amounts escalating over the term of the lease and the lessor provided the Company a $3.9 million tenant improvement allowance to complete the laboratory and office renovation which was recorded as deferred rent liability and leasehold improvement within property and equipment, net. In May 2017, the Company entered into an amendment to expand the leased space and received a three-month rent holiday for the expanded space.

As of December 31, 2018, the Company's future minimum payments under the noncancelable operating lease is as follows (in thousands):

	Amount
2019	$ 2,012
2020	2,072
2021	2,135
2022	1,621
Total future minimum lease payments	$ 7,840

Rent expense was $1.8 million, $2.0 million and $0.8 million and for the years ended December 31, 2018, 2017 and 2016, respectively.

8. Related-Party Transactions

Recourse Notes

In December 2015, April 2016, and July 2016, the Company issued three full-recourse promissory notes to two executive officers for an aggregate principal amount of $0.2 million with an interest rate of 2.5% per annum. All of the principal was used to early exercise options for 667,253 shares of the Company's common stock, in aggregate. All of these related party full-recourse notes were repaid on April 4, 2018 in accordance with the terms of such notes.

In October 2017, the Company issued two promissory notes to an executive officer for $1.6 million and $0.5 million, each with an interest rate of 1.85% per annum. The aggregate principal amount of $2.1 million was used to purchase 625,084 shares of restricted stock. The promissory notes were considered to be non-recourse in substance and accordingly, the shares sold subject to such promissory notes are considered to be an option for accounting purposes. In April 2018, the Company's board of directors approved the forgiveness of all outstanding principal and accrued interest of the $1.6 million non-recourse promissory note. The non-recourse promissory note outstanding of $0.5 million was repaid on April 4, 2018 in accordance with the terms of the note. The forgiveness of the promissory note was accounted for as a modification of a share-based payment. The Company recorded an incremental charge of $1.5 million related to the modification for the year ended December 31, 2018.

In January 2018, the Company issued full-recourse promissory notes to an executive and an executive officer of the Company for an aggregate principal amount of $0.4 million with an interest rate of 2.5% per annum. All of the principal was used to early exercise options for 114,406 shares of the Company's common stock. The full recourse note of $0.2 million for the executive officer was repaid on April 4, 2018 in accordance with the terms of the note.

Financing Activities

During the year ended December 31, 2018, the Company issued convertible preferred stock for total proceeds of $3.0 million to shareholders who are considered to be related parties. During the year ended December 31, 2017, the Company issued additional shares of Series B convertible preferred stock for total proceeds of $8.0 million to one of these related party shareholders. During the year ended December 31, 2016, the Company issued convertible preferred stock and convertible notes for total proceeds of $32.8 million to shareholders and certain executive officers who are considered to be related parties. All of the convertible notes converted into shares of series B preferred stock during 2016.

Other

In 2017, the Company entered into a master services agreement with a significant shareholder who was considered a related party. The Company incurred a total of $0.4 million and $0.6 million of research and development expenses during the years ended December 31, 2018 and 2017, respectively, related to this agreement.

9. Convertible Preferred Stock and Common Stock

Convertible Preferred Stock

The Company is authorized to issue two classes of stock: convertible preferred stock and common stock. Convertible preferred stock is carried at the issuance price, net of issuance costs.

In July 2013, the Company sold an aggregate of 2,887,086 shares of Series A-1 convertible preferred stock at $0.864 per share for gross proceeds of $2.0 million. From January 2014 through March 2015, the Company closed three tranches of Series A-2 convertible preferred stock financing and sold an aggregate of 5,826,839 shares of Series A-2 convertible preferred stock at $0.876 per share for gross proceeds of $4.9 million.

In February 2016, the Company closed the final tranche of Series A-2 convertible preferred stock financing by selling an aggregate of 4,671,430 shares of Series A-2 convertible preferred stock at $0.876 per share for gross proceeds of $4.0 million.

In October 2016, the Company closed the first tranche of its Series B round of financing by selling an aggregate of 7,519,592 shares of Series B convertible preferred stock at $12.125 per share for gross proceeds of $91.2 million, with an additional $9.0 million of Series B convertible preferred stock to be sold to two investors within 180 days of the first tranche closing at the issuance price per share of the Series B convertible preferred stock. The Company accounted for this issuance as forward options to issue shares at a fixed price. As the forward options expired in 180 days, and there was limited expected volatility in the Series B convertible preferred stock issuance price, the value of the forward options was considered immaterial at December 31, 2016. In March 2017, the Company issued an aggregate of 659,821 shares of Series B convertible preferred stock at $12.125 per share for gross proceeds of $8.0 million in full settlement of one of the forward options while the other expired unexercised.

In June 2017, the Company closed the second and final tranche of its Series B convertible preferred stock round of financing by selling an aggregate of 2,879,288 shares of Series B convertible preferred stock at $12.125 per share for gross proceeds of $34.9 million.

Included in the terms of the Series B Preferred Stock Agreement were rights to purchase additional tranches of Series B convertible preferred stock under the same terms as those provided at the initial closing. The Company did not separately account for these tranche purchase rights as a forward option as neither the purchasers nor the Company had a commitment or obligation to purchase or sell additional shares until the tranche closing occurred.

In March 2018, the Company amended and restated its certificate of incorporation to, among other things, (i) increase its authorized shares of common stock from 122,000,000 to 140,000,000 shares, (ii) increase its authorized shares of preferred stock from 91,739,149 to 103,283,818 shares, of which 11,544,669 shares were designated as Series C convertible preferred stock, and (iii) set forth the rights, preferences and privileges of the Series C convertible preferred stock. In March 2018, the Company sold 3,590,573 shares of Series C convertible preferred stock at $15.3317 per share for net proceeds of $54.9 million and in April 2018, the Company sold an additional 322,852 shares of Series C convertible preferred stock $15.3317 per share for net proceeds of $5.0 million.

Each share of Series C convertible preferred stock was convertible into one share of the Company's common stock. Each share of preferred stock was automatically converted into one share of common stock upon the consummation of a qualified public offering. A qualified public offering was defined as an initial public offering that resulted in listing on a U.S. national securities exchange and at least $30.0 million of gross proceeds at a per share price of not less than the Series C original issue price of $15.3317.

The Company evaluated the other rights, preferences and privileges of each series of convertible preferred stock and concluded that there were no freestanding derivative instruments or any embedded derivatives requiring bifurcation.

Upon the closing of the IPO, all of the Company's outstanding shares of convertible preferred stock were converted into 32,073,149 shares of common stock. In addition, all 763,501 of the Company's convertible preferred stock warrants were converted into warrants to purchase shares of common stock. As of December 31, 2018, the Company had no shares of convertible or preferred stock issued or outstanding.

As of December 31, 2017, convertible preferred stock consisted of the following (in thousands, except share amounts):

	Shares Authorized	Shares Issued and Outstanding	Liquidation Preference	Carrying Value
Series A-1	9,085,738	2,887,086	$ 2,495	$ 2,457
Series A-2	32,653,411	10,498,269	9,198	9,214
Series B	50,000,000	14,774,369	179,132	162,285
Total convertible preferred stock	91,739,149	28,159,724	$ 190,825	$ 173,956

Prior to the conversion of the convertible preferred stock upon closing of the IPO, the rights, preferences and privileges of the convertible preferred stock were as follows:

Conversion Rights

Each share of convertible preferred stock was convertible at the right and option of the stockholder, at any time after the date of issuance, into such number of fully paid and non-assessable shares of common stock on a one for one ratio (1:1 conversion ratio). The Series A-1 conversion price was $0.864 per share, the Series A-2 conversion price was $0.876 per share, the Series B conversion price was $12.125 per share and the Series C conversion price was $15.3317 per share, in each case, subject to certain antidilution adjustments as provided in the Company's amended and restated certificate of incorporation.

Each share of convertible preferred stock was automatically convertible into a fully paid, non-assessable share of common stock at the then-effective conversion rate for such share (i) upon the closing of a firm commitment, underwritten initial public offering of the Company's common stock with aggregate gross proceeds of not less than $30.0 million and a price per share to the public of not less than $15.3317 per share; or (ii) upon the receipt by the Company of a written request for such conversion from at least 60% of the holders of the convertible preferred stock then outstanding (voting together as a single class and on an as-converted basis), or if later, the effective date for conversion specified in such requests.

Liquidation Rights

In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Company or a deemed liquidation event, as further defined in the Company's amended and restated certificate of incorporation, prior to and in preference to any distribution of any of the assets of the Company to the holders of Series B convertible preferred stock and the Series A-1 and Series A-2 convertible preferred stock and common stock, the holders of Series C convertible preferred stock would have been paid, on a *pari passu* basis, an amount per share equal to the Series C liquidation preference of $15.3317 per share, plus an amount equal to any dividends declared but unpaid thereon (the "Series C Liquidation Preference"). If upon any such liquidation, dissolution or winding up of the Company or a deemed liquidation event, the assets of the Company available for distribution to its stockholders had been insufficient to pay the holders of Series C convertible preferred stock the full amount to which they were entitled, the holders of the Series C convertible preferred stock would have shared ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise have been 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.

After the payment or setting aside for payment to the holders of the Series C convertible preferred stock of the full amount of the Series C Liquidation Preference, prior to any distribution of any of the assets of the Company to the holders of the Series A-1 and Series A-2 convertible preferred stock and common stock, the holders of Series B convertible preferred stock would have been paid, on a *pari passu* basis, an amount per share equal to the Series B liquidation preference of $12.125 per share for Series B, plus, in each case, an amount equal to any dividends declared but unpaid thereon (the "Series B Liquidation Preference"). If upon any such liquidation, dissolution or winding up of the Company or deemed liquidation event, the assets of the Company available for distribution to its stockholders had been insufficient to pay the holders of shares of Series B convertible preferred stock the full amount to which they shall be entitled, the holders of the Series B convertible preferred stock would have shared ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise have been 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.

After the payment or setting aside for payment to the holders of the Series B convertible preferred stock of the full amount of the Series B Liquidation Preference, prior to any distribution of any of the assets of the Company to the holders of the common stock, the holders of Series A-1 and Series A-2 convertible preferred stock would have been paid, on a pari passu basis, an amount per share equal to $0.864 per share for Series A-1 and $0.876 per share for Series A-2, plus, in each case, an amount equal to any dividends declared but unpaid thereon (the "Series A Liquidation Preference"). If upon any such liquidation, dissolution or winding up of the Company or deemed liquidation event, the assets of the Company available for distribution to its stockholders had been insufficient to pay the holders of shares of Series A-1 and Series A-2 convertible preferred stock the full amount to which they shall be entitled, the holders of the Series A-1 and Series A-2 convertible preferred stock would have shared ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise have been 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.

After the payments or setting aside for payment to the holders of convertible preferred stock of the full amounts specified above, the entire remaining assets of the Company legally available for distribution shall be distributed pro rata to holders of the common stock of the Company in proportion to the number of shares of common stock held by them.

Voting Rights

The holders of outstanding shares of Series A-1 and Series A-2 convertible preferred stock, voting together as a single class, were entitled to elect two members of the Company's Board of Directors. The holders of outstanding shares of Series B convertible preferred stock, voting together as a single class, were entitled to elect one member of the Company's Board of Directors.

Additionally, each holder of the Company's convertible preferred stock was entitled to a vote equal to the number of shares of common stock into which the shares of convertible preferred stock could have been converted as of the record date. The holders of convertible preferred were entitled to vote on all matters on which the common stock shall be entitled to vote.

Dividend Rights

Holders of the Series A-1, Series A-2, Series B and Series C convertible preferred stock were entitled to receive non-cumulative dividends at a rate of 6% of the original respective series of convertible preferred stock issuance price. Only after payment of the dividends to the holders of Series C convertible preferred stock were the holders of shares of Series B, Series A-1 and Series A-2 convertible preferred stock be entitled to receive dividends, out of any assets legally available therefore, prior and in preference to any declaration or payment of any dividend (other than dividends on the common stock payable solely in common stock) on the common stock.

After the payment or setting aside for payment of the dividends described above, any additional dividends (other than dividends on common stock payable solely in common stock) set aside or paid in any fiscal year could have been set aside or paid among the holders of the convertible preferred stock and common stock then outstanding on a pari passu basis in proportion to the greatest whole number of shares of common stock which would have been held by each such holder if all shares of convertible preferred stock were converted at the then-effective conversion rate.

Dividends were only payable as and if declared by the Board of Directors. To date, the Company has not declared or paid any dividends.

Redemption Rights

The convertible preerred stock was not mandatorily redeemable as it did not have a set redemption date or a date after which the shares may be redeemed by the holders. A redemption event would have occurred only upon the occurrence of certain change in control events that are outside the Company's control, including a sale, lease, transfer, or other disposition of all or substantially all of the Company's assets. The Company has elected not to adjust the carrying values of the convertible preferred stock to the liquidation preferences of such shares because it is uncertain whether or when an event would have occurred that would obligate the Company to pay the liquidation preferences to holders of shares of convertible preferred stock. Subsequent adjustments to the carrying values of the liquidation preferences will be made only when it becomes probable that such a liquidation event will occur.

10. Stock-Based Compensation

Equity Incentive Plans

In March 2018, the Company's board of directors adopted the Company's 2018 Incentive Award Plan (the "2018 Plan"). The 2018 Plan was approved by the Company's stockholders in April 2018 and became effective on May 2, 2018. The 2018 Plan initially reserved 4,289,936 shares for the issuance of stock options as well as any automatic

annual increases in the number of shares of common stock reserved for future issuance under the 2018 Plan. Awards granted under the 2018 Plan expire no later than ten years from the date of grant. For stock options, the option price shall not be less than 100% of the estimated fair value on the day of grant. Options granted typically vest over a four-year period but may be granted with different vesting terms. Unvested options not exercised at the time of an employee's termination of employment are added back to the 2018 Plan.

Following the Company's IPO and in connection with the effectiveness of the 2018 Plan, the 2013 Equity Incentive Plan (the "2013 Plan") terminated and no further awards will be granted under that plan. All outstanding awards under the 2013 Plan will continue to be governed by their existing terms and the shares that remained outstanding for issuance under the 2013 Plan were transferred into the 2018 Plan. As of December 31, 2018, there was an aggregate 5,058,434 shares of common stock authorized for issuance under the 2018 Plan.

Prior to its termination, the 2013 Plan provided for the granting of incentive stock options ("ISOs"), non-statutory stock options ("NSOs") and restricted shares to employees, directors, and consultants at the discretion of management and the Board of Directors. The exercise price of an ISO and NSO shall not be less than 100% of the estimated fair value of the shares on the date of grant, and the exercise price of an ISO and NSO granted to a 10% stockholder shall not be less than 110% of the estimated fair value of the shares on the date of grant. For awards granted between September 2017 and February 2018 with an exercise price of $3.42, a deemed fair value ranging from $3.95 to $8.47 per share was used in calculating stock-based compensation expense, which was determined using management hindsight. Options granted under the 2013 Plan expire no later than 10 years from the date of grant and generally vest over a four-year period but may be granted with different vesting terms. Unvested options not exercised at the time of an employee's termination of employment are added back to the 2018 Plan.

Under the 2013 Plan, the Company permited early exercise of certain stock options prior to vesting. These unvested shares are subject to repurchase by the Company at the original issuance price in the event the optionee's employment is terminated either voluntarily or involuntarily. The amounts paid for shares purchased under an early exercise of stock options and subject to repurchase by the Company are reported as a liability and reclassified into additional paid-in capital as the shares vest.

Stock Option Activity

A summary of the Company's stock option activity under the 2013 and 2018 Plan is as follows:

	Shares Available for Grant	Outstanding Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contract Term (in Years)	Aggregate Intrinsic Value (in thousands)
Balances at December 31, 2017	918,595	4,196,213	$ 3.06		
Retired from 2013 Plan	(378,875)	—	—		
Authorized	4,289,936	—	—		
Granted	(2,082,265)	2,082,265	13.20		
Exercised	—	(501,329)	3.17		
Canceled	280,411	(276,618)	5.82		
Balances at December 31, 2018	3,027,802	5,500,531	$ 6.75	8.49	$ 53,051
Vested and exercisable at December 31, 2018		1,619,419	$ 2.72	7.65	$ 21,929
Vested and expected to vest at December 31, 2018		5,500,531	$ 6.75	8.49	$ 53,051

The total intrinsic value of options exercised was $1.5 million, $0.1 million and $20,000 for the years ended December 31, 2018, 2017 and 2016, respectively. The weighted-average estimated fair value of stock options granted was $13.20, $3.40 and $0.32 for the years ended December 31, 2018, 2017 and 2016, respectively.

The aggregate intrinsic value of options exercisable was $21.9 million and $3.3 million as of December 31, 2018 and 2017, respectively.

As of December 31, 2018, the total stock-based compensation cost related to options granted but not yet amortized was $20.6 million and will be recognized over a weighted-average period of approximately 4.1 years. The total grant-date fair value of stock options granted to employees that vested during the years ended December 31, 2018 and 2017 was approximately $3.5 million and $1.5 million. respectively.

Stock Options Granted to Employees with Service-Based Vesting

The fair value of stock options granted to employees was estimated on the date of grant using the Black-Scholes option pricing model using the following assumptions:

	Year Ended December 31,		
	2018	2017	2016
Expected dividend yield	—	—	—
Expected term of options (in years)	6.1	5.6–6.7	5.3–6.1
Risk-free interest rate	2.6%-3.0%	1.8%–2.2%	1.2%–2.1%
Expected stock price volatility	87.4%-92.6%	77.0%–82.0%	76.1%–79.7%

The valuation assumptions were determined as follows:

Expected Term—The expected term represents the period that the options granted are expected to be outstanding and is determined using the simplified method (based on the mid-point between the vesting date and the end of the contractual term) as the Company has concluded that its stock option exercise history does not provide a reasonable basis upon which to estimate expected term.

Expected Volatility—The Company used an average historical stock price volatility of comparable public companies within the biotechnology and pharmaceutical industry that were deemed to be representative of future stock price trends as the Company does not have a sufficient historical trading history for its own common stock. The Company will continue to apply this process until a sufficient amount of historical information regarding the volatility of its own stock price becomes available.

Risk-Free Interest Rate—The Company based the risk-free interest rate over the expected term of the options based on the constant maturity rate of U.S. Treasury securities with similar maturities as of the date of the grant.

Expected Dividends—The Company has never paid any dividends and does not plan to pay dividends in the foreseeable future. Therefore, the expected dividend yield is zero.

Performance Contingent Stock Options Granted to Employees

During the year endend December 31, 2018, the Board of Directors granted performance contingent stock option awards exercisable for 53,575 shares, to certain members of the Company's executive team. These awards had a weighted average exercise price of $3.42 which was based on the fair market value on the grant date, as determined by the Board of Directors, and vest upon the successful achievement of one or more specified performance goals.

The total estimated fair value of employee performance contingent stock option awards was $0.4 million and was estimated at the date of grant using a Black-Scholes option-pricing model using the same assumptions as the stock options granted to employees with service-based vesting conditions.

As of December 31, 2018, and 2017, there were 329,498 and 275,922 performance contingent stock option awards outstanding with a total grant date fair value of $0.7 million and $0.3 million respectively. As of December 31, 2018, and 2017, the Company determined that the achievement of the requisite performance conditions was not probable and, as a result, no compensation cost was recognized for these awards.

Performance and Market Contingent Stock Options Granted to Employees

During the year ended December 31, 2018, the Board of Directors granted performance and market contingent stock option awards exercisable for 160,727 shares of common stock to certain members of the Company's executive team. These awards had a weighted average exercise price of $3.42, which was based on the fair market value on the grant date, as determined by the Board of Directors. The total estimated grant-date fair value of these options was $0.7 million. Key assumptions in the valuation model included expected volatility, a risk-free interest rate, expected dividend yield, and an expected term unique to the terms of these awards.

Under the performance and market contingent awards, 53,575 of the shares have three separate market triggers for vesting based upon (i) the closing of a financing where the Company sells shares of its equity securities to institutional investors at a minimum price per share, (ii) a change in control with aggregate proceeds payable for the Company's common stock at a minimum price per share, or (iii) an initial public offering that becomes effective at a minimum specified price per share. The remaining 107,152 shares have three separate market triggers for vesting based upon (i) the closing of a financing where the Company sells shares of its equity securities to institutional investors at a minimum pre-money valuation, (ii) a change in control with minimum aggregate proceeds payable for the Company's common stock at a minimum price per share, or (iii) either an initial public offering or an achievement of a minimum market capitalization, as measured by a trailing 30 day volume-weighted average price.

By definition, the market condition in these awards can only be achieved after the performance condition of a liquidity event has been achieved. As such, the requisite service period is based on the estimated period over which the market condition can be achieved. When a performance goal is deemed to be probable of achievement, which for liquidity events is generally upon achievement, time-based vesting and recognition of stock-based compensation expense commence.

As of December 31, 2018 and 2017, there were 454,584 and 360,594 performance and market contingent stock option awards outstanding with a grant date total fair value of $1.0 million and $0.4 million respectively. As of December 31, 2018 and 2017, the Company determined that the achievement of the requisite performance conditions was not probable and, as a result, no compensation cost was recognized for these awards.

Stock-Based Compensation for Nonemployees

The Company has granted options to purchase shares of common stock to consultants in exchange for services performed. During the years ended December 31, 2018 and 2017, the Company granted options to purchase an aggregate of 20,337 and 235,250 shares (of which an aggregate of 169,491 were issued outside of the 2018 and 2013 Plans) of the Company's common stock with a weighted average exercise price of $6.19 and $3.39 per share, respectively.

The fair value of stock options granted to nonemployees was estimated on the date of grant using the Black-Scholes option pricing model. The valuation assumptions used were substantially consistent with the assumption used to value the employee options with the exception of the expected term which was based on the contractual term of the award. During the years ended December 31, 2018 and 2017, stock-based compensation expense recognized related to nonemployee options was $1.2 million and $0.4 million, respectively.

Restricted Stock

A summary of the Company's restricted stock activity for the year ended December 31, 2018 was as follows:

	Shares	Weighted-Average Grant Date Fair Value
Unvested at December 31, 2017	478,971	$ 4.57
Granted	—	$ 4.57
Vested	(119,742)	$ 4.57
Unvested at December 31, 2018	359,229	$ 4.57

In October 2017, the Company and an executive officer entered into two restricted stock agreements whereby the executive officer purchased an aggregate of 625,084 shares of restricted stock of which 146,113 shares vested immediately, 119,742 shares vest on January 1, 2018 and 359,229 shares vest on January 1, 2019. As discussed in Note 8, the purchase of the restricted stock was through the issuance of promissory notes which were considered to be non-recourse in substance and accordingly, considered an option for accounting purposes. The Company measured compensation cost for this option based on its fair value on the grant date using the Black-Scholes option pricing model considering an expected term commensurate with the expected timing to a liquidity event which would trigger repayment of these promissory notes and an exercise price consistent with the repayment term of the promissory notes. The Company recognized compensation cost over the requisite service period with an offsetting credit to additional paid-in capital. The shares of restricted stock have only been included in the shares issued and outstanding as such shares are legally issued.

2018 Employee Stock Purchase Plan

In March 2018, the Company's board of directors adopted the Company's 2018 Employee Stock Purchase Plan (the "2018 ESPP"). The 2018 ESPP was approved by the Company's stockholders in April 2018 and became effective on May 2, 2018. The 2018 ESPP reserved 536,242 shares of common stock for issuance pursuant to future awards, as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan.

Under the 2018 ESPP, employees are offered the option to purchase the Company's common stock at a discount during the offering periods, at semi-annual intervals, with their accumulated payroll deductions. The option purchase price will be 85% of the lower of the closing trading price per share at the beginning of the offering period or at the purchase date. The 2018 ESPP provides for consecutive offering periods and eligible employees may elect to withhold up to 15% of their compensation through payroll deductions during the offering period for the purchase of stock. The maximum number of shares that may be purchased by any one participant is limited to 15,000 shares in each offering period and $25,000 in fair market value during any calendar year per the Internal Revenue Code limits. The first offering period commenced on September 16, 2018.

The fair values of the rights granted under the 2018 ESPP were calculated using the following assumptions:

	Year Ended December 31, 2018
Expected dividend yield	—
Expected term of options (in years)	0.7
Risk-free interest rate	2.41%
Expected stock price volatility	73.18%

Stock-Based Compensation Expense

The following table sets forth the total stock-based compensation expense for all options granted to employees and nonemployees, including shares sold through the issuance of non-recourse promissory notes which are considered to be options for accounting purposes, and costs associated with the Company's 2018 ESPP included in the Company's statement of operations (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Research and development	$ 6,043	$ 1,695	$ 164
General and administrative	3,398	1,339	60
Total	$ 9,441	$ 3,034	$ 224

11. Warrants

In June 2013, the Company granted warrants to its then Chief Executive Officer ("CEO"), considered to be a related party, to purchase 192,823 shares of Series A-1 convertible preferred stock with an exercise price of $0.65 per share and 190,226 shares of Series A-2 convertible preferred stock at a price of $0.66 per share as compensation. In January 2015, the Company granted warrants to the aforementioned CEO to purchase an aggregate of 380,452 shares of Series A-2 convertible preferred stock with an exercise price of $0.66 per share as compensation. Upon the completion of the IPO, these warrants converted to common stock warrants. These warrants were exercisable beginning on January 1, 2018 and expired on the earlier of (i) December 31, 2018, (ii) December 31 of the year in which a change of control occurs or (iii) December 31 of the year in which the holder terminates service. All of the vested warrants expired unexercised on December 31, 2018.

In October 2013, the Company granted warrants to a nonemployee to purchase an aggregate of 96,610 shares of common stock with an exercise price of $0.18 per share of which 9,425 warrants vested immediately. During April 2018 the nonemployee exercised the vested shares and the remaining unvested warrants expired on May 3, 2018 upon the closing of the IPO.

12. Net Loss per Common Share

Basic net loss per share is calculated by dividing net loss by the weighted average number of shares outstanding for the period. Diluted net loss per share is calculated by dividing net loss by the weighted average number of shares of common stock and potential dilutive common stock equivalents outstanding during the period if the effect is dilutive.

The calculation of diluted earnings (loss) per share also requires that, to the extent the presumed issuance of additional shares as contingent consideration is dilutive to earnings (loss) per share for the period, adjustments to net income or net loss used in the calculation are required to remove the change in fair value of the contingent consideration liability for the period. Likewise, adjustments to the denominator are required to reflect the related dilutive shares. In all periods presented, the Company's outstanding stock options, convertible preferred stock, early exercised common stock subject to future vesting, restricted stock accounted for as options common and preferred stock warrants, shares subject to the 2018 ESPP and presumed issuance of additional shares as contingent consideration were excluded from the calculation of diluted net loss per share because their effects were antidilutive.

A reconciliation of the numerators and denominators used in computing net loss from continuing operations per share is as follows (in thousands, except per share amounts):

	December 31,		
	2018	2017	2016
	(in thousands, except share and per share amounts)		
Numerator:			
Net loss	$ (76,398)	$ (44,656)	$ (30,404)
Denominator:			
Weighted average number of shares outstanding—basic and diluted	28,269,907	3,197,516	2,662,841
Net loss per share—basic and diluted	$ (2.70)	$ (13.97)	$ (11.42)

Since the Company was in a loss position for all periods presented, basic net loss per common share is the same as diluted net loss per common share as the inclusion of all potential common shares outstanding would have been anti-dilutive. Potentially dilutive securities that were not included in the diluted per share calculations because they would be anti-dilutive were as follows:

	Year Ended December 31,		
	2018	2017	2016
Convertible preferred stock	—	28,159,724	24,620,615
Options to purchase common stock	5,500,531	4,365,694	508,418
Early exercised common stock subject to future vesting	704,028	831,439	1,287,435
Restricted stock accounted for as options	359,228	625,084	—
Warrants to purchase convertible preferred stock	—	763,501	763,501
Warrants to purchase common stock	—	96,610	96,610
Shares subject to the 2018 ESPP	27,622	—	—
Total	6,591,409	34,842,052	27,276,579

Up to 606,218 shares may be contingently issued, if certain performance conditions are met under the Company's in-licensing agreements.

13. Defined Contribution Plan

The Company sponsors a 401(k) Plan that stipulates that eligible employees can elect to contribute to the 401(k) Plan, subject to certain limitations, on a pretax basis. The Company does not match any employee contributions. In January 2019, the Company began to match 4% of employees' salary.

14. Income Taxes

The Company has incurred net operating losses for all the periods presented. The Company has not reflected the benefit of any such net operating loss carryforwards in the accompanying financial statements. The Company has established a full valuation allowance against its deferred tax assets due to the uncertainty surrounding the realization of such assets. All losses to date have been incurred domestically as the Company has no international operations or subsidiaries.

No provision for U.S. income taxes exists due to tax losses incurred in all periods presented. All losses incurred were U.S. based.

The effective tax rate for the years ended December 31, 2018, 2017 and 2016 is different from the federal statutory rate primarily due to the valuation allowance against deferred tax assets as a result of insufficient sources of income. The effective tax rate of the provision for income taxes differs from the federal statutory rate as follows:

	Year Ended December 31,		
	2018	2017	2016
Taxes at the U.S. statutory income tax rate	21.0 %	34.0 %	34.0 %
State tax, net of federal benefit	0.9	—	—
Other	(0.1)	(2.2)	—
Stock-based compensation	0.3	—	—
General business credits	1.0	—	—
Change in valuation allowance	(23.1)	(13.3)	(21.0)
Non-deductible interest expense	—	—	(13.0)
Change in income tax rate due to Tax Act	—	(18.5)	—
Total provision for income taxes	— %	— %	— %

On December 22, 2017, the U.S. federal government enacted the Tax Cuts and Jobs Act (Tax Act). The Tax Act contains, among other things, significant changes to corporate taxation, including reduction of the corporate tax rate

from a top marginal rate of 35% to a flat rate of 21% for tax years beginning after December 31, 2017, limitation of the deduction for net operating losses to 80% of current year taxable income and elimination of net operating loss carrybacks, implementing a territorial tax system, and requiring a mandatory one-time tax on U.S. owned undistributed foreign earnings and profits known as the transition tax.

Pursuant to SAB 118, an entity may select between one of three scenarios to determine a reasonable estimate arising from the Tax Act. The scenarios are (i) a final estimate which effectively closes the measurement window; (ii) a reasonable estimate leaving the measurement window open for future revisions; and (iii) no estimate as the law is still being analyzed. The Company was able to provide a reasonable estimate for the revaluation of deferred taxes. As such, the Company recorded a $8.3 million reduction in deferred tax assets for the revaluation of deferred taxes in 2017 which was offset by a corresponding decrease to the Company's full valuation allowance. The ultimate impact of the Act did not differ materially from provision amounts recorded. Adjustments, if any, would not have impacted the statement of operations and comprehensive loss due to the full valuation allowance on the Company's deferred tax assets.

The tax effects of significant items comprising the Company's deferred tax assets are as follows:

	December 31,	
	2018	2017
	(in thousands)	
Deferred tax assets:		
Net operating loss	$ 29,926	$ 16,530
Research and development credits	3,865	1,879
Stock-based compensation	1,839	671
Contingent consideration	954	—
Accruals and other	1,040	895
Charitable contributions	253	330
Total deferred tax assets	37,877	20,305
Valuation allowance	(37,877)	(20,236)
Net deferred tax assets	—	69
Deferred tax liability	—	(69)
Net deferred tax assets	$ —	$ —

ASC 740 requires that the tax benefit of net operating losses, temporary differences and credit carryforwards be recorded as an asset to the extent that management assesses that realization is "more likely than not." Realization of the future tax benefits is dependent on the Company's ability to generate sufficient taxable income within the carryforward period. Because of the Company's recent history of operating losses, management believes that recognition of the deferred tax assets arising from the above-mentioned future tax benefits is currently not likely to be realized and, accordingly, has provided a valuation allowance.

Realization of the net deferred tax assets is dependent upon future taxable income, if any, the amount and timing of which is uncertain. Based on the weight of available positive and negative objective evidence, management believes it more likely than not that the Company's deferred tax assets are not realizable. Accordingly, the net deferred tax assets have been fully offset by a valuation allowance. For the years ended December 31, 2018 and 2017, the net increase in the valuation allowance was $17.6 million and $9.4 million, respectively.

Net operating losses and tax credit carryforwards as of December 31, 2018 are as follows:

	Amount	Expiration Years
Net operating losses, federal (post December 31, 2017)	$ 64,593	indefinite
Net operating losses, federal (pre January 1, 2018)	64,136	2030 - 2038
Net operating losses, state	64,663	2030 - 2039
Tax credits, federal	2,988	2031 - 2039
Tax credits, state	2,692	Indefinite

The net operating loss and research and development credit carryforwards are subject to review and possible adjustment by the Internal Revenue Service ("IRS") and state tax authorities and may become subject to an annual limitation in the event of certain future cumulative changes in the ownership interest of significant stockholders over a three-year period in excess of 50%, as defined under Sections 382 and 383 of the Internal Revenue Code of 1986. The Company has performed this analysis and concluded that an additional $1.6 million of net operating losses and research development credits, collectively, were limited under Section 382, which has been reflected in the amounts disclosed in the financials.

The Company determines 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 is more likely than not to be sustained upon examination by the relevant income tax authorities.

A reconciliation of the beginning and ending amounts of unrecognized tax benefits is as follows:

	December 31,	
	2018	2017
	(in thousands)	
Gross unrecognized tax benefits at January 1	$ 3,065	$ 2,800
Additions for tax positions taken in the current year	753	478
Reductions for tax positions taken in the prior year	(104)	(213)
Gross unrecognized tax benefits at December 31	$ 3,714	$ 3,065

If recognized, none of the unrecognized tax benefits as of December 31, 2018 and 2017 would reduce the annual effective tax rate, primarily due to corresponding adjustments to the valuation allowance. The Company will recognize both accrued interest and penalties related to unrecognized benefits in income tax expense. As of December 31, 2018 and 2017, no liability has been recorded for potential interest or penalties. The Company does not expect the unrecognized tax benefits to change significantly over the next 12 months.

Since the Company is in a loss carryforward position, the Company is generally subject to examination by the U.S. federal, state and local income tax authorities for all tax years in which a loss carryforward is available.

15. Subsequent Events

In February 2019, the Company entered into a lease agreement for approximately 62,655 square feet of office, research and development and laboratory space in South San Francisco, California. The lease is expected to commence on October 1, 2019. The lease has an approximately ten year term with an option to extend for a period of eight years subject to certain conditions.

Pursuant to the lease agreement, the Company provided a $0.9 million letter of credit to the landlord for the term of the lease.

16. Selected Quarterly Financial Data (Unaudited)

The following tables show a summary of the Company's quarterly financial information for each of the four quarters of 2018 and 2017 and has been prepared in accordance with GAAP for interim financial reporting (in thousands, except for per share data):

	Quarter			
Year Ended December 31, 2018	First	Second	Third	Fourth
Loss from operations	$ (16,482)	$ (20,798)	$ (19,377)	$ (22,808)
Net loss	$ (16,133)	$ (20,002)	$ (18,346)	$ (21,917)
Net loss per common share, basic and diluted	$ (4.69)	$ (0.76)	$ (0.45)	$ (0.53)

Year Ended December 31, 2017	Quarter			
	First	Second	Third	Fourth
Loss from operations	$ (9,040)	$ (11,698)	$ (12,083)	$ (12,787)
Net loss	$ (8,934)	$ (11,428)	$ (11,750)	$ (12,544)
Net loss per common share, basic and diluted	$ (2.90)	$ (3.62)	$ (3.63)	$ (3.67)

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our chief executive and financial officers, evaluated the effectiveness of our disclosures controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, as of December 31, 2018. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate, to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of December 31, 2018, our chief executive officer and chief financial officer concluded that, as of such date, our disclosure controls and procedures were effective at a reasonable assurance level.

Management's Annual Report on Internal Control over Financial Reporting

This Annual Report on Form 10-K does not include a report of management's assessment regarding internal control over financial reporting due to a transition period established by rules of the SEC for newly public companies.

Attestation Report of the Registered Public Accounting Firm

This Annual Report on Form 10-K does not include an attestation report of our registered public accounting firm due to an exemption established by the JOBS Act for "emerging growth companies."

This Annual Report on Form 10-K does not include a report of management's assessment regarding internal control over financial reporting due to a transition period established by rules of the SEC for newly public companies.

Changes in Internal Control over Financial Reporting

Management determined that, as of December 31, 2018, there were no changes in our internal control over financial reporting that occurred during the fiscal quarter then ended that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

Information required by this Item is incorporated herein by reference to the sections titled "Executive Officers," "Election of Directors," "Corporate Governance" and "Section 16(a) Beneficial Ownership and Reporting Compliance" in our Definitive Proxy Statement with respect to our 2019 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

Item 11. Executive Compensation.

Information required by this Item is incorporated herein by reference to the section titled "Executive Compensation," "Director Compensation" and "Corporate Governance" in our Definitive Proxy Statement with respect to our 2019 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

Information required by this Item is incorporated herein by reference to the section titled "Security Ownership of Certain Beneficial Owners and Management" and "Equity Compensation Plan Information" in our Definitive Proxy Statement with respect to our 2019 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

Information required by this Item is incorporated herein by reference to the section titled "Certain Relationships and Related Party Transactions" and "Corporate Governance" in our Definitive Proxy Statement with respect to our 2019 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

Item 14. Principal Accounting Fees and Services.

Information required by this Item is incorporated herein by reference to the section titled "Ratification of Selection of Independent Registered Public Accounting Firm" in our Definitive Proxy Statement with respect to our 2019 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

PART IV

Item 15. Exhibits, Financial Statement Schedules.

(a) The following documents are filed as part of this report:

1. Financial Statements

   See Index to Financial Statements in Part II Item 8 of this Annual Report on Form 10-K.

2. Financial Statement Schedules

   All schedules are omitted because they are not applicable or the required information is shown in the financial statements or notes thereto.

3. Exhibits

Exhibit Index

Exhibit Number	Description	Incorporated by Reference			Filed Herewith
		Form	Number	Filing Date	
3.1	Amended and Restated Certificate of Incorporation of Unity Biotechnology, Inc.	8-K	3.1	5-7-18	
3.2	Amended and Restated Bylaws of Unity Biotechnology, Inc.	8-K	3.2	5-7-18	
4.1	Reference is made to exhibits 3.1 through 3.2.				
4.2	Form of Common Stock Certificate.	S-1	4.2	4-23-18	
4.3	Amended and Restated Investors' Rights Agreement, dated as of March 15, 2018, by and among Unity Biotechnology, Inc. and the investors party thereto.	S-1	4.3	4-5-18	
10.1(a)	Lease Agreement, dated as of May 13, 2016, by and between Unity Biotechnology, Inc. and BMR-Bayshore Boulevard L.P.	S-1	10.1(a)	4-5-18	
10.1(b)	First Amendment to Lease Agreement, dated as of May 23, 2017, by and between Unity Biotechnology, Inc. and BMR-Bayshore Boulevard L.P.	S-1	10.1(b)	4-5-18	
10.2(a)	Space License Agreement, dated as of October 20, 2016, by and between Unity Biotechnology, Inc. and BMR-Bayshore Boulevard L.P.	S-1	10.2(a)	4-5-18	
10.2(b)	First Amendment to Space License Agreement, dated as of December 5, 2016, by and between Unity Biotechnology, Inc. and BMR-Bayshore Boulevard L.P.	S-1	10.2(b)	4-5-18	
10.2(c)	Second Amendment to Space License Agreement, dated as of January 30, 2017, by and between Unity Biotechnology, Inc. and BMR-Bayshore Boulevard L.P.	S-1	10.2(c)	4-5-18	
10.3(a)#	2013 Equity Incentive Plan.	S-1	10.3(a)	4-5-18	
10.3(b)#	Form of Stock Option Agreement under 2013 Equity Incentive Plan.	S-1	10.3(b)	4-5-18	
10.4(a)#	2018 Incentive Award Plan.	S-1	10.4(a)	4-23-18	
10.4(b)#	Form of Stock Option Grant Notice and Stock Option Agreement under the 2018 Incentive Award Plan.	S-1	10.4(b)	4-5-18	
10.4(c)#	Form of Restricted Stock Award Grant Notice and Restricted Stock Award Agreement under the 2018 Incentive Award Plan.	S-1	10.4(c)	4-5-18	
10.4(d)#	Form of Restricted Stock Unit Award Grant Notice and Restricted Stock Unit Award Agreement under the 2018 Incentive Award Plan.	S-1	10.4(d)	4-5-18	
10.5#	2018 Employee Stock Purchase Plan.	S-1	10.5	4-23-18	
10.6#	Amended and Restated Non-Employee Director Compensation Program (Effective January 1, 2019)				X
10.7#	Form of Indemnification Agreement for directors and officers.	S-1	10.7	4-5-18	
10.8#	Employment Agreement, dated January 29, 2018, by and between Unity Biotechnology, Inc. and Keith R. Leonard Jr.	S-1	10.8	4-5-18	
10.9#	Employment Agreement, dated January 29, 2018, by and between Unity Biotechnology, Inc. and Nathaniel E. David.	S-1	10.9	4-5-18	
10.10#	Employment Agreement, dated January 29, 2018, by and between Unity Biotechnology, Inc. and Robert C. Goeltz II.	S-1	10.10	4-5-18	
10.11#	Employment Agreement, dated January 29, 2018, by and between Unity Biotechnology, Inc. and Jamie Dananberg.	S-1	10.11	4-5-18	
10.12#	Employment Agreement, dated January 29, 2018, by and between Unity Biotechnology, Inc. and Daniel G. Marquess.	S-1	10.12	4-5-18	
10.13#	Employment Agreement, dated January 29, 2018, by and between Unity Biotechnology, Inc. and Tamara L. Tompkins.	S-1	10.13	4-5-18	

10.14†	Compound Library and Option Agreement, dated as of February 2, 2016, by and between Ascentage Pharma Group Corp. Ltd. and Unity Biotechnology, Inc.	S-1	10.14	4-23-18	
10.15†	APG1252 License Agreement, dated as of February 2, 2016, by and between Ascentage Pharma Group Corp. Ltd. and Unity Biotechnology, Inc.	S-1	10.15	4-23-18	
10.16†	Research Services Agreement, dated as of February 2, 2016, by and between Ascentage Pharma Group Corp. Ltd. and Unity Biotechnology, Inc.	S-1	10.16	4-5-18	
10.17†	Amendment to APG1252 License Agreement, dated as of February 2, 2016, by and between Ascentage Pharma Group Corp. Ltd.	S-1	10.17	4-5-18	
10.18†	Amendment to Compound Library and Option Agreement, dated as of February 2, 2016, by and between Ascentage Pharma Group Corp. Ltd. and Unity Biotechnology, Inc.	S-1	10.18	4-5-18	
10.19(a)†	Exclusive License Agreement, dated as of June 28, 2013, by and between the Mayo Foundation for Medical Education and Research and Unity Biotechnology, Inc.	S-1	10.19(a)	4-23-18	
10.19(b)†	Amendment No. 1 to Exclusive License Agreement, dated as of September 10, 2014, by and between the Mayo Foundation for Medical Education and Research and Unity Biotechnology, Inc.	S-1	10.19(b)	4-23-18	
10.19(c)†	Amendment No. 2 to Exclusive License Agreement, dated as of November 17, 2014, by and between the Mayo Foundation for Medical Education and Research and Unity Biotechnology, Inc.	S-1	10.19(c)	4-23-18	
10.19(d)†	Amendment No. 3 to Exclusive License Agreement, dated as of May 5, 2015, by and between the Mayo Foundation for Medical Education and Research and Unity Biotechnology, Inc.	S-1	10.19(d)	4-23-18	
10.19(e)†	Amendment No. 4 to Exclusive License Agreement, dated as of September 15, 2016, by and between the Mayo Foundation for Medical Education and Research and Unity Biotechnology, Inc.	S-1	10.19(e)	4-23-18	
10.19(f)†	Addendum to Amendment No. 4 to Exclusive License Agreement, dated as of September 15, 2016, by and between the Mayo Foundation for Medical Education and Research and Unity Biotechnology, Inc.	S-1	10.19(f)	4-23-18	
10.19(g)†	Amendment No. 5 to Exclusive License Agreement, dated as of October 17, 2016, by and between the Mayo Foundation for Medical Education and Research and Unity Biotechnology, Inc.	S-1	10.19(g)	4-23-18	
10.20†	Amended and Restated License Agreement, dated as of January 27, 2017, by and between the Buck Institute for Research on Aging and Unity Biotechnology, Inc.	S-1	10.20	4-23-18	
10.21†	License Agreement, dated as of November 3, 2016, by and between The Johns Hopkins University and Unity Biotechnology, Inc.	S-1	10.21	4-23-18	
10.22††	License Agreement for APG1197, dated as of January 2, 2019, by and between Ascentage Pharma Group Corp. Ltd. And Unity Biotechnology, Inc.				X
10.23	Lease Agreement, dated as of February 28, 2019, by and between Unity Biotechnology, Inc. and Bayside Area Development, LLC				X
23.1	Consent of Independent Registered Public Accounting Firm				X
24.1	Power of Attorney. Reference is made to the signature page.				X

31.1	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	X
31.2	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	X
32.1**	Certification of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	X
101.INS	XBRL Instance Document	X
101.SCH	XBRL Taxonomy Extension Schema Document	X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document	X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document	X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document	X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document	X

† Confidential treatment has been granted for certain information contained in this exhibit. Such information has been omitted and filed separately with the Securities and Exchange Commission.

†† Portions of this exhibit (indicated by asterisks) have been omitted pursuant to a request for confidential treatment filed separately with the Securities and Exchange Commission.

# Indicates management contract or compensatory plan.

** The certification attached as Exhibit 32.1 that accompanies this Annual Report on Form 10-K is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Unity Biotechnology, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Annual Report on Form 10-K, irrespective of any general incorporation language contained in such filing.

Item 16. Form 10-K Summary.

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized**.**

Unity Biotechnology, Inc.

Date: March 6, 2019

By: /s/ Keith R. Leonard Jr.
Keith R. Leonard Jr.
Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints each of Keith R. Leonard, Robert C. Goeltz II and Tamara L. Tompkins his or her true and lawful attorney-in-fact andagent, with full power of substitution, for him or her and in his or her name, place and stead, in any and allcapacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the U.S. 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 that all said attorneys-in-fact and agents, or their, his or her substitutes or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed by the following persons on behalf of the Registrant in the capacities and on the dates indicated.

Name	Title	Date
/s/ Keith R. Leonard Jr. **Keith R. Leonard Jr.**	Chairman, Chief Executive Officer and Director (Principal Executive Officer)	March 6, 2019
/s/ Robert C. Goeltz II **Robert C. Goeltz II**	Chief Financial Officer (Principal Financial and Accounting Officer)	March 6, 2019
/s/ Paul L. Berns **Paul L. Berns**	Director	March 6, 2019
/s/ Kristina M. Burow **Kristina M. Burow**	Director	March 6, 2019
/s/ Graham K. Cooper **Graham K. Cooper**	Director	March 6, 2019
/s/ Nathaniel E. David **Nathaniel E. David**	President and Director	March 6, 2019
/s/ David L. Lacey **David L. Lacey**	Director	March 6, 2019
/s/ Robert T. Nelsen **Robert T. Nelsen**	Director	March 6, 2019
/s/ Margo Roberts **Margo Roberts**	Director	March 6, 2019
/s/ Camille D. Samuels **Camille D. Samuels**	Director	March 6, 2019

UNITY BIOTECHNOLOGY, INC.
AMENDED AND RESTATED NON-EMPLOYEE DIRECTOR COMPENSATION PROGRAM
(EFFECTIVE JANUARY 1, 2019)

Whereas the Unity Biotechnology, Inc. (the "Company") Non-Employee Director Compensation Program was adopted under the Company's 2018 Incentive Award Plan (the "Plan") and became effective upon the closing of the Company's initial public offering of its common stock (the "IPO"). This Amended and Restated Non-Employee Director Compensation Program (the "Amended Program") shall be effective as of January 1, 2019. Capitalized terms not otherwise defined herein shall have the meaning ascribed in the Plan.

Cash Compensation

Effective on January 1, 2019, annual retainers will be paid in the following amounts to Non-Employee Directors:

Non-Employee Director:	$35,000
Lead Independent Director	$25,000
Chair of Audit Committee:	$15,000
Chair of Compensation Committee:	$10,000
Chair of Nominating and Corporate Governance Committee:	$8,000
Audit Committee Member (other than Chair):	$7,500
Compensation Committee Member (other than Chair):	$5,000
Nominating and Corporate Governance Committee Member (other than Chair):	$4,000

All annual retainers will be paid in cash quarterly in arrears promptly following the end of the applicable calendar quarter, but in no event more than thirty (30) days after the end of such quarter. In the event a Non-Employee Director does not serve as a Non-Employee Director, or in the applicable positions described above, for an entire calendar quarter, the retainer paid to such Non-Employee Director shall be prorated for the portion of such calendar quarter actually served as a Non-Employee Director, or in such position, as applicable.

Equity Compensation

Initial Stock Option Grant:	Each Non-Employee Director who is initially elected or appointed to serve on the Board after the IPO shall be granted an Option under the Plan or any other applicable Company equity incentive plan then-maintained by the Company to purchase that number of shares of Common Stock such that the Option has a Grant Date Value (as defined below) equal to $450,000 (the "Initial Option"). For the purposes of this Amended Program, "Grant Date Value" shall mean the fair value of an option determined using the Black-Scholes pricing model with the volume weighted average trading price of a share of Common Stock on the stock exchange on which the Common Stock is then listed or traded for the thirty (30) consecutive trading days ending on the trading day prior to the date of grant and the volatility, risk-free rate and life expectancy assumptions in the Company's most recent public filings disclosing those assumptions. The Initial Option will be automatically granted on the date on which such Non-Employee Director commences service on the Board, and will vest as to 1/36th of the shares subject thereto on each monthly anniversary of the applicable date of grant such that the shares subject to the Initial Option are fully vested on the third anniversary of the grant, subject to the Non-Employee Director continuing in service on the Board through each vesting date.
Annual Stock Option Grant:	Each Non-Employee Director who is serving on the Board as of the date of each annual shareholder meeting of the Company (each, an "Annual Meeting") shall be granted an Option under the Plan or any other applicable Company equity incentive plan then-maintained by the Company to purchase that number of shares of Common Stock such that the Option has a Grant Date Value equal to $225,000 (the "Annual Option"), provided that the number of shares subject to the Annual Option will be prorated for any partial year of service as a Non-Employee Director. The Annual Option will be automatically granted on the date of the applicable Annual Meeting, and will vest in full on the earlier of (i) the first anniversary of the date of grant and (ii) immediately prior to the Annual Meeting following the date of grant, subject to the Non-Employee Director continuing in service on the Board through such vesting date.

The per share exercise price of each Option granted to a Non-Employee Director shall equal the Fair Market Value of a share of common stock on the date the Option is granted.

The term of each Option granted to a Non-Employee Director shall be ten (10) years from the date the Option is granted.

No portion of an Initial Option or Annual Option which is unvested or unexercisable at the time of a Non-Employee Director's termination of service on the Board shall become vested and exercisable thereafter.

Members of the Board who are employees of the Company or any parent or subsidiary of the Company who subsequently terminate their service with the Company and any parent or subsidiary of the Company and remain on the Board will not receive an Initial Option, but to the extent that they are otherwise eligible, will be eligible to receive, after termination from service with the Company and any parent or subsidiary of the Company, Annual Options as described above.

Change in Control

Upon a Change in Control of the Company, all outstanding equity awards granted under the Plan and any other equity incentive plan maintained by the Company that are held by a Non-Employee Director shall become fully vested and/or exercisable, irrespective of any other provisions of the Non-Employee Director's Award Agreement.

Reimbursements

The Company shall reimburse each Non-Employee Director for all reasonable, documented, out-of-pocket travel and other business expenses incurred by such Non-Employee Director in the performance of his or her duties to the Company in accordance with the Company's applicable expense reimbursement policies and procedures as in effect from time to time.

Miscellaneous

The other provisions of the Plan shall apply to the Options granted automatically pursuant to this Amended Program, except to the extent such other provisions are inconsistent with this Amended Program. All applicable terms of the Plan apply to this Amended Program as if fully set forth herein, and all grants of Options hereby are subject in all respect to the terms of such Plan. The grant of any Option under this Amended Program shall be made solely by and subject to the terms set forth in a written agreement in a form to be approved by the Board and duly executed by an executive officer of the Company.

Effectiveness

This Amended Program is effective as of January 1, 2019.

* * * * *

I hereby certify that the foregoing Amended Program was duly adopted by the Board of Directors of Unity Biotechnology, Inc. on January 29, 2019.

Executed on this 29th day of January, 2019.

/s/ Tamara L. Tompkins
Corporate Secretary

Exhibit 10.22

Compound License Agreement for APG1197

This Compound License Agreement (the "Agreement") effective as of the 2nd day of January, 2019, (the "Effective Date") is made by and between **Ascentage Pharma Group Corp. Ltd.**, a Hong Kong corporation and its affiliates (collectively, "Ascentage"), with a business address at 11/F, AXA CENTRE, Gloucester Road, Wanchai, Hong Kong, and **Unity Biotechnology, Inc.**, a Delaware corporation ("Unity"), with a business address at 3280 Bayshore Blvd, Suite 100, Brisbane, California 94005. Each of Ascentage and Unity shall be a "Party," and both the "Parties."

BACKGROUND

A. Unity and Ascentage entered into (i) that certain Compound Library and Option Agreement dated February 2, 2016, which was amended by that First Amendment dated March 28, 2018 (as amended the "Library Agreement"), pursuant to which Unity has certain rights to acquire a license under the Licensed Intellectual Property to commercialize specified compounds, and (ii) that certain license agreement dated February 2, 2016, which was amended by that First Amendment dated March 28, 2018 (as amended "APG-1252 License Agreement"), pursuant to which Unity obtained a license to commercialize that certain BCL-2/BCL-xL inhibitor known as "APG-1252" ("APG-1252", as further defined in the APG-1252 License Agreement) for treatment of age-related conditions; and

B. Unity has exercised its rights under the Library Agreement to acquire from Ascentage such a license under the Licensed Intellectual Property for the Licensed Compound, all as set forth below on the terms and conditions herein.

NOW, THEREFORE, for and in consideration of the covenants, conditions, and undertakings hereinafter set forth, it is agreed by and between the Parties as follows:

ARTICLE 1
DEFINITIONS

1.1 The following terms have the meanings set forth in the Library Agreement:

Active Compound
Affiliate
Back-up Compounds
Compounds
Development Candidates
Greater China
IND
Oncology Indications
Patents
Stock Agreement
Third Party

1.2 "Ascentage Intellectual Property" means all Patents and Technology owned or Controlled by Ascentage or its Affiliates during the Term.

1.3 "Ascentage Manufacturing Improvements" means any existing and future improvements to Ascentage Manufacturing IP developed by or for Ascentage during the Term (including Patents covering such improvements).

1.4 "Ascentage Manufacturing IP" means (a) Technology that is under the Control of Ascentage or its Affiliates as of the Effective Date Covering the manufacture of APG-1197 and/or the Back-up Compound or intermediates thereof, that is necessary and/or reasonably useful for the manufacture of the Licensed Compound or the Back-up Compound, and (b) Technology Covering any inventions described in clause (a).

1.5 "Fair Market Value" means with respect to a share of Unity common stock (i) the average price that Unity common stock is publicly trading at for [***] ([***]) days prior to the date in question, determined by the reported closing price of a share of Common Stock on the NASDAQ National Market System, or (ii) if the common stock is not publicly traded, the value of such stock as determined in good faith by Unity's board of directors in reliance upon Unity's most recent IRC Section 409A independent valuation of Unity's common stock that it used for the purposes of granting stock options to its employees.

1.6 "Control" and its correlative terms, "Controlled" or "Controls" means, with respect to any Patent or item of Technology, that a Party or one of its Affiliates owns or possesses rights to such Patent or item of Technology sufficient to grant the access, license or sublicense contemplated in this Agreement without violating the terms of any agreement or other arrangement with any Third Party.

1.7 "Cover" and its correlative terms, "Covers", "Covered" or "Covering" means (a) with respect to an issued patent, that, in the absence of a license, the use, offer for sale, sale, importation or manufacture of the product in question would infringe one or more claims of such patent or (b) with respect to a pending patent application, that, in the absence of a license, the use, offer for sale, sale, importation or manufacture of the product in question would infringe one or more claims of such patent application, should such claims issue as published.

1.8 "Designation Letter" means the Development Candidate designation letter from Unity to Ascentage [***], a copy of which is attached hereto as Schedule 1.8.

1.9 "Enabling IP" means Patents and/or Technology of a Third Party that Covers or relates to a Licensed Product and is necessary or useful for the research, development, manufacture, use, sale or import of Licensed Products, including Patents directed to the composition and manufacture of Licensed Compound, but excluding Patents related to formulation and therapeutic methods.

1.10 "EMA" means the European Medicines Agency and any successor agency.

1.11 "Existing Agreements" means (a) that certain Exclusive License Agreement between Unity and the Mayo Foundation for Medical Education and Research originally entered into by the parties effective June 28th, 2013; (b) that certain Exclusive License Agreement

between Unity and the Buck Institute for Research on Aging originally entered into by the parties effective February 3rd, 2014, as amended; and (c) that certain Exclusive License Agreement between Unity and the Board of Trustees of the University of Arkansas originally entered into by the parties effective April 28th, 2015.

1.12 "FDA" means the United States Food and Drug Administration and any successor agency.

1.13 "Field" means the prophylaxis and treatment of, and palliation of symptoms associated with, indications other than Oncology Indications.

1.14 "Generic Product" means a product which (a) contains as its active pharmaceutical ingredient a compound that is (or is substantially the same as) the Licensed Compound, and (b) has been placed on the market pursuant to a validly granted marketing authorization.

1.15 "Licensed Compound" means (a) the Development Candidate that was designated in the Designation Letter, [***], or (b) if the Back-up Compound that was designated in the Designation Letter is substituted under Section 3.3 below, a Substitute Licensed Compound [***].

1.16 "Licensed Intellectual Property" means the Licensed Patents and Licensed Technology.

1.17 "Licensed Patents" means (i) the Patents set forth on Schedule 1.15 hereto, and (ii) any additional Patents owned or Controlled by Ascentage or its Affiliates during the Term, in each case to the extent Covering the development, manufacture, use, sale, offering for sale, import, export or distribution of the Licensed Compound or a Licensed Product.

1.18 "Licensed Product" means a pharmaceutical product containing the Licensed Compound (either alone or with other active pharmaceutical ingredients), in all forms, presentations, formulation and dosage forms. Unity acknowledges and agrees that in the event Unity [***].

1.19 "Licensed Product-Specific Patents" means those Licensed Patents that [***] the Licensed Compound and/or Licensed Product and [***].

1.20 "Licensed Technology" means Technology owned or Controlled by Ascentage or its Affiliates during the Term, in each case to the extent such Technology is necessary or reasonably useful for the development, manufacture or commercialization of the Licensed Compound or a Licensed Product.

1.21 "Manufacturing Process Improvement" means (a) the Unity Manufacturing Improvements and (b) Ascentage Manufacturing Improvements.

1.22 "Marketing Approval Application" or "MAA" means a New Drug Application (or its equivalent), as defined in the U.S. Food, Drug and Cosmetic Act and the regulations promulgated thereunder, or any corresponding or similar application, registration or certification in any country.

1.23 "Net Sales" means the gross amount invoiced to non-Affiliate Third Parties on sales of Licensed Products by Unity or its Affiliates or Third Party Sublicensees, less the actual amounts incurred, allowed, or paid for the following items (if not previously deducted from the amount invoiced and provided that such deductions are calculated in accordance with generally accepted accounting principles of the United States of America ("GAAP") on a consistent basis): (a) trade, cash, and quantity discounts; (b) amounts for claims, allowances or credits for returns, rejections or recalls; (c) freight, shipping and insurance charges allocable to such Licensed Products; (d) sales taxes, duties and other governmental charges (including value added tax) on particular sales, but excluding what is commonly known as income taxes; (e) government mandated rebates; (f) contracted rebates; and (g) a provision for uncollectible accounts; in each case as determined from books and records of the selling party maintained in accordance with GAAP, as consistently applied by such selling party. In the event that Unity grants a sublicense to a Third Party Sublicensee hereunder, and receives payments based upon such Third Party Sublicensee's sales of Licensed Product, Unity may, with Ascentage's consent, which consent shall not be unreasonably withheld or delayed, substitute the definition of "Net Sales," used by such Third Party Sublicensee to calculate its payments to Unity in place of the foregoing definition of "Net Sales" for purposes of calculating royalties payable to Ascentage on such Third Party Sublicensee's sales.

1.24 "Phase I Clinical Trial" means a human clinical trial, the principal purpose of which is preliminary determination of safety of a drug in healthy individuals or patients, that would satisfy the requirements of 21 C.F.R. §312.21(a).

1.25 "Phase II Clinical Trial" means a clinical trial of a drug conducted on a limited number of patients for the purpose of preliminary evaluation of clinical efficacy and safety of such drug, and/or to obtain an indication of the dosage regimen required, in each case that would satisfy the requirements of 21 C.F.R. 312.21(b).

1.26 "Phase III Clinical Trial" means a pivotal human clinical trial intended to gather additional information regarding the safety and efficacy of the drug in patients with the disease being studied, which clinical study is designed to be of a size and statistical power sufficient to support the filing of an MAA and that would satisfy the requirements of 21 C.F.R. 312.21(c).

1.27 "Prodrug" means a derivative of an Active Compound, which is transformed to release the Active Compound, which transformation can include, but is not limited to, [***].

1.28 "Technology" means all inventions, discoveries, improvements, trade secrets and proprietary methods and materials, whether or not patentable, directly relating to one or more structurally related Compounds, in each case that is Controlled by Ascentage or its Affiliates during the Term of this Agreement and is necessary and/or reasonably useful to Unity in exercising its rights or performing its obligations under this Agreement, including (a)

methods of production or use of, Compounds and (b) data, formulations and techniques arising from the synthesis or characterization of Compounds.

1.29 "Territory" means the entire world excluding Greater China.

1.30 "Third Party Sublicensee" means any Third Party to which Unity sublicenses the right to manufacture and/or commercialize any Licensed Product. For the avoidance of doubt, "Third Party Sublicensee" shall not include Third Party distributors, service providers, vendors and suppliers that do not have the right to manufacture, market or promote Licensed Product.

1.31 "UM License Agreement" means that certain license agreement entered into by Ascentage and the Regents of the University of Michigan ("UM") effective as of December 1, 2010, as amended by all amendments to such license agreement existing as of the Effective Date.

1.32 "Unity Manufacturing Improvements" means existing and future (a) improvements to the Ascentage Manufacturing IP that are developed by of for Unity during the Term, and (b) Patents Covering any inventions described in clause (a).

1.33 "Valid Claim" means a claim contained in an issued Patent within the Licensed Patents in any country that (a) has not expired; (b) has not been disclaimed; (c) has not been cancelled or superseded, or if cancelled or superseded, has been reinstated; and (d) has not been revoked, held invalid, or otherwise declared unenforceable or not allowable by a tribunal or patent authority of competent jurisdiction over such claim in such country from which no further appeal has or may be taken.

1.34 The following terms have the meanings set forth in the referenced provisions of this Agreement:

Agreement	Recitals
APG-1252	Recitals
APG-1252 License Agreement	Recitals
Ascentage	Recitals
Ascentage Indemnitees	Section 11.1
Bankruptcy Code	Section 15.14
China JVCO	Section 9.1
Competitive Product	Section 8.2.1(a)
Confidential Information	Section 10.1
Effective Date	Recitals
Enforcement Action	Section 8.2.1(a)
Enforcing Party	Section 8.4
Indemnitee	Section 11.3
Inventing Party	Section 4.2
JCS	Section 5.1
Joint Steering Committee	Section 5.1
Liabilities	Section 11.1
Library Agreement	Recitals
Non-Inventing Party	Section 4.2
Party/Parties	Recitals
Substitute Licensed Compound	Section 3.3.1
Substitution Notice	Section 3.3.2
Term	Section 13.1
Third Party Intellectual Property	Section 2.3
Unity	Recitals
Unity Indemnitees	Section 11.2

ARTICLE 2
LICENSES

2.1 Licenses.

2.1.1 Development Licenses.

(a) Subject to the terms and conditions of this Agreement, Ascentage hereby grants to Unity a royalty-free, exclusive license in the Field and the Territory, with the right to grant sublicenses as provided in Section 2.2, under the Licensed Intellectual Property to research, develop and seek and obtain marketing approval for the Licensed Compound and Licensed Products in the Field and Territory, and to have any of the foregoing performed on its behalf by a Third Party.

(b) For the avoidance of doubt, until such time as Unity elects to discontinue development of the Licensed Compound and designate the Back-up Compound as a Substitute Licensed Compound as provided in Section 3.3 herein, the Parties agree that Unity

will be permitted to continue to conduct activities with respect to the Back-up Compound as an Active Compound under the terms and conditions set forth in the Library Agreement.

(c) Additionally, and notwithstanding Section 3.1 of the Library Agreement, Ascentage further agrees that Unity will be permitted to pursue formal preclinical development of the Back-Up Compound, including by initiating GLP toxicity studies until the earlier of such time as (i) Unity designates the Back-Up Compound as a Substitute Licensed Compound in accordance with Section 3.3. herein, (ii) Unity declares the Back-Up Compound to be a separate Development Candidate, in which case the Parties shall complete and execute a separate form of Compound License Agreement in accordance with Section 3.3 of the Library Agreement, or (iii) the Back-Up Compound is released pursuant to Section 3.5.3 of the Library Agreement.

2.1.2 Manufacturing Licenses. Subject to the terms and conditions of this Agreement:

(a) Ascentage hereby grants to Unity a royalty-free, non-exclusive license in the Field and the Territory, with the right to grant sublicenses as provided in Section 2.2, under the Ascentage Intellectual Property, including all Ascentage Manufacturing Improvements, to manufacture or have manufactured the Licensed Compound or the Back-up Compound and Licensed Product for research, development, and commercialization purposes.

(b) Unity hereby grants to Ascentage a worldwide, royalty-free, non-exclusive license, with the right to grant sublicenses as provided in Section 2.2, under the Unity Manufacturing Improvements to manufacture or have manufactured BCL-2/BCL-xL inhibitor compounds outside the Field for research, development, and commercialization purposes. Such license shall be subject to the terms and conditions of the Library Agreement, including without limitation, the exclusivity provisions and restrictions on compound development set forth in Article 4 therein.

2.1.3 Commercialization Licenses. Subject to the terms and conditions of this Agreement, Ascentage hereby grants to Unity a royalty-bearing, exclusive license in the Field and the Territory, with the right to grant sublicenses as provided in Section 2.2, under the Licensed Intellectual Property: (a) to use the Licensed Compound to make or have made the Licensed Products; (b) to make or have made Licensed Products and all components thereof (including without limitation, Licensed Compound); and (c) to use, offer for sale, sell, import, export, market, promote and distribute Licensed Compound and Licensed Products; in each case, solely for use in the Field and Territory, and to have any of the foregoing performed on its behalf by a Third Party. For clarity, it is understood and agreed that Unity's right under subsection (b) above to make or have made Licensed Products and all components thereof may only be exercised as (i) contemplated by Article 9, and (ii) permitted under Section 2.1.2(a).

2.2 Sublicenses. Either Party may grant and authorize sublicenses (through multiple tiers of sublicensees) within the scope of the licenses granted to it pursuant to this Agreement subject to the following: (a) the sublicensing Party shall not be relieved of its obligations pursuant to this Agreement as a result of such sublicense and shall remain fully responsible and liable for any action or omission of such sublicensee which would constitute a breach of this

Agreement if committed by the sublicensing Party as if the sublicensing Party had committed such action or inaction itself, (b) the sublicensee shall expressly agree in writing to be bound by and be subject to the terms and conditions of this Agreement in the same manner and to the same extent as the sublicensing Party, (c) the sublicensing Party shall, at its own expense, investigate each report and indication of breach of any of its sublicense agreements, and the sublicensing Party shall promptly report to non-sublicensing Party any breach learned of or discovered by sublicensing Party, (d) the sublicensing Party shall diligently enforce the terms and conditions of each sublicense agreement, including without limitation, by (i) pursuing all appropriate judicial and administrative action and relief in the event of any breach of its sublicense agreement and (ii) upon the non-sublicensing Party's request, terminating the sublicense agreement upon a breach thereof, (e) with the prior written consent of the non-sublicensing Party, not to be unreasonably withheld. For clarity, Unity shall remain responsible for all activities, including milestone and other payments due to Ascentage under this Agreement, by or relating to Unity's sublicensees.

2.3 Third Party Intellectual Property. If after the Effective Date, Ascentage acquires or licenses from a Third Party subject matter that would fall within the Licensed Intellectual Property ("Third Party Intellectual Property") that is subject to any payment obligation to the Third Party, then Ascentage shall so notify Unity and Unity shall inform Ascentage if it wishes such subject matter to be included within the Licensed Intellectual Property. If Unity notifies Ascentage that it does wish such subject matter to be so included, the rights granted to Unity hereunder with respect to such Third Party Intellectual Property shall be subject to Unity promptly reimbursing Ascentage for [***] and Unity shall reimburse Ascentage for [***]. Upon request by Unity, Ascentage shall disclose to Unity a written description of such payment obligations. Notwithstanding the foregoing, Unity shall have the right to treat amounts paid to Ascentage as reimbursements for payments for Enabling IP for purposes of Section 6.5.

2.4 No Implied Licenses. Nothing herein shall be construed as granting Unity, by implication, estoppel or otherwise, any license or other right (a) to any intellectual property of Ascentage other than the Licensed Intellectual Property, (b) to commercialize Licensed Products outside of the Field and Territory, (c) not relating to the Licensed Compound and Licensed Products or (d) any right or license other than those expressly granted herein.

2.5 Exclusivity with Respect to Licensed Compound. Ascentage hereby covenants that except as expressly permitted under any future agreement that the Parties may enter into pursuant to Article 9 below pertaining to the China JVCO, Ascentage shall not: (a) research, develop, use or commercialize, and shall not authorize any Affiliate or other Third Party to research, develop, use or commercialize, the Licensed Compound or any Licensed Product in the Field in the Territory, or (b) manufacture, or authorize any Third Party to manufacture, the Licensed Compound or any Licensed Product in the Field in the Territory.

2.6 [***]. The Parties agree that within [***] of the Effective Date of this Agreement the Joint Steering Committee shall determine whether it is necessary put in place a procedure pursuant to which [***] shall [***] that [***] to [***].

ARTICLE 3
DUE DILIGENCE

3.1 General. Unity shall use commercially reasonable efforts to develop and obtain marketing approval for at least one Licensed Product hereunder, and thereafter shall use commercially reasonable efforts to launch and commercialize each such Licensed Product and to fulfill the market demand therefor.

3.2 Diligence Milestones. Without limiting its general diligence obligations under Section 3.1 above, Unity agrees that it shall achieve the following diligence milestones with respect to the Licensed Compound by the deadlines specified below:

Milestone	Time Period
1.[***]	Within [***] ([***]) [***] of the Effective Date
2.[***]	Within [***] ([***]) [***] of the Effective Date
3.[***]	Within [***] ([***]) [***] of (i) the Effective Date, in the case of the Licensed Compound, or (ii) the date of the Substitution Notice, in the event Unity designates the Back-Up Compound as a Substitute Licensed Compound
4.[***]	Within [***] ([***]) [***] of (i) the Effective Date, in the case of the Licensed Compound, or (ii) the date of the Substitution Notice, in the event Unity designates the Back-Up Compound

If Unity is unable to meet [***], as applicable, by the specified deadline, Unity shall nonetheless be deemed to be in compliance with its diligence obligations hereunder so long as it [***].

3.3 Substitution of Licensed Compound.

3.3.1 General. If Unity elects to discontinue development of a Licensed Compound for [***] reasons, then Unity shall have a right to replace such abandoned Licensed Compound with the Back-up Compound designated in the Designation Letter, together with all salts, hydrates and polymorphic forms of such Back-Up Compound. Following such replacement pursuant to this Section 3.3, the Back-up Compound shall be considered a "Substitute Licensed Compound".

3.3.2 Designation. In the event that Unity wishes to exercise its right under this Article 3 to select a Substitute Licensed Compound, Unity will provide Ascentage with written notice specifying the Licensed Compound for which development is being discontinued and the Back-up Compound that it wishes to replace it with ("Substitution Notice").

3.3.3 Following designation of a Substitute Licensed Compound, the Parties shall promptly update Schedule 1.13 to reflect the substitution of the Substitute Licensed Compound for the current Licensed Compound. Upon any such substitution, all references to the "Licensed Compound" in this Agreement shall thereafter be deemed to refer to such Substitute Licensed Compound, and the compound for which such Substitute Licensed Compound was substituted shall cease to be considered a Licensed Compound.

ARTICLE 4
TECH TRANSFER; MANUFACTURING PROCESS IMPROVEMENTS

4.1 Technology Transfer of Ascentage Manufacturing IP. Subject to the terms and conditions of this Agreement, following the Effective Date (or if applicable, the date Unity elects to substitute the Back-up Compound as a Substitute Licensed Compound) and upon Unity's written request, Ascentage shall conduct or cause to be conducted a customary technology transfer of the then-most current version of the Ascentage Manufacturing IP in a format, scope and manner reasonably deemed by Unity to be sufficient to enable Unity to manufacture the Licensed Compound and Licensed Products (including if applicable, a Substitute Licensed Compound). All written portions of the technology transfer package shall be provided in the English language.

4.2 Disclosure of Manufacturing Process Improvements. Each Party (the "Inventing Party") shall disclose to the other Party (the "Non-Inventing Party") all Manufacturing Process Improvements conceived, discovered, or generated by such Inventing Party which the Inventing Party intends to implement in its own manufacturing processes, including any invention disclosures, or other similar documents submitted to it by its employees, agents or independent contractors describing such inventions as well as any Compound-Related Patents covering such inventions, and shall promptly respond to reasonable requests from the Non-Inventing Party for additional information relating to such inventions. Such disclosures shall be made through the Joint Steering Committee as provided in Section 5.1 herein.

4.3 Technology Transfer of Manufacturing Process Improvements. Upon the written request of the Non-Inventing Party, the Inventing Party shall conduct or cause to be conducted a customary technology transfer of the Manufacturing Process Improvement in a format, scope and manner reasonably deemed by the Non-Inventing Party to be sufficient to enable the Non-Inventing Party to exercise its rights under Section 2.1.2. All written portions of any technology transfer package shall be provided in the English language.

4.4 Technology Transfer Fees. All costs other than document transfer for the technology transfers described in Sections 4.1 and 4.3 above shall be borne by the Non-Inventing Party.

4.5 Process Improvement Records. During the term of this Agreement and for the period of time, if any, thereafter required by applicable law or regulations, the Parties shall maintain records of any use by Third Parties of any Manufacturing Process Improvements owned or Controlled by the other Party. Each sublicensing Party agrees to either: (a) require each of its Third Party Sublicensees to maintain similar records and to open such records for inspection by an independent Third Party, reasonably satisfactory to such non-sublicensing Party for the

purpose of auditing use of Manufacturing Process Improvements hereunder, or (b) obtain such audits rights from the Third Party Sublicensee for the non-sublicensing Party and exercise such audit rights on behalf of the non-sublicensing Party, at such non-sublicensing Party's request and cost and disclose the results thereof to the sublicensing Party.

ARTICLE 5
JOINT STEERING COMMITTEE

5.1 Joint Steering Committee. Ascentage and Unity will establish a committee (the "Joint Steering Committee" or "JSC") to coordinate the Parties activities under this Agreement. The responsibilities of the Joint Research Committee shall consist of:

5.1.1 Facilitating the exchange of information and materials hereunder, including, without limitation, by managing (i) the initial technology transfer of the Ascentage Manufacturing IP under Section 4.1 above, (ii) the disclosure of Manufacturing Process Improvements under Section 4.2 above, and (iii) any subsequent technology transfers under Section 4.3 above;

5.1.2 Determining whether it is necessary to implement a procedure for [***] as set forth in Section 2.6 above and, if it deemed necessary, then managing the implementation of such procedure;

5.1.3 Monitoring and reporting on Unity's due diligence obligations under Article 3 above;

5.1.4 Reviewing and discussing issues that may arise regarding the designation or release of the Back-Up Compound;

5.1.5 Managing the initial, informal mediation of any dispute that arises under this Agreement; and

5.1.6 Assuming such other responsibilities as both parties may mutually agree to delegate to the JSC.

5.2 Membership. The JSC shall include two (2) employees to serve as members of each of Ascentage and Unity, with each Party's members selected by that Party. Ascentage and Unity may each replace its JSC member at any time, upon written notice to the other Party. The chairperson shall serve for a term of one (1) year, beginning on the Effective Date or an anniversary thereof, as the case may be. The right to name the chairperson of the JSC shall alternate between the Parties. The initial chairperson shall be selected by [***]. Neither Party shall have the right to remove a sitting member of the other Party.

5.3 Meetings. The JSC shall meet at least [***], or more frequently as agreed by the parties, at such locations as the parties agree, and will otherwise communicate regularly. With the consent of the parties, other representatives of Ascentage or Unity may attend JSC meetings as nonvoting observers. Each party shall be responsible for all of its own expenses associated with attendance of such meetings.

5.4 Decision Making. With respect to decisions taken on matters placed by either party before the JSC, each Party shall have one vote. Decisions of the JSC shall be made by unanimous approval of the Parties. If the members of the JSC cannot reach an agreement after commercially reasonable efforts to do so, then either Party's representative to the JSC may refer such dispute to the [***] of each Party, who shall meet in person or by telephone within [***] ([***]) days after such referral to attempt in good faith to resolve such dispute.

ARTICLE 6
PAYMENTS

6.1 Equity Grants.

6.1.1 [***]. Upon the [***], Unity shall issue (i) One Hundred Six Thousand Six Hundred Sixty-Seven (106,667) shares of Unity common stock to Ascentage, and (ii) Twenty-Six Thousand Six Hundred Sixty-Six (26,666) shares of Unity common stock to UM, in each case pursuant to a restricted stock issuance agreement substantially in the form set forth on Schedule 5.1.1 hereto and within [***] ([***]) days of date that [***] occurs. For clarity, [***].

6.1.2 [***]. Upon the [***], Unity shall issue to Ascentage and UM the following number of shares of Unity common stock based on how long after the Effective Date of the Library Agreement such [***], in each case pursuant to a restricted stock issuance agreement substantially in the form set forth on Schedule 5.1.1 hereto and within [***] ([***]) days of date that such [***] occurs:

(a) If such [***] occurs within [***] ([***]) [***] of the Effective Date of the Library Agreement, then (i) [***] ([***]) shares of Unity common stock to Ascentage, and (ii) [***] ([***]) shares of Unity common stock to UM.

(b) If such [***] occurs more than [***] ([***]) [***] after the Effective Date of the Library Agreement but less than [***] ([***]) [***] after the Effective Date of the Library Agreement then (i) [***] ([***]) shares of Unity common stock to Ascentage, and (ii) [***] ([***]) shares of Unity common stock to UM.

(c) If such [***] occurs more than [***] ([***]) [***] after the Effective Date of the Library Agreement then (i) [***] ([***]) shares of Unity common stock to Ascentage, and (ii) [***] ([***]) shares of Unity common stock to UM.

6.1.3 Equity Cap. Notwithstanding anything in the contrary in this Agreement, the Library Agreement, the APG-1252 License Agreement or any other Compound License Agreement, the maximum cumulative aggregate number of shares of Unity common stock that Ascentage and UM are collectively eligible to receive under Sections 6.1 and 6.2 of the Library Agreement, Section 5.1 of the APG-1252 License Agreement, this Section 6.1 and Section 5.1 of any other Compound License Agreement is:

(a) [***] ([***]) shares of Unity common stock (as adjusted for stock splits, reverse stock splits, stock dividends, recapitalizations and the like) if only one Licensed Product (as defined in the applicable Compound License Agreement) has been developed (i.e., [***]); and

(b) One Million Three Hundred Thirty Three Thousand Three Hundred and Thirty-Nine (1,333,339) shares of Unity common stock (as adjusted for stock splits, reverse stock splits, stock dividends, recapitalizations and the like) if two or more Licensed Products (as defined in the applicable Compound License Agreement) are developed (i.e., [***).

6.1.4 Fractional Shares. No fractional shares of Unity common stock shall be issued in connection with this Agreement. In lieu of any fractional shares to which Ascentage or UM would be entitled as the result of any stock split, reverse stock split, dividend, recapitalization or the like, Unity shall pay cash equal to such fraction multiplied by the Fair Market Value of a share of common stock.

6.2 Development/Sales Milestones. In partial consideration of the rights and licenses granted herein to Unity, Unity shall pay Ascentage the following milestone payments. For the avoidance of doubt, each development milestone pursuant to this Section 6.2 is across all indications for a Licensed Product, such that Unity shall only have the obligation to pay once for each development milestone for each Licensed Product, regardless of indication.

(a) Within [***] ([***]) days after the first achievement by Unity (or any of its Affiliates or Third Party Sublicensees) of each of the following milestones with respect to the first Licensed Product to achieve such milestone, Unity shall pay Ascentage the corresponding milestone payment set forth below, in accordance with the payment provisions of Article 7 below:

Milestone Event	**Milestone Payment**
1.[***]:	$[***]
2.[***]:	$[***]
3.[***]:	$[***]
4.[***]	$[***]
5.[***]	$[***]
Total per Licensed Product	**$[***]**

(b) Within [***] ([***]) days after the first achievement by Unity (or any of its Affiliates or Third Party Sublicensees) of each of the following milestones with respect to the second and each Licensed Product to achieve such milestone, Unity shall pay Ascentage the corresponding milestone payment set forth below, in accordance with the payment provisions of Article 7 below:

Milestone Event	Milestone Payment
1.[***]:	$[***]
2.[***]:	$[***]
3.[***]:	$[***]
Total per Licensed Product	**$[***]**

6.2.2 Certain Additional Terms.

(a) For clarity, all forms, presentations, formulation and dosage forms of a Licensed Product shall be considered one and the same Licensed Product for purposes of Section 5.1 and this Section 6.2.

(b) If Unity begins development of one Licensed Product and a milestone payment is made under this Section 6.2, and then Unity terminates development of such Licensed Product and begins development of a second Licensed Product, the milestone which was already paid under this Section 6.2 for the abandoned Licensed Product will not be repeated, but the remaining milestone payments hereunder will be due as the second Licensed Product advances. For clarity, it is acknowledged and agreed that should the first Licensed Product be abandoned prior to achieving all of the milestones set forth Section 6.2(a), such remaining unpaid milestones shall become due and payable when first achieved by the next Licensed Product.

(c) In its sole discretion, Unity may elect in lieu of the payment of the milestone payments owing to Ascentage under this Section 6.2, to grant to Ascentage that number of shares of Unity common stock of equivalent value (based on the Fair Market Value of such Unity common stock at the time of such grant).

6.3 Royalties. In partial consideration of the licenses granted herein to Unity, Unity shall pay to Ascentage a running royalty equal to the percentage set forth below on the Net Sales of Licensed Product, subject to any adjustments set forth in Sections 6.5 and 6.6, and in accordance with the payment provisions of Article 7 below.

(a) With respect to Net Sales of the [***] to receive marketing approval, Unity shall pay to Ascentage the royalties set forth below:

Annual Net Sales of Licensed Product	Applicable Royalty Rate
Portion of worldwide annual Net Sales of the Licensed Product less than or equal to [***] Dollars (US$[***])	[***]%
Portion of worldwide annual Net Sales of the Licensed Product over [***] Dollars (US$[***])	[***]%

(b) With respect to Net Sales of the [***] to receive marketing approval, Unity shall pay to Ascentage the royalties set forth below:

Annual Net Sales of Licensed Product	Applicable Royalty Rate
Portion of worldwide annual Net Sales of the Licensed Product less than or equal to [***] Dollars (US$[***])	[***]%
Portion of worldwide annual Net Sales of the Licensed Product over [***] Dollars (US$[***])	[***0]%

6.4 Royalty Term. Unity's obligation to pay royalties on Net Sales of Licensed Product under this Agreement shall continue on a country-by-country and Licensed Product-by-Licensed Product basis until the later of (a) abandonment or expiration of the last Valid Claim that claims the [***] of the Compound contained in such Licensed Product in such country, (b) the date of expiry of any applicable regulatory, pediatric, orphan drug or data exclusivity obtained for such Licensed Product in such country, or (c) ten (10) years after the first commercial sale of the Licensed Product by or under the authority of Unity in any country in the Territory.

6.5 Royalty Stacking. Unity shall be entitled to deduct from the amounts owing to Ascentage under Sections 6.2 and 6.3 above [***] percent ([***]%) of any royalties or other payments made to Third Parties for Enabling IP, provided that (a) the total aggregate amount payable to Ascentage under Sections 6.2 and 6.3 in any [***] may not be reduced to less than [***] percent ([***]%) of the amounts that would otherwise be due Ascentage in such [***], and (b) Unity shall not be entitled to deduct any royalties or other payments made under the Existing Agreements. If, in any [***], Unity is not able to fully recover its [***] percent ([***]%) portion of the payments due to a Third Party, it shall be entitled to carry forward such right of off-set to future [***] with respect to the excess amount.

6.6 Generic Products. If at any time during the term of this Agreement a Generic Product enters the market in any country and has for a period of at least [***] ([***])

consecutive [***] a market share in such country of at least [***] percent ([***]%) of the then combined unit volume of the corresponding Licensed Product (i.e., the Licensed Product containing the same active pharmaceutical ingredient(s) as are present in the Generic Product) and such Generic Product, then Unity's obligation to pay royalties to Ascentage on Net Sales of such Licensed Product in such country shall be reduced to [***] percent ([***]%) of the amounts that would otherwise be due Ascentage under Section 6.3 in such [***].

6.7 Maximum Reduction to Royalties. Notwithstanding anything to the contrary in this Article 6, in no event shall the royalties owing to Ascentage with respect to Net Sales of a Licensed Product in any country be reduced by cumulative operation of Sections 6.5 and 6.6 to less than [***] percent ([***]%) of the amounts that would otherwise be due Ascentage under Section 6.3 in such [***].

6.8 Combination Products. In the event that a Licensed Product is sold for a single price in combination with another therapeutically active pharmaceutical ingredient, or other product or service, for which no royalty would be due hereunder if sold separately, Net Sales from such combination sales, for purposes of calculating the applicable royalty rate and the applicable royalty due under Section 6.3 shall be calculated by multiplying the Net Sales of the combination product by the fraction A/(A + B), where A is the average gross selling price during the previous [***] of the Licensed Product sold separately and B is the gross selling price during the previous [***] of the therapeutically active ingredient, product or service. In the event that separate sales of the Licensed Product or the additional therapeutically active ingredient, product or service were not made during the previous [***], then the Net Sales shall be reasonably allocated between such Licensed Product and such other active ingredient, product or service as agreed upon by the Parties, or failing agreement, determined in accordance with Section 14.1 (Dispute Resolution) below.

6.9 Unity's Covenant. Unity hereby agrees that any shares of common stock issued to Ascentage will not be diluted unless diluted in good faith by Unity on a proportionate basis to the other shares of common stock of Unity outstanding at the time of any such dilution, and subject to the anti-dilution protections as set forth in Unity's certificate of incorporation, as may be amended from time to time in good faith; provided further, that Unity shall not take actions that specifically treat Ascentage differently from other holders of common stock, or issue any capital stock in a manner which is intended to circumvent this covenant. The shares of common stock issued to Ascentage shall be duly adjusted for any bonus issue, share split, consolidation, subdivision, reclassification, recapitalization or similar arrangement of Unity, in each case in accordance with, and as expressly contemplated by, Unity's certificate of incorporation, as may be amended from time to time in good faith.

ARTICLE 7
ACCOUNTING; RECORDS; METHOD OF PAYMENT

7.1 Royalty Reports; Payments, Invoices. After the first sale of a Licensed Product on which royalties are payable by Unity hereunder, Unity shall make quarterly written reports to Ascentage within [***] ([***]) days after the end of each calendar quarter, stating in each such report the number, description, and aggregate Net Sales of Licensed Product sold during the calendar quarter upon which a royalty is payable under Article 6 above. Concurrently with the

making of such reports, Unity shall pay to Ascentage all amounts payable pursuant to Article 6 above, in accordance with the payment provisions of Section 7.3.

7.2 Records; Inspection. During the term of this Agreement and for a period of [***] ([***]) years thereafter, Unity and its Affiliates shall keep complete, true and accurate books of account and records for the purpose of determining the amounts payable to Ascentage under this Agreement. Ascentage shall have the right to cause an independent, certified public accountant reasonably acceptable to Unity to audit such records to confirm gross sales, Net Sales and royalty payments for a period covering not more than the preceding [***] ([***]) years. Unity agrees to either: (a) require each of its Third Party Sublicensees to maintain similar books and records and to open such records for inspection by an independent, certified public accountant reasonably satisfactory to such Third Party Sublicensee, on behalf of, and as required by, Ascentage for the purpose of verifying payments hereunder, or (b) obtain such audits rights from the Third Party Sublicensee for itself and exercise such audit rights on behalf of Ascentage upon Ascentage's request and disclose the results thereof to Ascentage. All such inspections may be made no more than once each calendar year at reasonable times and on reasonable notice. No accounting period of Unity or its Affiliate or Third Party Sublicensee shall be subject to audit more than one time hereunder. Such independent, certified public accountant will be obliged to execute a reasonable confidentiality agreement prior to commencing any such inspection. The results of any inspection hereunder shall be provided to both Parties, and Unity shall pay any underpayment to Ascentage within [***] ([***]) days. Inspections conducted under this Section 7.2 shall be at the expense of Ascentage (and Ascentage will reimburse Unity's reasonable out-of-pocket costs of those inspections conducted by Unity at Ascentage's request under (b) above), unless a variation or error producing an increase exceeding [***] percent ([***]%) of the amount stated for any period is established in the course of any such inspection, whereupon all costs of such audit of such period will be paid by Unity.

7.3 Payment Method. All payments due hereunder shall be made in U.S. dollars, and shall be made by bank wire transfer in immediately available funds to an account designated by Ascentage in a written notice to Unity. If any currency conversion shall be required in connection with the payment of royalties hereunder, such conversion shall be made by using the exchange rates used by Unity in calculating Unity's own revenues for financial reporting purposes.

7.4 Late Payments. Any payments due from Unity that are not paid on the date such payments are due under this Agreement shall bear interest at [***] ([***]%) above the then prevailing US Federal Funds Target Rate (Bloomberg page: FDTR <Index>) per annum calculated on a daily basis and payable for the period from the date payment is due until the date payment is actually made. This Section 7.4 shall in no way limit any other remedies available to any Party.

ARTICLE 8
PATENT PROSECUTION AND ENFORCEMENT

8.1 Prosecution of Patents within the Licensed Intellectual Property.

8.1.1 General.

(a) Except as set forth in Section 8.1.1(b) or Section 8.1.1(c) hereof, Ascentage shall have the sole right to control the preparation, filing, prosecution and maintenance of all Licensed Patents using patent counsel of its choice.

(b) Unity shall have the first right, but not the obligation, to prepare, file, prosecute and maintain Licensed Product-Specific Patents. Unity shall keep Ascentage reasonably informed as to its filing and prosecution strategy for Licensed Product-Specific Patents and the filing, prosecution and maintenance of Licensed Product-Specific Patents with a reasonable opportunity to review drafts of proposed patent office submissions with respect to Licensed Product-Specific Patents; and (ii) consider in good faith the requests and suggestions of Ascentage with respect to strategies for filing and prosecuting such Licensed Product-Specific Patents. In the event that Unity desires to abandon or decline further responsibility for any such Licensed Product-Specific Patent, Unity shall provide reasonable prior written notice to Ascentage of such intention to abandon or decline responsibility, but in no case later than [***] ([***]) days prior to any required action relating to the filing, prosecution or maintenance of such Licensed Product-Specific Patent, and Ascentage shall have the right, at its discretion, to assume such responsibility.

(c) With respect to any Licensed Patent (other than a Licensed Product-Specific Patent) that claims the Licensed Compound and/or Licensed Product, Ascentage shall have the first right, but not the obligation, to prepare, file, prosecute and maintain such Licensed Patent and shall (i) keep Unity reasonably informed as to its filing and prosecution strategy for such Licensed Patent and the filing, prosecution and maintenance of such Licensed Patent, (ii) provide Unity with a reasonable opportunity to review drafts of proposed patent office submissions with respect to such Licensed Patent; and (iii) follow the directions given by Unity with respect to filing and prosecuting such Licensed Patents, unless [***], in which case [***] and [***]. In the event that Ascentage desires to abandon or decline further responsibility for any Licensed Patent, Ascentage shall provide Unity [***] notice and he opportunity to assume responsibility for such Licensed Patent.

8.1.2 For purposes of this Article 8, “prosecution and maintenance” of patents and patent applications shall be deemed to include, without limitation, the conduct of interferences or oppositions, and/or requests for re-examinations, reissues or extensions of patent terms.

8.2 Enforcement of Licensed Patents. If either Party determines that a Third Party is making, using or selling a product that may infringe any Licensed Patent, that Party shall notify the other Party in writing.

8.2.1 Infringement by a Competitive Product.

(a) With respect to any such infringing activity that involves the manufacture, use or sale by a Third Party of any product that [***] ("Competitive Product"), Unity shall have the first right, at its sole option, to bring suit to enforce any Licensed Patent, and/or to defend any declaratory judgment action with respect thereto ("Enforcement Action"); provided, however, that Unity shall keep Ascentage reasonably informed as to the defense and/or settlement of any such Enforcement Action. Ascentage shall have the right to participate in any such Enforcement Action with counsel of its own choice at its own expense. All recoveries received by Unity from an Enforcement Action shall be first applied to reimburse Unity's and then Ascentage's unreimbursed expenses, including without limitation, reasonable attorney's fees and court costs. Any remainder shall, to the extent the same pertains to an infringing activity that involves the manufacture, use or sale by a Third Party of any Competitive Product, be treated as Net Sales.

(b) In the event Unity elects not to initiate an Enforcement Action with respect to any commercially significant infringing activity that involves the manufacture, use or sale by a Third Party of any Competitive Product within [***] ([***]) days of a request by Ascentage to do so ([***]), Ascentage may initiate such action at its expense. Unity shall have the right to participate in any such action with counsel of its own choice at its own expense. All recoveries received by Ascentage from an Enforcement Action shall be first applied to reimburse Ascentage's and then Unity's unreimbursed expenses, including without limitation, reasonable attorney's fees and court costs. Any remainder shall, to the extent the same pertains to an infringement of the Licensed Patents, be split [***].

8.2.2 Other Instances of Infringement. With respect to any such infringing activity that does not involve the manufacture, use or sale by a Third Party of a Competitive Product, Ascentage shall have the sole right, at its sole option, to bring suit to enforce any Licensed Patent, and/or to defend any declaratory judgment action with respect thereto and to retain all recoveries received by Ascentage in connection therewith.

8.3 Infringement Claims Against Unity. If the production, sale or use of a Licensed Product pursuant to this Agreement results in any claim, suit or proceeding alleging patent infringement against Unity (or its Affiliates or sublicensees), Unity shall promptly notify Ascentage thereof in writing setting forth the facts of such claim in reasonable detail. As between the Parties, Unity will be entitled to control the defense in any such action(s). Unity agrees to keep Ascentage reasonably informed of all material developments in connection with any such claim, suit or proceeding as it relates to the Licensed Intellectual Property. Notwithstanding the above, Unity shall not admit the invalidity of any Licensed Patent without written consent from Ascentage.

8.4 Cooperation. In any legal action undertaken by a Party pursuant to Sections 8.2 or 8.3 of this Agreement (the Party bringing or defending such legal action, the "Enforcing Party"), the non-Enforcing Party shall cooperate fully with the Enforcing Party, including without limitation by joining as a party plaintiff if necessary for legal standing and executing such documents as the Enforcing Party may reasonably request. Upon the request of, and at the expense of, the Enforcing Party, the non-Enforcing Party shall make available at reasonable

times and under appropriate conditions all relevant personnel, records, papers, information, samples, specimens and other similar materials in its possession.

8.5 No Implied Obligations. Except as expressly provided in this Article 8, neither Party has any obligation to bring or prosecute actions or suits against any Third Party for patent infringement.

8.6 UM License Agreement. Notwithstanding the foregoing provisions of this Article 8, with respect to the Licensed Patents subject of the UM License Agreement, Unity's rights under this Article 8 shall be limited to the extent of Ascentage's rights to prosecute and enforce such Licensed Patents under the UM License Agreement, provided that (a) with respect to Licensed Product-Specific Patents that have been in-licensed from UM, to the extent the UM License Agreement will not permit Unity to control the prosecution of such patents, Ascentage agrees to (i) share with Unity the information Ascentage receives from UM under Section 7.2 of the UM License Agreement with respect to such patents, (ii) provide Unity with a reasonable opportunity to review and comment upon such information; and (iii) pass along to UM Unity's comments and requested actions, and (b) Ascentage shall at Unity's request and expense cooperate with Unity in order exercise the enforcement rights granted to Ascentage under Section 8.1 of the UM License Agreement, in each case permitted by the UM License Agreement.

ARTICLE 9
OPTION FOR CHINA JOINT VENTURE

9.1 Option for China JVCO. Unity shall grant to Ascentage an option to commercialize Licensed Products in Greater China jointly with Unity through the joint venture entity ("China JVCO") to be established as described in Section 8.2.3 of the Library Agreement.

9.2 Limitation of Obligations; Certain Covenants.

9.2.1 Notwithstanding anything to the contrary, nothing in this Agreement shall be deemed to have granted Unity or any of its sublicensees the right to develop, manufacture, distribute, sell or otherwise commercialize the Licensed Products in Greater China.

9.2.2 Ascentage hereby covenants that it shall not develop, manufacture, distribute, sell or otherwise commercialize the Licensed Compound (including any Licensed Products containing the Licensed Compound) in Greater China except through the China JVCO. In the event of a breach by Ascentage of its obligations under this Section 9.2.2, the [***] and [***], shall [***].

9.2.3 Unity and Ascentage hereby covenant that they shall cooperate with respect to the establishment of the China JVCO, including without limitation by (a) continuing discussions between [***] of Ascentage and Unity regarding the form agreements relating to the JVCO, (b) using commercially reasonable efforts to reach agreement on such form agreements within a reasonable amount of time after the Effective Date, and (c) signing the agreements for establishment of the China JVCO agreed upon [***] of Ascentage and Unity.

ARTICLE 10
CONFIDENTIALITY

10.1 Confidential Information. Except as otherwise expressly provided herein, the parties agree that the receiving party shall not, except as expressly provided in this Article 10, disclose to any Third Party or use for any purpose any information which is disclosed to it by the other party, whether orally or in writing, and identified as confidential ("Confidential Information"), except to the extent that it can be established by the receiving party by competent proof that such information:

(a) Was already known to the receiving party, other than under an obligation of confidentiality, at the time of disclosure;

(b) Was generally available to the public or otherwise part of the public domain at the time of its disclosure to the receiving party;

(c) Became generally available to the public or otherwise part of the public domain after its disclosure and other than through any act or omission of the receiving party in breach of this Agreement;

(d) Was independently developed by the receiving party without reference to information provided by the disclosing party as demonstrated by documented evidence prepared contemporaneously with such independent development; or

(e) Was disclosed to the receiving party, other than under an obligation of confidentiality, by a Third Party who had no obligation to the disclosing party not to disclose such information to others.

10.2 Permitted Use and Disclosures. Each party hereto may use or disclose Confidential Information of the other party to the extent such use or disclosure is reasonably necessary in the following instances: (a) exercising the rights granted to it hereunder (including, in the case of Unity, developing, manufacturing, commercializing and/or sublicensing of Licensed Products) or in carrying out its obligations hereunder; (b) filing or prosecuting Patents as permitted by this Agreement; (c) prosecuting or defending litigation; and (d) complying with applicable court orders or governmental regulations. Notwithstanding the foregoing, in the event a party is required to make a disclosure of the other party's Confidential Information pursuant to clause (c) or (d) of this Section 10.2, it will, except where impracticable, give reasonable advance notice to the disclosing party of such disclosure and use efforts to secure confidential treatment of such information at least as diligent as such party would use to protect its own confidential information, but in no event less than reasonable efforts. In addition, Unity shall have the right to disclose Confidential Information regarding the Licensed Compound or Licensed Products to Third Parties in connection with due diligence or similar investigations, to potential Third Party investors, and others on a need to know basis, in each case under terms of confidentiality that are appropriate for the circumstances, or to the extent required by law.

10.3 Nondisclosure of Terms. Each of the parties hereto agrees not to disclose the terms of this Agreement to any Third Party without the prior written consent of the other party hereto, which consent shall not be unreasonably withheld; provided that a party may disclose the

terms of this Agreement without such consent to such party's attorneys and advisors, to Third Parties in connection with due diligence or similar investigations, to potential Third Party investors, and others on a need to know basis, in each case under terms of confidentiality that are appropriate for the circumstances, or to the extent required by law.

10.4 Public Announcement. Unity may, in its discretion, issue a press release announcing the formation of this Agreement, which shall be substantially in a form approved by Ascentage prior to execution of the Agreement. Except with respect to such initial release or as otherwise required by law, neither party shall issue an additional press release or public announcement relating to this Agreement without the prior written approval of the other party, which shall not be withheld unreasonably. Either party may refer to the license granted under this Agreement in promotional and other communications with prospective customers and investors, subject to the prior written approval of the other party of the form, substance and intended use of such reference, and provided that such disclosure shall not include any technical details or any financial terms of the license. For purposes of clarification, after a party has obtained the other party's written approval of the form, substance and intended use of a particular reference, no further approval of the other party will be required for inclusion of the same reference in future communications that are intended for the same use.

ARTICLE 11
INDEMNIFICATION

11.1 Unity. Unity agrees to indemnify and defend Ascentage and its directors, officers, employees, agents and their respective successors, heirs and assigns (the "Ascentage Indemnitees") against any losses, costs, claims, damages, liabilities or expense (including reasonable attorneys' and professional fees and other expenses of litigation) (collectively, "Liabilities") arising, directly or indirectly out of or in connection with Third Party claims, suits, actions, demands or judgments, to the extent (a) relating to Licensed Products developed, manufactured, used, sold or otherwise distributed by or on behalf of Unity, its Affiliates, sublicensees or other designees (excluding Ascentage, its Affiliates and licensees) including, without limitation, product liability and patent infringement claims, (b) resulting from a breach by Unity of its representations and warranties under this Agreement, or (c) the exercise of its manufacturing license set forth in Section 2.1.2(b), except, in each case, to the extent such Liabilities result from the negligence or intentional misconduct of Ascentage or Ascentage's breach of its representations and warranties under this Agreement.

11.2 Ascentage. Ascentage agrees to indemnify and defend Unity and its directors, officers, employees, agents and their respective heirs and assigns (the "Unity Indemnitees") against any Liabilities arising, directly or indirectly out of or in connection with Third Party claims, suits, actions, demands or judgments, to the extent resulting from (a) a breach by Ascentage of its representations and warranties under this Agreement or (b) the exercise of its manufacturing license set forth in Section 2.1.2(a), except, in each case, to the extent such Liabilities result from the negligence or intentional misconduct of Unity or Unity's breach of its representations and warranties under this Agreement.

11.3 Procedure. In the event that any party intends to claim indemnification under this Article 11 (each such party, an "Indemnitee") it shall promptly notify the other Party in writing

of such alleged Liability. The indemnifying Party shall have the right to control the defense thereof with counsel of its choice as long as such counsel is reasonably acceptable to Indemnitee; provided, however, that any Indemnitee shall have the right to retain its own counsel at its own expense, for any reason, including if representation of any Indemnitee by the counsel retained by the indemnifying Party would be inappropriate due to actual or potential differing interests between such Indemnitee and any other Party reasonably represented by such counsel in such proceeding. The indemnifying Party shall keep the Indemnitee regularly informed of the status of the defense of any action, claim or liability covered by this Article 11 and shall take into consideration the Indemnitee's reasonable comments thereon. The affected Indemnitee shall cooperate with the indemnifying Party and its legal representatives in the investigation of any action, claim or liability covered by this Article 11. The Indemnitee shall not compromise or settle any claim or suit, or voluntarily incur any expense with respect to any such claim or suit, in each case, without the prior written consent of the indemnifying Party, which such Party shall not be required to give. The failure to deliver written notice to the indemnifying Party within a reasonable time after the commencement of any action with respect to any action, claim or liability covered by this Article 11, if prejudicial to its ability to defend such action, shall relieve the indemnifying Party of any liability to the Indemnitee under this Article 11.

ARTICLE 12
REPRESENTATIONS AND WARRANTIES

12.1 General Warranties. Each Party represents and warrants to the other Party that it is a corporation duly organized and validly existing under the laws of the state or country of its incorporation, the execution, delivery and performance of this Agreement by such Party has been duly authorized by all requisite corporate action, and it has the power and authority to execute and deliver this Agreement and to perform its obligations hereunder (including, in the case of Ascentage, granting the rights and licenses described in Article 2).

12.2 Ascentage Warranties. Ascentage represents and warrants on its own behalf and on behalf of its Affiliates that as of the Effective Date:

(a) except as otherwise disclosed to Unity in writing prior to the Effective Date, (i) Ascentage has not received written notice from a Third Party claiming that the Licensed Compound infringes the intellectual property rights of any Third Party, and (ii) Ascentage is not a party to any legal action, suit or proceeding relating to the Licensed Compound.

(b) except as otherwise disclosed to Unity in writing prior to the Effective Date, there are no actual or pending actions, suits or claims, by any Third Party (i) challenging the ownership of the Licensed Compound; or (ii) challenging the validity, effectiveness, enforceability, or ownership of the Licensed Intellectual Property.

(c) except as otherwise disclosed to Unity in writing prior to the Effective Date, the Licensed Patents are subsisting, in force or pending, as the case may be, and are not the subject of any interference, reissue, reexamination, opposition, cancellation or similar administrative proceedings.

(d) except as otherwise disclosed to Unity in writing prior to the Effective Date, Ascentage has not brought a claim alleging an infringement by a Third Party of any of the Licensed Patents and to Ascentage's actual knowledge, there is no actual or alleged infringement by a Third Party of any of the Patents within the Licensed Patents.

(e) there are no Patents: (i) filed by Ascentage and subsequently assigned to Third Party, or (ii) with respect to which Ascentage or its Affiliates have acquired rights from a Third Party (i.e., through in-licenses, cross-licenses or otherwise), in each case that (A) would be required for Unity to research, develop, manufacture, use or commercialize the Licensed Compound and (B) are not included within the Licensed Intellectual Property.

(f) except as otherwise disclosed to Unity in writing prior to the Effective Date, there are no actual or pending suits or claims by any Third Party asserting that the manufacture, use, sale, offer for sale or importing of the Licensed Compound infringes the intellectual property of a Third Party and to Ascentage's knowledge, the development and commercialization of the Licensed Compound would not infringe (i) any issued Patents of any Third Party (other than Patents in-licensed from UM), or (ii) any published Patent claim of any Third Party (other than claims of Patents in-licensed from UM) if such claim were to issue as published.

(g) Ascentage has disclosed to Unity all material agreements with Third Parties in effect as of the Effective Date pursuant to which Licensed Intellectual Property was licensed, acquired or sold, including without limitation all amendments to the UM License Agreement entered into by UM and Ascentage subsequent to the effective date of the UM License Agreement.

(h) Ascentage has not previously granted and will not grant any rights in the Licensed Intellectual Property that are inconsistent with the rights and licenses granted to Unity herein.

12.3 Certain Rights and Obligations under the UM License Agreement.

(a) Ascentage shall not modify, amend or otherwise alter the UM License Agreement to the extent the same would materially and adversely affect Unity's rights under this Agreement.

(b) Ascentage shall not (i) exercise or fail to exercise any right under the UM License Agreement or (ii) provide or fail to provide any consent or approval with respect to any right or obligation under the UM License Agreement, in each case to the extent the same would materially and adversely affect Unity's rights under this Agreement.

(c) Ascentage shall not unilaterally terminate the UM License Agreement.

12.4 Disclaimer. EXCEPT AS OTHERWISE EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER PARTY MAKES ANY REPRESENTATIONS OR EXTENDS ANY WARRANTIES TO THE OTHER PARTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, REGARDING THE LICENSED COMPOUND, LICENSED PRODUCTS OR THE

LICENSED INTELLECTUAL PROPERTY, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT, AND VALIDITY OF LICENSED INTELLECTUAL PROPERTY CLAIMS, ISSUED OR PENDING.

12.5 Limitation of Liability. EXCEPT FOR LIABILITY FOR BREACH OF ARTICLE 10, NEITHER PARTY SHALL BE ENTITLED TO RECOVER FROM THE OTHER PARTY ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES IN CONNECTION WITH THIS AGREEMENT; *provided, however,* that this Section 12.5 shall not be construed to limit either party's indemnification obligations under Article 11.

ARTICLE 13
TERM AND TERMINATION

13.1 Term. The term of this Agreement shall commence on the Effective Date and, unless earlier terminated as provided in this Article 13, shall continue in full force and effect on a country-by-country basis until the expiration of all royalty obligations pursuant to this Agreement for such country, as provided in Section 6.4 above (the "Term"). Unity's license with respect to the Licensed Technology shall survive the expiration (but not an earlier termination) of this Agreement, provided that such license shall thereafter become nonexclusive and fully paid-up.

13.2 Termination for Breach. Either Party may terminate this Agreement in the event that the other Party shall have materially breached or defaulted in the performance of any of its material obligations hereunder, and such breach or default shall have continued for sixty (60) days after written notice of such breach and intent to terminate this Agreement therefor was provided to the breaching Party by the nonbreaching Party. Any such termination shall become effective at the end of such sixty (60) day period unless the breaching Party has cured any such breach or default prior to the expiration of the sixty (60) day period. Notwithstanding the foregoing, if the Party alleged to be in breach of this Agreement in good faith disputes such breach within such sixty (60) day period, the nonbreaching Party shall not have the right to terminate this Agreement unless it has been determined by arbitration pursuant to Section 14.2 that this Agreement was materially breached, and the breaching Party fails to comply with its obligations hereunder within sixty (60) days after such determination.

13.3 Termination by Unity for Convenience. Any provision herein notwithstanding, Unity may terminate this Agreement, in its entirety or as to any particular Patent within the Licensed Patents, or as to any particular Licensed Product, at any time by giving Ascentage at least ninety (90) days prior written notice. From and after the effective date of a termination under this Section 13.3 with respect to a particular Patent in a particular country, such Patent shall cease to be within the Licensed Patents for all purposes of this Agreement, and all rights and obligations of Unity with respect to such Patent(s) shall terminate. From and after the effective date of a termination under this Section 13.3 with respect to a particular Licensed Product, the license granted under Section 2.1 above shall terminate with respect to such Licensed Product, and the same shall cease to be a Licensed Product for all purposes of this Agreement. Upon a termination of this Agreement in its entirety under this Section 13.3, all

rights and obligations of the Parties shall terminate, except as provided in Section 13.4 below. For clarity, Unity shall remain obligated to pay any and all milestone and other payments accrued, due and payable to Ascentage prior to such termination.

13.4 Effect of Termination.

13.4.1 Termination due to Breach by Unity. Upon a termination by Ascentage under Section 13.2 due to an uncured breach by Unity, the licenses granted under Sections 2.1 and 2.2 above shall terminate immediately, subject to Section 13.4.5.

13.4.2 Termination due to Breach by Ascentage. Upon a termination by Unity under Section 13.2 due to an uncured breach by Ascentage, the licenses granted under Sections 2.1.2(b) and 2.2 above shall terminate immediately.

13.4.3 Accrued Obligations. Expiration or any termination of this Agreement for any reason shall not release either Party hereto from any liability which at the time of such expiration or termination has already accrued to such Party or which is attributable to a period prior to such expiration or termination, subject to the terms of this Agreement, nor preclude either Party from pursuing any rights and remedies it may have hereunder or at law or in equity which accrued to it prior to such expiration or termination, subject to the terms of this Agreement.

13.4.4 Sales of Existing Inventory of Licensed Product. In the event this Agreement is terminated for any reason with respect to a Licensed Product after the first approval of an MAA for such Licensed Product, Unity shall provide Ascentage with a written inventory of all quantities of such Licensed Product that Unity and its Affiliates have in stock and, for a period of [***] ([***]) [***] after such termination, Unity and its Affiliates shall have the right to sell or otherwise dispose of such Licensed Product, all subject to the payment to Ascentage of royalties pursuant to Article 6 hereof.

13.4.5 Survival of Sublicenses. Upon termination of this Agreement for any reason, any sublicense granted by Unity hereunder to a Third Party Sublicensee shall survive or terminate in accordance with Section 2.2; provided that for any surviving Third Party Sublicense, such Third Party Sublicensee not only continues to pay to Ascentage the milestones and royalties that would have been due to Ascentage under this Agreement based on such Third Party Sublicensee's activities had this Agreement not terminated but also remain fully responsible and liable for all terms and conditions of such Third Party Sublicense. For clarity, in the event that a Third Party Sublicensee fails to pay to Ascentage the applicable milestones and royalties due to Ascentage based on such Third Party Sublicensee's activities, Ascentage shall be entitled to terminate such surviving sublicense in accordance with the terms of the Third Party Sublicense.

13.4.6 Library Agreement. This Agreement is independent of, and shall not be affected by, the expiration or termination of the Library Agreement, and vice versa.

13.4.7 Survival. Articles 1 (Definitions), 7 (Accounting; Records; Method of Payment), 10 (Confidentiality), 11 (Indemnification), 14 (Dispute Resolution) and 15 (Miscellaneous) and Sections 8.2.1 (with respect to any ongoing Enforcement Action), 12.3, 12.4 and 13.4 shall survive the expiration or termination of this Agreement for any reason. Except as

otherwise provided in this Article 13, all rights and obligations of the parties under this Agreement shall terminate upon the expiration or termination of this Agreement.

ARTICLE 14
DISPUTE RESOLUTION

14.1 Dispute Resolution. If an unresolved dispute arises out of or relates to this Agreement, or the breach thereof, either Party may refer such dispute to the [***] of Unity and Ascentage, who shall meet in person or by telephone within [***] ([***]) days after such referral to attempt in good faith to resolve such dispute. If such matter cannot be resolved by discussion of such officers within such [***] ([***]) days period (as may be extended by mutual agreement), either Party shall be entitled to seek resolution of such dispute pursuant to Section 14.2 below.

14.2 Arbitration. If the parties are unable to resolve a dispute on an issue of interpretation, breach or enforcement of this Agreement, the parties shall refer such dispute to be finally resolved by binding arbitration under the terms of this Section 14.2, except that all disputes with respect to the validity or infringement of Patents shall be subject to applicable federal court jurisdiction and not subject to the terms of this Section 14.2. Whenever a party shall decide to institute arbitration proceedings, it shall give written notice to that effect to the other party. Any such arbitration shall be conducted under the [***] by a panel of three (3) arbitrators in [***]. Each party shall select one (1) arbitrator who is not employed by, or otherwise affiliated with, such party within [***] ([***]) days after the institution of arbitration proceedings, and the two (2) arbitrators so selected shall designate the third arbitrator. The parties shall use their commercially reasonable efforts to conclude the arbitration hearings within [***] ([***]) [***] following the confirmation of the third and presiding arbitrator.

14.3 Injunctive Relief. Each Party shall be free to seek preliminary or permanent injunctive relief, restraining order or degree of specific performance in any court of competent jurisdiction. For avoidance of doubt, any such equitable remedies provided under this Section 14.3 shall be cumulative and not exclusive and are in addition to any other remedies, which either Party may have under this Agreement or applicable law.

ARTICLE 15
MISCELLANEOUS

15.1 Governing Laws. This Agreement and any dispute arising from the construction, performance or breach hereof shall be governed by and construed, and enforced in accordance with, the laws of the state of New York, USA, without reference to conflicts of laws principles.

15.2 Waiver. It is agreed that no waiver by either Party hereto of any breach or default of any of the covenants or agreements herein set forth shall be deemed a waiver as to any subsequent and/or similar breach or default.

15.3 Assignment. This Agreement shall not be assignable by either party without the written consent of the other party hereto, except that either party may assign this Agreement, without such consent, to an entity that acquires all or substantially all of the business or assets of such party to which this Agreement relates, whether by merger, reorganization, acquisition, sale, or otherwise; provided, however, that within [***] ([***]) days of such an assignment, the

assignee shall agree in writing to be bound by the terms and conditions of this Agreement. Subject to the foregoing, this Agreement shall bind and inure to the benefit of each party's successors and permitted assigns.

15.4 Independent Contractors. The relationship of the Parties hereto is that of independent contractors. The Parties hereto are not deemed to be agents, partners or joint venturers of the others for any purpose as a result of this Agreement or the transactions contemplated hereby.

15.5 Compliance with Laws. In exercising their rights under this Agreement, the Parties shall fully comply in all material respects with the requirements of any and all applicable laws, regulations, rules and orders of any governmental body having jurisdiction over the exercise of rights under this license including, without limitation, those applicable to the discovery, development, manufacture, distribution, import and export and sale of Licensed Products pursuant to this Agreement.

15.6 Notices. All notices, requests and other communications hereunder shall be in writing and shall be sent to the address specified below, or at such other address a party may specify in writing, and is deemed received when: (a) if personally delivered, on the day of delivery; or (b) if sent by a commercial delivery service such as Federal Express, DHL or United Parcel Service, in each case with shipment tracking, on the day delivery is confirmed by the tracking service; or (c) sent by e-mail, on the day the email is confirmed received by the receiving party:

If to Unity:	Unity Biotechnology, Inc. 3280 Bayshore Blvd, Suite 100 Brisbane, CA 94005, USA Attention: General Counsel Email: [***]
If to Ascentage prior January 15, 2019:	Ascentage Pharma Group Inc. 9400 Key West Avenue, Suite 220 Rockville, MD 20850 Attention: SVP, Legal Affairs Email: [***]
If to Ascentage after January 15, 2019:	Ascentage Pharma Group Inc. 800 King Farm Boulevard Rockville, MD 20850 Attention: SVP, Legal Affairs Email:[***]

15.7 Severability. In the event that any provision of this Agreement becomes or is declared by a court of competent jurisdiction to be illegal, unenforceable or void, this Agreement shall continue in full force and effect to the fullest extent permitted by law without said provision, and the Parties shall amend the Agreement to the extent feasible to lawfully include

the substance of the excluded term to as fully as possible realize the intent of the Parties and their commercial bargain.

15.8 Advice of Counsel. Unity and Ascentage have each consulted counsel of their choice regarding this Agreement, and each acknowledges and agrees that this Agreement shall not be deemed to have been drafted by one Party or another and will be construed accordingly.

15.9 Performance Warranty. Each Party hereby warrants and guarantees the performance of any and all rights and obligations of this Agreement by its Affiliates, licensees and sublicensees.

15.10 Force Majeure. Neither Party shall lose any rights hereunder or be liable to the other Party for damages or losses (except for payment obligations) on account of failure of performance by the defaulting Party if the failure is occasioned by war, strike, fire, Act of God, earthquake, flood, lockout, embargo, unusual and unexpected governmental intervention, failure of suppliers, or any other reason where failure to perform is beyond the reasonable control and not caused by the negligence, intentional conduct or misconduct of the non-performing Party and such Party has exerted all reasonable efforts to avoid or remedy such force majeure; provided, however, that in no event shall a Party be required to settle any labor dispute or disturbance.

15.11 Complete Agreement. This Agreement with its schedules, together with the Library Agreement and its exhibits, constitutes the entire agreement, both written and oral, between the Parties with respect to the subject matter hereof, and all prior agreements respecting the subject matter hereof, either written or oral, express or implied, shall be abrogated, canceled, and are null and void and of no effect. No amendment or change hereof or addition hereto shall be effective or binding on either of the Parties hereto unless reduced to writing and executed by the respective duly authorized representatives of Unity and Ascentage.

15.12 Headings. The captions to the several Sections and Articles hereof are not a Part of this Agreement, but are included merely for convenience of reference and shall not affect its meaning or interpretation.

15.13 Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed to be an original and all of which together shall be deemed to be one and the same agreement.

15.14 Bankruptcy. All rights and licenses granted under or pursuant to this Agreement by each Party as a licensor are, and shall otherwise be deemed to be, for purposes of (a) Section 365(n) of Title II, U.S. Code (the "Bankruptcy Code"), licenses of rights to "intellectual property" as defined under section 101(35A) of the Bankruptcy Code and (b) any similar provisions under bankruptcy laws outside the United States. The Parties agree that each licensee of such rights under this Agreement, shall retain and may fully exercise all rights and elections it would have in the case of a licensor bankruptcy under the Bankruptcy Code or other similar bankruptcy laws outside the United States. Each Party agrees during the term of this Agreement to create or maintain current copies, or if not amenable to copying, detailed descriptions or other appropriate embodiments, of all such intellectual property licensed to the other Party.

[Signature Page Follows]

IN WITNESS WHEREOF, the Parties hereto have caused their duly authorized representatives to execute this Agreement.

ASCENTAGE PHARMA GROUP CORP. LTD.

By: /s/ Dajun Yang, MD, PhD

Name: Dajun Yang, MD, PhD

Title: Chief Executive Officer

UNITY BIOTECHNOLOGY, INC.

By: /s/ Keith R. Leonard Jr.

Name: Keith R. Leonard Jr.

Title: Chief Executive Officer

SCHEDULES

Schedule 1.8 – Designation Letter
Schedule 1.15 – Licensed Patents
Schedule 5.1.1 – Restricted Stock Issuance Agreement

SCHEDULE 1.8

DESIGNATION LETTER

[copy attached]

[***]

Via DHL and Email
Ascentage Pharma Group Corp. Ltd.
218 Xinghu Street, Building 87, 7th Floor
Suzhou Industrial Park, Suzhou, Jiangsu, 215000
P.R. China
Attention: [***]
Email: [***]

Via Federal Express
Ascentage Pharma Group Inc.
9400 Key West Avenue, Suite 220
Rockville, MD 20850
Attention: [***]

Dear [***]:

I am writing in connection with the Compound Library and Option Agreement by and between Ascentage Pharma Group Corp. Ltd. ("Ascentage") and Unity Biotechnology, Inc. ("UNITY") dated February 2, 2016 (the "Library Agreement"). This letter shall serve as formal notice under Article 3 of the Library Agreement, including without limitation Section 3.3.1, of the following designations:

1. Development Candidate

UNITY designates the Ascentage compound known as APG-1197 (also known as BM-1197 and UBX-1967) having the chemical structure set forth below to be a Development Candidate (as defined in the Library Agreement).

APG-1197 [***]

2. Back-up Compound

UNITY designates the Ascentage compound known as ***] (also known as [***]) having the chemical structure set forth below to be a Back-up Compound (as defined in the Library Agreement).

[***]

As provided in Section 3.3.2(a) of the Library Agreement, we look forward to entering into a Compound License Agreement covering these compounds within [***] ([***]) days.

More importantly, we view this as further validation of the fruitful relationship between our companies and look forward to progressing our development of these compounds in the coming months.

Regards,

/s/ Keith Leonard

Keith Leonard
Chief Executive Officer

CC: [***]
[***]

Schedule 1.8

SCHEDULE 1.15

LICENSED PATENTS

[***]

[***]

SCHEDULE 5.1.1

RESTRICTED STOCK ISSUANCE AGREEMENT

[copy attached]

UNITY BIOTECHNOLOGY, INC.

STOCK ISSUANCE AGREEMENT

This Stock Issuance Agreement (the "**Agreement**") is made as of [●] by and between Unity Biotechnology, Inc., a Delaware corporation (the "**Company**"), and Ascentage Pharma Group Corp Limited (the "**Licensor**").

In consideration of the mutual covenants and representations set forth below, the Company and Licensor agree as follows:

1. *Issuance of the Shares*. Subject to the terms and conditions of this Agreement, the Company agrees to issue to Licensor, and Licensor agrees to acquire from the Company, on the Closing (as defined below) 106,667 shares of the Company's Common Stock, $0.0001 par value per share (the "**Shares**"), as partial consideration for the rights granted by Licensor to Company under that certain Compound License Agreement for APG-1197 dated as of [●] by and between the Company and the Licensor and as required by Section 6.2 of that certain Compound Library and Option Agreement dated February 2, 2016, as amended by the First Amendment dated March 28, 2018, by and between the Company and the Licensor.

2. *Closing*. The transfer of the Shares shall occur at a closing (the "**Closing**") to be held on the date first set forth above, or at any other time mutually agreed upon by the Company and Licensor. The Closing will take place at the principal office of the Company or at such other place as shall be designated by the Company. As promptly after the Closing as practicable, the Company shall issue or deliver to the Licensor evidence of a book entry position evidencing the Shares issued to the Licensor hereunder, registered in the name of the Licensor, or in such nominee name(s) as designated by the Licensor, representing the Shares to be issued by the Licensor at the Closing upon execution and delivery of the License Agreement by the Licensor.

3. *Restrictions on Transfer*.

A. *Investment Representations and Legend Requirements*. The Licensor hereby makes the investment representations listed on **Exhibit A** to the Company as of the date of this Agreement and as of the date of the Closing, and agrees that such representations are incorporated into this Agreement by this reference, such that the Company may rely on them in issuing the Shares. Licensor understands and agrees that the Company shall cause the legends set forth below, or substantially equivalent legends, to be placed upon any certificate(s) evidencing ownership of the Shares, together with any other legends that may be required by the Company or by applicable state or federal securities laws:

> THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR THE SECURITIES LAWS OF ANY STATE, AND MAY NOT BE SOLD, TRANSFERRED, ASSIGNED, PLEDGED OR HYPOTHECATED UNLESS AND UNTIL REGISTERED UNDER SUCH ACT AND/OR APPLICABLE STATE SECURITIES LAWS, OR UNLESS THE COMPANY HAS RECEIVED AN OPINION OF COUNSEL OR OTHER EVIDENCE,

REASONABLY SATISFACTORY TO THE COMPANY AND ITS COUNSEL, THAT SUCH REGISTRATION IS NOT REQUIRED.

B. *Reporting Status*. The Company has timely filed or furnished, as applicable, all reports, schedules, forms, statements and other documents required to be filed or furnished by it with the **SEC** pursuant to the Securities Act or the Securities Exchange Act of 1934, as amended (the "Exchange Act") and the rules and regulations promulgated thereunder (all of the foregoing documents filed with or furnished to the SEC and all exhibits included therein and financial statements, notes and schedules thereto and documents incorporated by reference therein being hereinafter referred to as the "**SEC Documents**")

C. *Rule 144 Requirements*. For purposes of Rule 144(d) promulgated under the Securities Act, as in effect on the Closing, the Company shall, at all times prior to the date of sale or other disposition by the Licensor, use commercially reasonable efforts to timely file all SEC Documents and otherwise timely take all actions necessary to permit the Licensor to sell or otherwise dispose of the Shares pursuant to Rule 144 promulgated under the Securities Act. If the Licensor proposes to sell the Shares in compliance with Rule 144, then, upon the Licensor's written request to the Company, the Company shall furnish to the Licensor, within five (5) Business Days after receipt of such request, a written statement confirming the Company's compliance with the filing and other requirements of Rule 144.

4. *General Provisions*.

A. *Choice of 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. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Agreement (whether brought against a party hereto or its respective affiliates, directors, officers, shareholders, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the State of Delaware. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the State of Delaware for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of this Agreement), and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law.

B. *Integration*. This Agreement, including all exhibits hereto, represents the entire agreement between the parties with respect to the acquisition of the Shares by the Licensor and supersedes and replaces any and all prior written or oral agreements regarding the subject matter of this Agreement including, but not limited to, any representations made during any interviews, relocation discussions or negotiations whether written or oral.

C. *Notices*. Any notice, demand, offer, request or other communication required or permitted to be given by either the Company or the Licensor pursuant to the terms of this Agreement shall be in writing and shall be deemed effectively given the earlier of (i) when received, (ii) when delivered personally, (iii) one business day after being delivered by facsimile (with receipt of appropriate confirmation), (iv) one business day after being deposited with an overnight courier service or (v) four days after being deposited in the U.S. mail, First Class with postage prepaid and return receipt requested, and addressed to the parties at the addresses provided to the Company (which the Company agrees to disclose to the other parties upon request) or such other address as a party may request by notifying the other in writing.

D. *Successors*. Any successor to the Company (whether direct or indirect and whether by purchase, merger, consolidation, liquidation or otherwise) to all or substantially all of the Company's business and/or assets shall assume the obligations under this Agreement and agree expressly to perform the obligations under this Agreement in the same manner and to the same extent as the Company would be required to perform such obligations in the absence of a succession. For all purposes under this Agreement, the term "Company" shall include any successor to the Company's business and/or assets which executes and delivers the assumption agreement described in this section or which becomes bound by the terms of this Agreement by operation of law. Subject to the restrictions on transfer set forth in this Agreement, this Agreement shall be binding upon Licensor and its heirs, executors, administrators, successors and assigns.

E. *Assignment; Transfers*. Except as set forth in this Agreement, this Agreement, and any and all rights, duties and obligations hereunder, shall not be assigned, transferred, delegated or sublicensed by the Licensor without the prior written consent of the Company. Any attempt by the Licensor without such consent to assign, transfer, delegate or sublicense any rights, duties or obligations that arise under this Agreement shall be void. Except as set forth in this Agreement, any transfers in violation of any restriction upon transfer contained in any section of this Agreement shall be void, unless such restriction is waived in accordance with the terms of this Agreement.

F. *Waiver*. Either party's failure to enforce any provision of this Agreement shall not in any way be construed as a waiver of any such provision, nor prevent that party from thereafter enforcing any other provision of this Agreement. The rights granted both parties hereunder are cumulative and shall not constitute a waiver of either party's right to assert any other legal remedy available to it.

G. *Licensor Investment Representations and Further Documents*. The Licensor agrees upon request to execute any further documents or instruments necessary or reasonably desirable in the view of the Company to carry out the purposes or intent of this Agreement, including (but not limited to) the applicable exhibits and attachments to this Agreement.

H. *Severability*. Should any provision of this Agreement be found to be illegal or unenforceable, the other provisions shall nevertheless remain effective and shall remain enforceable to the greatest extent permitted by law.

I. *Rights as Stockholder*. Subject to the terms and conditions of this Agreement, Licensor shall have all of the rights of a stockholder of the Company with respect to the Shares from and after the date that Licensor delivers a fully executed copy of this Agreement (including the applicable exhibits and attachments to this Agreement) and full payment for the Shares to the Company, and until such time as Licensor disposes of the Shares in accordance with this Agreement. Upon such transfer, Licensor shall have no further rights as a holder of the Shares so purchased except (in the case of a transfer to the Company) the right to receive payment for the Shares so purchased in accordance with the provisions of this Agreement, and Licensor shall forthwith cause the certificate(s) evidencing the Shares so purchased to be surrendered to the Company for transfer or cancellation.

J. *Reliance on Counsel and Advisors*. Licensor acknowledges that Latham & Watkins LLP, is representing only the Company in this transaction. Licensor acknowledges that he or she has had the opportunity to review this Agreement, including all attachments hereto, and the transactions contemplated by this Agreement with his or her own legal counsel, tax advisors and other advisors. Licensor is relying solely on his or her own counsel and advisors and not on any statements or representations of the Company or its agents for legal or other advice with respect to this investment or the transactions contemplated by this Agreement.

K. *Counterparts*. This Agreement may be executed in one or more counterparts, each of which will be deemed an original, but all of which together will constitute one and the same agreement. Facsimile copies or electronic portable document format copies of signed signature pages shall be binding originals.

(*Signature page follows*)

The parties represent that they have read this Agreement in its entirety, have had an opportunity to obtain the advice of counsel prior to executing this Agreement and fully understand this Agreement.

COMPANY:

UNITY BIOTECHNOLOGY, INC.

By: _____
Name: Keith R. Leonard Jr.
Title: Chief Executive Officer

The parties represent that they have read this Agreement in its entirety, have had an opportunity to obtain the advice of counsel prior to executing this Agreement and fully understand this Agreement. The Licensor agrees to notify the Company of any change in its address below.

GRANTEE:

ASCENTAGE PHARMA GROUP CORP LIMITED

_____

Name: Dajun Yang, M.D., Ph.D.
Title: Chief Executive Officer

Address:

11/F, AXA Centre 151 Gloucester Road
Wanchai, Hong Kong, China

EXHIBIT A

INVESTMENT REPRESENTATION STATEMENT

GRANTEE	:	ASCENTAGE PHARMA GROUP CORP LIMITED
COMPANY	:	UNITY BIOTECHNOLOGY, INC.
SECURITY	:	COMMON STOCK
AMOUNT	:	106,667 SHARES
DATE	:	[●]

In connection with the acquisition of the 106,667 shares of the Company's Common Stock, $0.0001 par value per share (the "**Shares**"), Ascentage Pharma Group Corp Limited ("Ascentage") as the undersigned, represent to the Company as follows:

1. ***The Company may rely on these representations***. Ascentage understands that the Company's sale of the Shares has not been registered under the Securities Act of 1933, as amended (the "**Securities Act**"), because the Company believes, relying in part on these representations in this document, that an exemption from such registration requirement is available for such sale. Ascentage understands that the availability of this exemption depends upon the representations Ascentage am making to the Company in this document being true and correct.

A. Ascentage has conducted its own due diligence examination of the Company's business, financial condition, results of operations, and prospects and has reviewed the Company's filings with the United States Securities and Exchange Commission (the "SEC"), in each case, to the extent it deems necessary and in a manner sufficient to enable it to evaluate its purchase of the Shares. Ascentage understands that its investment in the Shares involves a high degree of risk. Ascentage has sought such accounting, legal and tax advice as it has considered necessary to make an informed investment decision with respect to its acquisition of the Securities. Ascentage further represents that it has relied solely upon the aforementioned examination, review and evaluation and has not relied on any representation or action made or taken by Seller or any of its affiliates or any of its or their officers, directors or representatives in connection with such Buyer's decision to acquire the Securities, other than those expressly set forth herein. Ascentage understands and agrees that the Company, its affiliates and its and their respective officers, directors and representatives have not made any representation or warranty whatsoever with respect to the business, condition (financial or otherwise), properties, prospects, creditworthiness, status or affairs of the Company, or with respect to the value of the Shares.

2. ***I am purchasing for investment***. Ascentage is purchasing the Shares solely for investment purposes, and not for further distribution. The entire legal and beneficial ownership interest in the Shares is being acquired and shall be held solely for Ascentage's account. Ascentage is not a party to, and do not presently intend to enter into, any contract or other arrangement with any other person or entity involving the resale, transfer, grant of participation with respect to or other distribution of any of the Shares. Its investment intent is not limited to any present intention

to hold the Shares for the minimum capital gains period specified under any applicable tax law, for a deferred sale, for a specified increase or decrease in the market price of the Shares, or for any other fixed period in the future.

3. ***Ascentage can protect its own interests***. Ascentage can properly evaluate the merits and risks of an investment in the Shares and can protect its own interests in this regard, whether by reason of its own business and financial expertise, the business and financial expertise of certain professional advisors unaffiliated with the Company with whom Ascentage have consulted, or my preexisting business or personal relationship with the Company or any of its officers, directors or controlling persons.

4. ***Ascentage is informed about the Company***. Ascentage am sufficiently aware of the Company's business affairs and financial condition to reach an informed and knowledgeable decision to acquire the Shares. Ascentage has had opportunity to discuss the plans, operations and financial condition of the Company with its officers, directors or controlling persons, and have received all information Ascentage deems appropriate for assessing the risk of an investment in the Shares.

5. ***Ascentage is an "accredited investor."*** Ascentage is an Accredited Investor as defined in Rule 501(a) under the Securities Act. Ascentage understands and acknowledges that the Company is offering and selling the Shares in reliance upon an exemption from the registration requirements of the Securities Act and that the Shares are "restricted securities" within the meaning of Rule 144(a)(3) under the Securities Act. Ascentage is not purchasing its portion of the Shares with a view to, or for offer or sale in connection with, any distribution thereof (within the meaning of the Securities Act) that would be in violation of the securities laws of the United States or any state thereof. Ascentage became aware of the offering of Shares by the Company solely by direct contact between itself and the Company or between itself and one or more agents acting on behalf of the Company, with whom it had a pre-existing business relationship. Ascentage did not become aware of the offering or the Shares by any other means, including by any form of general advertising or general solicitation.

6. ***Ascentage recognizes the economic risk***. Ascentage realizes that the acquisition of the Shares involves a high degree of risk, and that the Company's future prospects are uncertain. Ascentage is able to hold the Shares indefinitely if required, and is able to bear the loss of the entire investment in the Shares.

7. ***Ascentage recognizes this is not a general solicitation***. Ascentage understands that the acquisition of the Shares was not the result of any "general solicitation or general advertising" within the meaning contemplated by Rule 502(c) of Regulation D of the Securities Act.

8. ***Ascentage knows that the Shares are restricted securities***. Ascentage understand that the Shares are "restricted securities" in that the Company's sale of the Shares has not been registered under the Securities Act in reliance upon an exemption for non-public offerings. In this regard, Ascentage also understands and agrees that:

A. Ascentage must hold the Shares indefinitely, unless any subsequent proposed resale is registered under the Securities Act, or unless an exemption from registration is otherwise available (such as Rule 144);

B. the Company is under no obligation to register any subsequent proposed resale of

C. the Shares; and the certificate evidencing the Shares will be imprinted with a legend which prohibits the transfer of the Shares unless such transfer is registered or such registration is not required in the opinion of counsel for the Company.

9. ***Ascentage is familiar with Rule 144***. Ascentage is familiar with Rule 144 adopted under the Securities Act, which in some circumstances permits limited public resales of "restricted securities" like the shares acquired from an issuer in a non-public offering. Ascentage understands that its ability to sell the Shares under Rule 144 in the future is uncertain, and may depend upon, among other things: (i) the availability of certain current public information about the Company; (ii) the resale occurring more than a specified period after its acquisition and full payment (within the meaning of Rule 144) for the Shares; and (iii) if Ascentage is an affiliate of the Company (A) the sale 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, as amended, (B) the amount of shares being sold during any three-month period not exceeding the specified limitations stated in Rule 144, and (C) timely filing of a notice of proposed sale on Form 144, if applicable.

10. ***Ascentage knows that Rule 144 may never be available***. Ascentage understands that the requirements of Rule 144 may not be met, and that the Shares may not be saleable under Rule 144, other than through the Company's failure to comply with the requirements of Rule 144. Ascentage further understands that at the time Ascentage wish to sell the Shares, there may be no public market for the Company's stock upon which to make such a sale, or the current public information requirements of Rule 144 may not be satisfied other than through the Company's failure to satisfy such requirements, either of which may preclude it from selling the Shares under Rule 144 even if the relevant holding period had been satisfied.

11. ***Ascentage knows that Ascentage is subject to further restrictions on resale***. Ascentage understands that in the event Rule 144 is not available to it, absent an effective registration under the Securities Act, the Shares may only be offered, sold or otherwise transferred (x) to the Company, (y) outside the United States in accordance with Rule 904 of Regulation S or (z) pursuant to an exemption from registration under the Securities Act,(which may or may not be available), or each of the following: (i) its written notice to the Company containing detailed information regarding the proposed sale, (ii) its providing an opinion of its counsel to the effect that such sale will not require registration, and (iii) the Company notifying Ascentage in writing that its counsel concurs in such opinion. Ascentage understands that although Rule 144 is not

exclusive, the Staff of the SEC has stated that persons proposing to sell private placement securities other than in a registered offering or pursuant to Rule 144 will 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.

12. ***Non-U.S. Investor***. If Ascentage is not a United States person, Ascentage hereby represents that Ascentage is satisfied as to the full observance of the laws of its jurisdiction in connection with any invitation to receive the Shares issuable pursuant to this Agreement, or any use of this Agreement, including the legal requirements within its jurisdiction for the acquisition of the shares pursuant to this Agreement, any foreign exchange restrictions applicable to such receipt or transfer, (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 acquisition, holding, redemption, sale or transfer of such securities. Ascentage's subscription for, and its continued beneficial ownership of the Shares will not violate any applicable securities or other laws of its jurisdiction.

13. ***Principal Place of Business***. The address of its principal place of business is set forth on the signature page below.

By signing below, the undersigned acknowledge their agreement with each of the statements contained in this Investment Representation Statement as of the date first set forth above, and their intent for the Company to rely on such statements in issuing the Shares.

Address of Licensor's Principal Place of Business:

Address:

11/F, AXA Centre 151 Gloucester Road
Wanchai, Hong Kong, China

285 EAST GRAND AVENUE

LEASE

This Lease (the "**Lease**"), dated as of the date set forth in Section 1 of the Summary of Basic Lease Information (the "**Summary**"), below, is made by and between **BAYSIDE AREA DEVELOPMENT, LLC**, a Delaware limited liability company ("**Landlord**"), and **UNITY BIOTECHNOLOGY, INC.**, a Delaware corporation ("**Tenant**").

SUMMARY OF BASIC LEASE INFORMATION

TERMS OF LEASE		DESCRIPTION
1.	Date:	February 28, 2019
2.	Premises (Article 1).	
2.1	Building:	285 East Grand Avenue South San Francisco, CA 94080
2.2	Premises:	Deemed to be approximately 62,655 rentable square feet of space consisting of the entire Building, as further set forth in **Exhibit A** to the Lease.
3.	Lease Term (Article 2).	
3.1	Length of Term:	Approximately ten (10) years.
3.2	Lease Commencement Date:	The later of (i) the earlier to occur of (a) October 1, 2019, and (b) the date upon which Tenant commences to conduct business from the Premises for the Permitted Use (as opposed to accessing the Premises for move-in purposes), and (ii) the date the Premises are "Ready for Occupancy", as defined in the Tenant Work Letter attached hereto as **Exhibit B**.
3.3	Lease Expiration Date:	If the Lease Commencement Date shall be the first day of a calendar month, then the day immediately preceding the tenth (10th) anniversary of the Lease Commencement Date; or, if the Lease Commencement Date shall be other than the first day of a calendar month, then the last day of the month in which the tenth (10th) anniversary of the Lease Commencement Date occurs.

4. Base Rent (Article 3):

Lease Year	Annual Base Rent	Monthly Installment of Base Rent	Approximate Monthly Base Rent per Rentable Square Foot
1*	$3,947,265.00*	$328,938.75*	$5.25
2	$4,082,599.80	$340,216.65	$5.43
3	$4,225,490.79	$352,124.23	$5.62
4	$4,373,382.97	$364,448.58	$5.82
5	$4,526,451.37	$377,204.28	$6.02
6	$4,684,877.17	$390,406.43	$6.23
7	$4,848,847.87	$404,070.66	$6.45
8	$5,018,557.55	$418,213.13	$6.67
9	$5,194,207.06	$432,850.59	$6.91
10	$5,376,004.31	$448,000.36	$7.15

*Note: Tenant shall have no obligation to pay any Base Rent for the Premises attributable to the first two (2) full calendar months of the Lease Term (the "**Base Rent Abatement Period**"); provided, however, Tenant shall be required to pay Tenant's Share of Direct Expenses attributable to such period, as well as for all utilities and other services furnished to the Premises.

5. Tenant Improvement Allowance (**Exhibit B**): $7,831,875.00 (i.e., $125.00 multiplied by 62,655 rentable square feet in the Premises).

6. Tenant's Share (Article 4): One hundred percent (100%).

7. Permitted Use (Article 5): General office, research and development, engineering, laboratory, vivarium, storage and/or warehouse uses, including, but not limited to, administrative offices and other lawful uses reasonably related to or incidental to such specified uses, all consistent with first class life sciences projects located in the South San Francisco, California area that are comparable in age (based on the original construction or the latest major renovation), location, quality of construction, services and amenities to the Building ("**Comparable Buildings**").

8. Letter of Credit (Article 21): $896,000.72.

9.	Parking (Article 28):	2.6 unreserved parking spaces for every 1,000 rentable square feet of the Premises (which based on the rentable square feet of the Premises is 163 parking spaces). Such parking spaces are located in the on-site parking facilities which serve the Project and shall be without additional charge.
10.	Address of Tenant (Section 29.18):	Prior to the Lease Commencement Date: Unity Biotechnology, Inc. 3280 Bayshore Boulevard, Suite 100 Brisbane, CA 94005 Attention: General Counsel With a copy to: legal@unitybiotechnology.com After the Lease Commencement Date: Unity Biotechnology, Inc. 285 East Grand Avenue South San Francisco, CA 94080 Attention: General Counsel With a copy to: legal@unitybiotechnology.com
11.	Address of Landlord (Section 29.18):	See Section 29.18 of the Lease.
12.	Broker(s) (Section 29.24):	CBRE, Inc. (representing Landlord) and Cornish & Carey Commercial dba Newmark Knight Frank (representing Tenant)

1. PREMISES, BUILDING, PROJECT, AND COMMON AREAS

1.1 **Premises, Building, Project and Common Areas**.

1.1.1 **The Premises**. Landlord hereby leases to Tenant and Tenant hereby leases from Landlord the premises set forth in Section 2.2 of the Summary (the "**Premises**"). The outline of the Premises is set forth in **Exhibit A** attached hereto. The outline of the "Building" and the "Project," as those terms are defined in Section 1.1.2 below, are further depicted on the Site Plan attached hereto as **Exhibit A-1**. The parties hereto agree that the lease of the Premises is upon and subject to the terms, covenants and conditions herein set forth, and each of Tenant and Landlord hereby covenants as a material part of the consideration for this Lease to keep and perform each and all of such terms, covenants and conditions by it to be kept and performed and that this Lease is made upon the condition of such performance. The parties hereto hereby acknowledge that the purpose of **Exhibit A** is to show the approximate location of the Premises only, and such Exhibit is not meant to constitute an agreement, representation or warranty as to the construction of the Premises, the precise area thereof or the specific location of the "Common Areas," as that term is defined in Section 1.1.3, below, or the elements thereof or of the accessways to the Premises or the "Project," as that term is defined in Section 1.1.2, below. Except as specifically set forth in this Lease and in the Tenant Work Letter attached hereto as **Exhibit B** (the "**Tenant Work Letter**"), Landlord shall not be obligated to provide or pay for any improvement work or services related to the improvement of the Premises. Tenant also acknowledges that neither Landlord nor any agent of Landlord has made any representation or warranty regarding the condition of the Premises, the Building or the Project or with respect to the suitability of any of the foregoing for the conduct of Tenant's business, except as specifically set forth in this Lease and the Tenant Work Letter. The taking of possession of the Premises by Tenant shall conclusively establish that the Premises and the Building were at such time in good and sanitary order, condition and repair, subject to latent defects, the terms and conditions of this Lease and the Tenant Work Letter (including without limitation, Landlord's obligations with respect to any "Punch List Work," as that term is defined in the Tenant Work Letter, and Landlord's express maintenance and repair obligations under this Lease). Landlord shall deliver exclusive possession of the Building and Premises to Tenant, including the Building Structure (as that term is defined in Section 7.4 below), in good working condition and repair, with the roof and roof membrane watertight, with the existing "Building Systems", as defined in Section 7.1, below, including without limitation HVAC, electrical, lighting, plumbing, ceiling tiles, structural integrity, roof and roof membrane, fire protection system, parking facilities and landscape irrigation (but excluding all laboratory services, process utilities and emergency generator), the Tenant Improvements and the Common Areas, in good working condition, and in compliance with all "Applicable Laws" (as that term is defined in Article 24 below) existing as of the Lease Commencement Date, including, without limitation, the Americans with Disabilities Act of 1990, to the extent required to allow the legal occupancy of the Premises (the "**Delivery Condition**"). Notwithstanding the foregoing, Tenant shall accept all laboratory services, process utilities and emergency generator in their presently existing, as-is condition and Tenant shall be solely responsible for all costs related to their conditional use.

1.1.2 **The Building and The Project**. The Premises constitutes the entire building set forth in Section 2.1 of the Summary (the "**Building**"). The Building comprises the office/laboratory project currently known as Britannia Modular Labs II." The term "**Project**," as used in this Lease, shall mean (i) the Building and the Common Areas, (ii) the land (which is improved with landscaping, parking facilities and other improvements) upon which the Building and the Common Areas are located, and (iii) at Landlord's discretion, any additional real property, areas, land, buildings or other improvements added thereto outside of the Project.

1.1.3 **Common Areas**. Tenant shall have the non-exclusive right to use in common with other tenants in the Project, and subject to the rules and regulations referred to in Article 5 of this Lease, those portions of the Project which are provided, from time to time, for use in common by Landlord, Tenant and any other tenants of the Project (such areas, together with such other portions of the Project designated by Landlord, in its discretion, are collectively referred to herein as the "**Common Areas**"). Landlord shall maintain and operate the Common Areas in good condition and repair and consistent with the manner in which common areas are maintained in "Comparable Buildings" (as that term is defined in Section 7 of the Summary)) and the use thereof shall be subject to such reasonable and non-discriminatory rules, regulations and restrictions as Landlord may make from time to time and provide to Tenant in writing. Landlord reserves the right to close temporarily, make alterations or additions to, in accordance with the terms of Section 29.29 below, or change the location of elements of the Project (other than the Premises) and

the Common Areas, provided that the same do not materially and adversely interfere with Tenant's use of or access to the Premises or the parking facilities serving the Project.

1.2 **Rentable Square Feet of Premises**. The rentable square footage of the Premises is hereby deemed to be as set forth in Section 2.2 of the Summary, and shall not be subject to measurement or adjustment during the Lease Term.

2. LEASE TERM; OPTION TERM

2.1 **Lease Term**. The terms and provisions of this Lease shall be effective as of the date of this Lease. The term of this Lease (the "**Lease Term**") shall be as set forth in Section 3.1 of the Summary, shall commence on the date set forth in Section 3.2 of the Summary (the "**Lease Commencement Date**"), and shall terminate on the date set forth in Section 3.3 of the Summary (the "**Lease Expiration Date**") unless this Lease is sooner terminated or extended as hereinafter provided. As used in this Lease, the term "Lease Term" shall include any extension term pursuant to Section 2.2 below or otherwise. For purposes of this Lease, the term "**Lease Year**" shall mean each consecutive twelve (12) month period during the Lease Term; provided if the Lease Commencement Date shall be other than the first day of a calendar month, the first Lease Year shall include the partial month during which the Lease Commencement Date occurs plus the immediately following consecutive twelve (12) month period. Within the first one hundred twenty (120) days of the Lease Term, Landlord shall deliver to Tenant a notice in the form as set forth in **Exhibit C**, attached hereto, as a confirmation only of the information set forth therein, which Tenant shall execute and return to Landlord within fifteen (15) days of receipt thereof assuming the same is factually correct. Notwithstanding the foregoing, if Landlord has not delivered possession of the Premises to Tenant Ready for Occupancy, (1) on or before January 31, 2020, then, as Tenant's sole remedy for such delay (except as set forth in subsections (2) and (3) below), Tenant shall be entitled to one (1) day of abatement of Rent for every two (2) days that the delivery date is delayed beyond such date (which abatement shall be in addition to the abatement set forth in Section 4 of the Summary), (2) on or before February 29, 2020, then, as Tenant's sole remedy for such delay (except as set forth in subsection (3) below), Tenant shall be entitled to one (1) day of abatement of Rent for each day that the delivery date is delayed beyond such date (which abatement shall be in addition to the abatement set forth in Section 4 of the Summary), or (3) March 31, 2020, then, as Tenant's sole remedy for such delay (except as set forth in subsections (1) and (2) above), Tenant shall also have the right to terminate this Lease by written notice thereof to Landlord, whereupon any monies previously paid by Tenant to Landlord shall be reimbursed to Tenant and the parties shall be relieved of all obligations under this Lease. The foregoing dates in subsections (1), (2) and (3) shall be extended to the extent of any delays in delivery of possession caused by (i) Tenant Delay, as that term is defined in Section 1(j) of the Tenant Work Letter, and the foregoing date in subsection (3) shall be extended to the extent of any delays in delivery of possession caused by "Unavoidable Delays", as that term is defined in Section 1(l) of the Tenant Work Letter (provided that any such delay due to Unavoidable Delays shall not extend such date by more than forty five (45) days in the aggregate). If Landlord contends that a delay in delivery of possession due to Unavoidable Delays has occurred, Landlord shall notify Tenant in writing of the event that constitutes Unavoidable Delay and the date upon which the Unavoidable Delay is anticipated to end, and the delay due to Unavoidable Delay shall not be deemed to have occurred until the date of Tenant's receipt of such notice. Landlord shall use commercially reasonable efforts to mitigate any Unavoidable Delay.

2.2 **Option Term**.

2.2.1 **Option Right**. Landlord hereby grants the Tenant originally named in this Lease (the "**Original Tenant**"), and any assignee of Original Tenant's entire interest in the Lease that has been approved or deemed approved in accordance with the terms of Article 14, below or any assignee of Original Tenant's entire interest in the Lease who does not require Landlord's consent under Article 14 below (a "**Permitted Assignee**"), one (1) option to extend the Lease Term for a period of eight (8) years (the "**Option Term**"). Such option to extend shall be exercisable only by written notice (the "**Option Exercise Notice**") delivered by Tenant to Landlord not more than twelve (12) months nor less than nine (9) months prior to the expiration of the initial Lease Term, stating that Tenant is thereby irrevocably exercising its option to lease the Premises during the Option Term. Upon the proper exercise of the option to extend, and provided that, at Landlord's option, as of the date of delivery of such notice, Tenant is not in monetary or material non-monetary default under this Lease (beyond the applicable notice and cure periods) and has not previously been in monetary or material non-monetary default under this Lease (beyond the applicable notice

and cure periods) more than once during the prior eighteen (18)-month period, and as of the end of the initial Lease Term, Tenant is not in monetary or material non-monetary default under this Lease (beyond the applicable notice and cure periods), the Lease Term shall be extended for a period of eight (8) years on all of the terms and conditions set forth in this Lease, except that the Base Rent payable during the Option Term shall be determined as set forth in this Section 2.2. The rights contained in this Section 2.2 shall be personal to Original Tenant and any Permitted Assignee (and not any other assignee, sublessee or "Transferee," as that term is defined in Section 14.1, below, of Tenant's interest in this Lease). In the event that Tenant fails to timely and appropriately exercise its option to extend the Lease Term in accordance with the terms of this Section 2.2, then such option shall automatically terminate and shall be of no further force or effect.

2.2.2 **Option Rent**. The Base Rent payable by Tenant during the Option Term (the "**Option Rent**") shall be equal to the "Fair Rental Value," as that term is defined below, for the Premises as of the commencement date of the Option Term. The "**Fair Rental Value**," as used in this Lease, shall be equal to the annual base rent per rentable square foot (considering any "base year" or "expense stop" applicable thereto), including all escalations, at which tenants (pursuant to leases consummated within the twelve (12) month period preceding the first day of the Option Term), are leasing non-sublease, non-encumbered, non-equity space which is not significantly greater or smaller in size than the subject space, for a comparable lease term, in an arm's length transaction, which comparable space is located in the Building or in "Comparable Buildings," as that term is defined in Section 7 of the Summary (transactions satisfying the foregoing criteria shall be known as the "**Comparable Transactions**"), taking into consideration the following concessions (the "**Concessions**"): (a) rental abatement concessions, if any, being granted such tenants in connection with such comparable space; (b) tenant improvements or allowances provided or to be provided for such comparable space, and taking into account the value, if any, of the existing improvements in the subject space, such value to be based upon the age, condition, design, quality of finishes and layout of the improvements; and (c) other reasonable monetary concessions being granted such tenants in connection with such comparable space. The Concessions (A) shall be reflected in the effective rental rate (which effective rental rate shall take into consideration the total dollar value of such Concessions as amortized on a straight-line basis over the applicable term of the Comparable Transaction (in which case such Concessions evidenced in the effective rental rate shall not be granted to Tenant)) payable by Tenant, or (B) at Landlord's election and with Tenant's reasonable approval, all such Concessions shall be granted to Tenant in kind.

2.2.3 **Determination of Option Rent**. In the event Tenant timely and appropriately exercises its option to extend the Lease Term for the Option Term, Landlord shall notify Tenant of Landlord's good faith determination of the Option Rent ("**Landlord's Option Rent Determination**") on or before the date that is thirty (30) days following Landlord's receipt of the Option Exercise Notice. If Tenant, on or before the date which is thirty (30) days following the date upon which Tenant receives Landlord's Option Rent Determination, in good faith objects to Landlord's Option Rent Determination, then Landlord and Tenant shall attempt to agree upon the Option Rent using their good-faith efforts. If Landlord and Tenant fail to reach agreement within thirty (30) days following Tenant's objection to Landlord's Option Rent Determination (the "**Outside Agreement Date**"), then each party shall thereafter make a separate determination of the Option Rent, within five (5) business days of the Outside Agreement Date, and such determinations shall be submitted to arbitration in accordance with Sections 2.2.3.1 through 2.2.3.7, below. If Tenant fails to object to Landlord's Option Rent Determination within the time period set forth herein, then Tenant shall be deemed to have rejected Landlord's Option Rent Determination, and the matter shall be submitted to arbitration in accordance with the terms hereof.

2.2.3.1 Landlord and Tenant shall each appoint one arbitrator who shall be, at the option of the appointing party, a MAI appraiser or a real estate broker, who shall have been active over the five (5) year period ending on the date of such appointment in the leasing or appraisal, as the case may be, of life science properties in South San Francisco, California. Each such arbitrator shall be appointed within twenty (20) days after the Outside Agreement Date. Landlord and Tenant may consult with their selected arbitrators prior to appointment and may select an arbitrator who is favorable to their respective positions. The arbitrators so selected by Landlord and Tenant shall be deemed "**Advocate Arbitrators**."

2.2.3.2 The two (2) Advocate Arbitrators so appointed shall be required by Landlord and Tenant within ten (10) days of the date of the appointment of the last appointed Advocate Arbitrator to agree upon and appoint a third arbitrator ("**Neutral Arbitrator**") who shall be qualified under the same criteria set forth

hereinabove for qualification of the two Advocate Arbitrators, except that neither the Landlord or Tenant or either parties' Advocate Arbitrator may, directly or indirectly, consult with the Neutral Arbitrator prior or subsequent to his or her appointment. The Neutral Arbitrator shall be retained via an engagement letter jointly prepared by Landlord's counsel and Tenant's counsel.

2.2.3.3 The Neutral Arbitrator shall, within thirty (30) days of his/her appointment, reach a decision as to whether Landlord's or Tenant's submitted Option Rent is closest to the Fair Rental Value, and simultaneously publish a ruling indicating whether Landlord's or Tenant's determination of Option Rent is closest to the Fair Rental Value as determined by such Neutral Arbitrator. The determination of the Neutral Arbitrator shall be limited solely to the issue of whether Landlord's or Tenant's submitted Option Rent is the closest to the actual Fair Rental Value, taking into account the requirements of Section 2.2.2 of this Lease, as determined by the arbitrators.

2.2.3.4 The decision of the Neutral Arbitrator shall be binding upon Landlord and Tenant.

2.2.3.5 If either Landlord or Tenant fails to appoint an Advocate Arbitrator within twenty (20) days after the Outside Agreement Date, then either party may petition the presiding judge of the Superior Court of San Francisco County to appoint such Advocate Arbitrator subject to the criteria in Section 2.2.3.1 of this Lease, or if he or she refuses to act, either party may petition any judge having jurisdiction over the parties to appoint such Advocate Arbitrator.

2.2.3.6 If the two (2) Advocate Arbitrators fail to agree upon and appoint the Neutral Arbitrator within ten (10) days after the appointment of the last appointed Advocate Arbitrator, then either party may petition the presiding judge of the Superior Court of San Francisco County to appoint the Neutral Arbitrator, subject to criteria in Section 2.2.3.2 of this Lease, or if he or she refuses to act, either party may petition any judge having jurisdiction over the parties to appoint such arbitrator.

2.2.3.7 Each party shall pay the fees and expenses of the Advocate Arbitrator it appoints, and each party shall pay fifty percent (50%) of the fees and expenses of the Neutral Arbitrator.

2.2.4 In the event that the Option Rent shall not have been determined pursuant to the terms hereof prior to the commencement of the Option Term, Tenant shall be required to pay as Option Rent, the Base Rent payable by Tenant as of the expiration of the initial Lease Term, and upon the final determination of the Option Rent, the payments made by Tenant shall be reconciled with the actual amounts of Option Rent due, and the appropriate party shall make any corresponding payment to the other party.

3. BASE RENT Tenant shall pay, without prior notice or demand, to Landlord or Landlord's agent at the management office of the Project, or, at Landlord's option, at such other place within the continental United States as Landlord may from time to time designate in writing, by a check for currency which, at the time of payment, is legal tender for private or public debts in the United States of America, base rent ("**Base Rent**") as set forth in Section 4 of the Summary, payable in equal monthly installments as set forth in Section 4 of the Summary in advance on or before the first day of each and every calendar month during the Lease Term, without any setoff or deduction whatsoever, except to the extent otherwise expressly provided in this Lease. The Base Rent for the third (3rd) full month of the Lease Term shall be paid at the time of Tenant's execution of this Lease. If any Rent payment date (including the Lease Commencement Date) falls on a day of the month other than the first day of such month or if any payment of Rent is for a period which is shorter than one month, the Rent for any fractional month shall accrue on a daily basis for the period from the date such payment is due to the end of such calendar month or to the end of the Lease Term at a rate per day which is equal to 1/365 of the applicable annual Rent. All other payments or adjustments required to be made under the terms of this Lease that require proration on a time basis shall be prorated on the same basis.

4. ADDITIONAL RENT

4.1 **General Terms**.

4.1.1 **Direct Expenses; Additional Rent**. In addition to paying the Base Rent specified in Article 3 of this Lease, commencing on the Lease Commencement Date Tenant shall pay "**Tenant's Share**" of the

annual "**Direct Expenses**," as those terms are defined in Sections 4.2.6 and 4.2.2 of this Lease, respectively. Such payments by Tenant, together with any and all other amounts payable by Tenant to Landlord pursuant to the terms of this Lease, are hereinafter collectively referred to as the "**Additional Rent**", and the Base Rent and the Additional Rent are herein collectively referred to as "**Rent**." All amounts due under this Article 4 as Additional Rent shall be payable for the same periods and in the same manner as the Base Rent. Without limitation on other obligations of Tenant which survive the expiration of the Lease Term, the obligations of Tenant to pay the Additional Rent provided for in this Article 4 shall survive the expiration of the Lease Term.

4.1.2 **Triple Net Lease**. Landlord and Tenant acknowledge that, except as otherwise provided to the contrary in this Lease, it is their intent and agreement that this Lease be a "**TRIPLE NET**" lease and that as such, the provisions contained in this Lease are intended to pass on to Tenant or reimburse Landlord for the costs and expenses reasonably associated with this Lease, the Building and the Project, and Tenant's operation therefrom. To the extent such costs and expenses payable by Tenant cannot be charged directly to, and paid by, Tenant, such costs and expenses shall be paid by Landlord but reimbursed by Tenant as Additional Rent.

4.2 **Definitions of Key Terms Relating to Additional Rent**. As used in this Article 4, the following terms shall have the meanings hereinafter set forth:

4.2.1 Intentionally Deleted.

4.2.2 "**Direct Expenses**" shall mean "**Operating Expenses**" and "**Tax Expenses**."

4.2.3 "**Expense Year**" shall mean each calendar year in which any portion of the Lease Term falls, through and including the calendar year in which the Lease Term expires, provided that Landlord, upon notice to Tenant, may change the Expense Year from time to time to any other twelve (12) consecutive month period, and, in the event of any such change, Tenant's Share of Direct Expenses shall be equitably adjusted for any Expense Year involved in any such change.

4.2.4 "**Operating Expenses**" shall mean all expenses, costs and amounts of every kind and nature which Landlord pays or accrues during any Expense Year because of or in connection with the ownership, management, maintenance, security, repair, replacement, restoration or operation of the Project, or any portion thereof. Without limiting the generality of the foregoing, Operating Expenses shall specifically include any and all of the following: (i) the cost of supplying all utilities (excluding any utilities directly payable by Tenant pursuant to Article 6 or by another tenant or occupant of the Project), the cost of operating, repairing, maintaining, and renovating the utility, telephone, mechanical, sanitary, storm drainage, and elevator systems, and the cost of maintenance and service contracts in connection therewith; (ii) the cost of licenses, certificates, permits and inspections and the cost of contesting any governmental enactments which may increase Operating Expenses, and the costs incurred in connection with a governmentally mandated transportation system management program or similar program; (iii) premiums for insurance required to be carried by Landlord with respect to the Project and Premises under this Lease, and reasonable and customary deductible amounts under such insurance policies not exceeding deductible amounts generally obtained by owners of Comparable Buildings (and if such deductible amounts are in excess of $75,000.00 and are used to fund capital expenditures, the deductibles shall be amortized over the useful life of the capital expenditure as Landlord shall reasonably determine in accordance with sound real estate management and accounting practices consistently applied by owners of Comparable Buildings); (iv) the cost of landscaping, relamping, and all supplies, tools, equipment and materials used in the operation, repair and maintenance of the Project, or any portion thereof; (v) the cost of parking area operation, repair, restoration, and maintenance; (vi) subject to item (s) below, fees and other costs, including management and/or incentive fees, consulting fees, legal fees and accounting fees, of all contractors and consultants in connection with the management, operation, maintenance and repair of the Project; (vii) subject to item (m) below the fair rental value of any management office space; (viii) subject to item (f), below, wages, salaries and other compensation and benefits, including taxes levied thereon, of all persons engaged in the operation, maintenance and security of the Project; (ix) costs under any instrument pertaining to the sharing of costs by the Project, but only to the extent that such cost sharing is non-discriminatory and commercially reasonable; (x) subject to item (xiii) below, operation, repair, maintenance and replacement of all systems and equipment and components thereof of the Project; (xi) the cost of janitorial, alarm, security and other services, replacement of wall and floor coverings, ceiling tiles and fixtures in Common Areas, maintenance and replacement of curbs and walkways, repair

to roofs (including roof membrane) and re-roofing (subject to amortization (including interest on the amortized cost at a commercially reasonable interest rate) over the useful life of the new roof as Landlord shall reasonably determine in accordance with sound real estate management and accounting practices consistently applied by owners of Comparable Buildings); (xii) amortization (including commercially reasonable interest on the unamortized cost) over such period of time as Landlord shall reasonably determine in accordance with sound real estate management and accounting practices consistently applied by owners of Comparable Buildings, of the cost of acquiring or the rental expense of personal property used in the maintenance, operation and repair of the Project, or any portion thereof; (xiii) the cost of capital improvements or other costs incurred in connection with the Project (A) which are intended to effect economies in the operation or maintenance of the Project, or any portion thereof, or to reduce current or future Operating Expenses or to enhance the safety or security of the Project or its occupants, in each case only to the extent of the cost savings reasonably anticipated to result therefrom, (B) that are required to comply with mandatory conservation programs, (C) that are required under any Applicable Law first enacted or enforced after the Lease Commencement Date, or (D) which are repairs, replacements or modifications to the Building Systems (as defined in Section 7.1, below); provided, however, that if any such cost described in (A), (B), (C) or (D) above is a capital expenditure, such cost shall be amortized (including interest on the amortized cost at a commercially reasonable interest rate) over the useful life of the applicable capital item as Landlord shall reasonably determine in accordance with sound real estate management and accounting practices consistently applied by owners of Comparable Buildings; (xiv) costs, fees, charges or assessments imposed by, or resulting from any mandate imposed on Landlord by, any federal, state or local government for fire and police protection, trash removal, community services, or other services which do not constitute "Tax Expenses" as that term is defined in Section 4.2.5, below; provided, however, that if any such cost described in this subsection (xiv) is a capital expenditure, such cost shall be amortized (including interest on the amortized cost at a commercially reasonable interest rate) over the useful life of the applicable capital item as Landlord shall reasonably determine in accordance with sound real estate management and accounting practices consistently applied by owners of Comparable Buildings, and (xv) payments under any easement, license, operating agreement, declaration, restrictive covenant, or instrument pertaining to the sharing of costs by the Building, including, without limitation, any covenants, conditions and restrictions affecting the property, and reciprocal easement agreements affecting the property, any parking licenses, and any agreements with transit agencies affecting the Property (collectively, "**Underlying Documents**"), provided the allocation of such costs is made on a commercially reasonable and non-discriminatory basis. Landlord shall not collect more than one hundred percent of any Operating Expense or any Operating Expense more than once. Notwithstanding the foregoing, for purposes of this Lease, Operating Expenses shall not, however, include:

(a) costs, including legal fees, space planners' fees, advertising and promotional expenses (except as otherwise set forth above), and brokerage fees incurred in connection with the original construction or development or to correct any defect in the original construction or development of the Project, or original or future leasing of the Project, and costs, including permit, license and inspection costs, incurred with respect to the installation of tenant improvements made for tenants occupying space in the Project or incurred in renovating or otherwise improving, decorating, painting or redecorating vacant space for tenants or other occupants of the Project (excluding, however, such costs relating to any Common Areas of the Project or parking facilities that generally benefit all tenants);

(b) except as set forth in items (xii), (xiii), and (xiv) above, depreciation, interest and principal payments on mortgages and other debt costs, if any, penalties and interest and costs of capital expenditures, improvements, repairs or alterations;

(c) costs for which the Landlord is entitled to be reimbursed by any tenant or occupant of the Project or by insurance by its carrier (or would be subject to reimbursement in the event Landlord fails to carry the insurance coverage required under this Lease) or any tenant's carrier or by anyone else, and electric power or other utility costs for which any tenant directly contracts with the local public service company;

(d) any bad debt loss, rent loss, or reserves for bad debts or rent loss or other reserves of any kind;

(e) costs associated with the operation of the business of the partnership or entity which constitutes the Landlord, as the same are distinguished from the costs of operation of the Project (which shall specifically include, but not be limited to, accounting costs associated with the operation of the Project). Costs associated with the operation of the business of the partnership or entity which constitutes the Landlord include costs of partnership accounting and legal matters, costs of defending any lawsuits with any mortgagee (except as the actions of the Tenant may be in issue), costs of selling, syndicating, financing, mortgaging or hypothecating any of the Landlord's interest in the Project, and costs incurred in connection with any disputes between Landlord and its employees, between Landlord and Project management, or between Landlord and other tenants or occupants and costs incurred due to a violation by Landlord of the terms and conditions of any lease of space in the Project;

(f) the wages and benefits of any employee who does not devote substantially all of his or her employed time to the Project unless such wages and benefits are prorated to reflect time spent on operating and managing the Project vis-a-vis time spent on matters unrelated to operating and managing the Project; provided, that in no event shall Operating Expenses for purposes of this Lease include wages and/or benefits attributable to personnel above the level of Project manager;

(g) amount paid as ground rental for the Project by the Landlord;

(h) except for a Project management fee to the extent allowed pursuant to item (s) below, overhead and profit increment paid to the Landlord or to subsidiaries or affiliates of the Landlord for services in the Project to the extent the same exceeds the costs of such services rendered by qualified, first-class unaffiliated third parties on a competitive basis;

(i) any compensation paid to clerks, attendants or other persons in commercial concessions operated by the Landlord, provided that any compensation paid to any concierge at the Project shall be includable as an Operating Expense;

(j) rentals and other related expenses incurred in leasing air conditioning systems, elevators or other equipment which if purchased the cost of which would be excluded from Operating Expenses as a capital cost, except equipment not affixed to the Project which is used in providing engineering, janitorial or similar services and, further excepting from this exclusion such equipment rented or leased to remedy or ameliorate an emergency condition in the Project;

(k) all items and services for which Tenant or any other tenant in the Project is obligated to reimburse Landlord or which Landlord provides selectively to one or more tenants (other than Tenant) without reimbursement;

(l) any costs expressly excluded from Operating Expenses elsewhere in this Lease;

(m) rent for any office space occupied by Project management personnel to the extent the size or rental rate of such office space exceeds the size or fair market rental value of office space occupied by management personnel of the Comparable Buildings, with adjustment where appropriate for the size of the applicable project;

(n) costs arising from the negligence or willful misconduct of Landlord or its agents, employees, contractors or providers of materials or services; and

(o) costs incurred to test, survey, remove, remedy, contain, or treat any “Hazardous Materials”, as defined in Section 5.3.1.1 below, existing in the Building or on or about the Project as of the Lease Commencement Date or thereafter brought into the Building or onto or about the Project after the Lease Commencement Date by Landlord or any other tenant of the Project or by any party other than Tenant or Tenant’s Agents;

(p) costs of repairs or other work occasioned by fire, windstorm or other casualty (other than those amounts within the deductible limits of insurance policies actually carried by Landlord, which amounts shall be includable as Operating Expenses so long as such deductibles are within the generally prevailing range of deductibles to policies carried by landlords of the Comparable Buildings) which are covered by Landlord's insurance policies or would be covered if Landlord had maintained insurance in accordance with this Lease;

(q) costs incurred in connection with any major change in the Project, such as adding or deleting buildings or floors or reconfiguring the parking facilities or other Common Areas;

(r) fines, penalties and interest resulting from late payment by Landlord; and

(s) fees payable by Landlord for management of the Project in excess of three percent (3%) (the " **Management Fee Cap**") of Landlord's gross rental revenues from the Project;

(t) costs incurred to comply with Landlord's representations and warranties under this Lease or the Tenant Work Letter, to comply with Landlord's obligations under the Tenant Work Letter, or to deliver the Premises in the Delivery Condition;

(u) costs to remedy any violation of any Underlying Document or any Applicable Law that exists as of the Lease Commencement Date (and the inclusion of the phrase "to the extent required to allow the legal occupancy of the Premises" in the second to last sentence of Section 1.1.1 above shall not operate as a waiver with respect to this exclusion); and

(v) costs of replacing, as opposed to the routine repair and maintenance of the Building Structure (which shall be includable in Operating Expenses), the Building Structure or any component thereof; provided that re-roofing shall be includable pursuant to the terms of Section 4.2.4(xi).

4.2.5 **Taxes**.

4.2.5.1 "**Tax Expenses**" shall mean all federal, state, county, or local governmental or municipal taxes, fees, charges or other impositions of every kind and nature, whether general, special, ordinary or extraordinary (including, without limitation, real estate taxes, general and special assessments, transit taxes, leasehold taxes or taxes based upon the receipt of rent, including gross receipts or sales taxes applicable to the receipt of rent, unless required to be paid by Tenant, personal property taxes imposed upon the fixtures, machinery, equipment, apparatus, systems and equipment, appurtenances, furniture and other personal property used in connection with the Project, or any portion thereof), which shall be paid or accrued during any Expense Year (without regard to any different fiscal year used by such governmental or municipal authority) because of or in connection with the ownership, leasing and operation of the Project, or any portion thereof.

4.2.5.2 Tax Expenses shall include, without limitation: (i) Any tax on the rent, right to rent or other income from the Project, or any portion thereof, or as against the business of leasing the Project, or any portion thereof; (ii) Any assessment, tax, fee, levy or charge in addition to, or in substitution, partially or totally, of any assessment, tax, fee, levy or charge previously included within the definition of real property tax; (iii) Any assessment, tax, fee, levy, or charge allocable to or measured by the area of the Premises or the Rent payable hereunder, including, without limitation, any business or gross income tax or excise tax with respect to the receipt of such rent, or upon or with respect to the possession, leasing, operating, management, maintenance, alteration, repair, use or occupancy by Tenant of the Premises, or any portion thereof; and (iv) Any assessment, tax, fee, levy or charge, upon this transaction or any document to which Tenant is a party, creating or transferring an interest or an estate in the Premises or the improvements thereon.

4.2.5.3 Any reasonable costs and expenses (including, without limitation, reasonable attorneys' and consultants' fees) incurred in attempting to protest, reduce or minimize Tax Expenses shall be included in Tax Expenses in the Expense Year such expenses are incurred. Tax refunds shall be credited against Tax Expenses and refunded to Tenant regardless of when received, based on the Expense Year to which the refund is applicable,

provided that in no event shall the amount to be refunded to Tenant for any such Expense Year exceed the total amount paid by Tenant as Additional Rent under this Article 4 for such Expense Year. If Tax Expenses for any period during the Lease Term or any extension thereof are increased after payment thereof for any reason, including, without limitation, error or reassessment by applicable governmental or municipal authorities, Tenant shall pay Landlord upon demand Tenant's Share of any such increased Tax Expenses. Notwithstanding anything to the contrary contained in this Section 4.2.5, there shall be excluded from Tax Expenses (i) all excess profits taxes, franchise taxes, gift taxes, capital stock taxes, inheritance and succession taxes, estate taxes, federal and state income taxes, and other taxes to the extent applicable to Landlord's net income (as opposed to rents, receipts or income attributable to operations at the Project), (ii) any items included as Operating Expenses, (iii) any items paid by Tenant under Section 4.5 of this Lease, and (iv) any penalties or fees arising from Landlord's late payment of Tax Expenses.

4.2.5.4 At Tenant's request, and provided that it is then deemed advisable by Landlord in the exercise of Landlord' s reasonable business judgment (i.e., Landlord has a reasonable expectation of success of such appeal), Landlord shall bring or cause to be brought an application or proceeding for reduction of the assessed valuation of the Building or Project, as applicable, in order to reduce Tax Expenses.

4.2.6 "**Tenant's Share**" shall mean the percentage set forth in Section 6 of the Summary.

4.3 **Allocation of Direct Expenses**. The parties acknowledge that if at any time in the future the Building is a part of a multi-building project, the costs and expenses incurred in connection with the Project (i.e., the Direct Expenses) shall be shared between the Building and the other buildings in the Project in accordance with this Section 4.3. Accordingly, as set forth in Section 4.2 above, Direct Expenses (which consist of Operating Expenses and Tax Expenses) are determined annually for the Project as a whole, and a portion of the Direct Expenses, which portion shall be reasonably determined by Landlord on an equitable basis, shall be allocated to the Building (as opposed to any other future buildings in the Project). Such portion of Direct Expenses allocated to the Building shall include all Direct Expenses attributable solely to the Building and an equitable pro-rata portion of the Direct Expenses attributable to the Project as a whole, and shall not include Direct Expenses attributable solely to other buildings in the Project.

4.4 **Calculation and Payment of Additional Rent**. Tenant shall pay to Landlord, in the manner set forth in Section 4.4.1, below, and as Additional Rent, Tenant's Share of Direct Expenses for each Expense Year.

4.4.1 **Statement of Actual Direct Expenses and Payment by Tenant**. Landlord shall give to Tenant following the end of each Expense Year, a statement (the "**Statement**") which shall set forth in reasonable itemized detail the Direct Expenses incurred or accrued for such preceding Expense Year, and which shall indicate the amount of Tenant's Share of Direct Expenses. Landlord shall deliver such Statement to Tenant on or before June 1 following the end of the Expense Year to which such Statement relates. Upon receipt of the Statement for each Expense Year commencing or ending during the Lease Term, Tenant shall pay, with its next installment of Base Rent due, the full amount of Tenant's Share of Direct Expenses for such Expense Year, less the amounts, if any, paid during such Expense Year as "**Estimated Direct Expenses**," as that term is defined in Section 4.4.2, below, and if Tenant paid more as Estimated Direct Expenses than the actual Tenant's Share of Direct Expenses, Tenant shall receive a credit in the amount of Tenant's overpayment against Rent next due under this Lease. The failure of Landlord to timely furnish the Statement for any Expense Year shall not prejudice Landlord or Tenant from enforcing its rights under this Article 4. Even though the Lease Term has expired and Tenant has vacated the Premises, when the final determination is made of Tenant's Share of Direct Expenses for the Expense Year in which this Lease terminates, Tenant shall within thirty (30) days after receipt of such final determination pay to Landlord such amount, and if Tenant paid more as Estimated Direct Expenses than the actual Tenant's Share of Direct Expenses, Landlord shall, within thirty (30) days, deliver a check payable to Tenant in the amount of the overpayment. The provisions of this Section 4.4.1 shall survive the expiration or earlier termination of the Lease Term. Notwithstanding the immediately preceding sentences, Tenant shall not be responsible for Tenant's Share of any Direct Expenses (other than Tax Expenses) attributable to any Expense Year which are first billed to Tenant more than eighteen (18) months after the earlier of the expiration of the applicable Expense Year or the Lease Expiration Date, and Tenant shall not be responsible for Tenant's Share of any Tax Expenses attributable to any Expense Year which are first billed to Tenant more than thirty-six (36) months after the earlier of the expiration of the applicable Expense Year or the Lease Expiration Date.

4.4.2 **Statement of Estimated Direct Expenses**. In addition, Landlord shall give Tenant a yearly expense estimate statement (the "**Estimate Statement**") which shall set forth Landlord's reasonable estimate (the "**Estimate**") of what the total amount of Direct Expenses for the then-current Expense Year shall be and the estimated Tenant's Share of Direct Expenses (the "**Estimated Direct Expenses**"). Landlord shall deliver such Estimate Statement to Tenant on or before June 1 of the Expense Year to which such Estimate Statement relates. The failure of Landlord to timely furnish the Estimate Statement for any Expense Year shall not preclude Landlord from enforcing its rights to collect any Estimated Direct Expenses under this Article 4, nor shall Landlord be prohibited from revising any Estimate Statement or Estimated Direct Expenses theretofore delivered to the extent necessary. Thereafter, Tenant shall pay, with its next installment of Base Rent due, a fraction of the Estimated Direct Expenses for the then-current Expense Year (reduced by any amounts paid pursuant to the last sentence of this Section 4.4.2). Such fraction shall have as its numerator the number of months which have elapsed in such current Expense Year, including the month of such payment, and twelve (12) as its denominator. Until a new Estimate Statement is furnished (which Landlord shall have the right to deliver to Tenant at any time), Tenant shall pay monthly, with the monthly Base Rent installments, an amount equal to one-twelfth (1/12) of the total Estimated Direct Expenses set forth in the previous Estimate Statement delivered by Landlord to Tenant.

4.5 **Taxes and Other Charges for Which Tenant Is Directly Responsible**. Tenant shall be liable for and shall pay before delinquency, taxes levied against Tenant's equipment, furniture, fixtures and any other personal property located in or about the Premises. If any such taxes on Tenant's equipment, furniture, fixtures and any other personal property are levied against Landlord or Landlord's property or if the assessed value of Landlord's property is increased by the inclusion therein of a value placed upon such equipment, furniture, fixtures or any other personal property and if Landlord pays the taxes based upon such increased assessment, which Landlord shall have the right to do regardless of the validity thereof but only under proper protest if requested by Tenant, Tenant shall upon demand repay to Landlord the taxes so levied against Landlord or the proportion of such taxes resulting from such increase in the assessment, as the case may be.

4.6 **Landlord's Books and Records**. Within one hundred eighty (180) days after receipt by Tenant of a Statement, if Tenant disputes the amount of Additional Rent set forth in the Statement, a member of Tenant's finance department, or an independent certified public accountant (which accountant is a member of a nationally or regionally recognized accounting firm and is not working on a contingency fee basis) ("**Tenant's Accountant**"), designated and paid for by Tenant, may, after reasonable notice to Landlord and at reasonable times, inspect Landlord's records with respect to the Statement at Landlord's offices in Northern California, provided that there is no existing monetary Event of Default and Tenant has paid all amounts required to be paid under the applicable Estimate Statement and Statement, as the case may be. In connection with such inspection, Tenant and Tenant's agents must agree in advance to follow Landlord's reasonable rules and procedures regarding inspections of Landlord's records, and shall execute a commercially reasonable confidentiality agreement regarding such inspection. Tenant's failure to dispute the amount of Additional Rent set forth in any Statement within one hundred eighty (180) days of Tenant's receipt of such Statement shall be deemed to be Tenant's approval of such Statement and Tenant, thereafter, waives the right or ability to dispute the amounts set forth in such Statement. If after such inspection, Tenant still disputes such Additional Rent, a determination as to the proper amount shall be made, at Tenant's expense, by an independent certified public accountant (the "**Accountant**") selected by Landlord and subject to Tenant's reasonable approval; provided that if such Accountant determines that Direct Expenses were overstated by five percent (5%) or more, then the cost of the Accountant and the cost of such determination shall be paid for by Landlord, and Landlord shall reimburse Tenant for the cost of the Tenant's Accountant (provided that such cost shall be a reasonable market cost for such services). If such inspection determines that Tenant has overpaid any amounts on account of Direct Expenses for such Expense Year, Landlord shall refund to Tenant the amount of such overpayment within thirty (30) days after the amount thereof is determined. Tenant hereby acknowledges that Tenant's sole right to inspect Landlord's books and records and to contest the amount of Direct Expenses payable by Tenant shall be as set forth in this Section 4.6, and Tenant hereby waives any and all other rights pursuant to Applicable Law to inspect such books and records and/or to contest the amount of Direct Expenses payable by Tenant.

5. USE OF PREMISES

5.1 **Permitted Use**. Tenant shall use the Premises solely for the Permitted Use set forth in Section 7 of the Summary and Tenant shall not use or permit the Premises or the Project to be used for any other purpose or

purposes whatsoever without the prior written consent of Landlord, which may be withheld in Landlord's sole discretion.

5.2 **Prohibited Uses**. Tenant further covenants and agrees that Tenant shall not use, or suffer or permit any person or persons to use, the Premises or any part thereof for any use or purpose in violation of Applicable Laws. Landlord shall have the right to impose reasonable and customary non-discriminatory rules and regulations regarding the use of the Project, as reasonably deemed necessary by Landlord with respect to the orderly operation of the Project, and Tenant shall comply with such reasonable rules and regulations provided the same are provided to Tenant in writing. In the event of any conflict between the rules and regulations and the other provisions of this Lease, the terms of this Lease shall control. Tenant shall not do or permit anything to be done in or about the Premises which will in any way damage the reputation of the Project or obstruct or interfere with the rights of other tenants or occupants of the Building, or injure them or use or allow the Premises to be used for any unlawful purpose, nor shall Tenant cause, maintain or permit any nuisance in, on or about the Premises. Tenant shall comply with, and Tenant's rights and obligations under the Lease and Tenant's use of the Premises shall be subject and subordinate to, all recorded easements, covenants, conditions, and restrictions now or hereafter affecting the Project. Landlord hereby confirms that as of the date of this Lease there are no recorded easements, covenants, conditions, and restrictions affecting the Project. Tenant shall only be required to comply with any future recorded easements, covenants, conditions, and restrictions affecting the Project provided the same do not materially and adversely affect Tenant's rights (including parking rights) under this Lease or use of or access to the Premises for the Permitted Use or materially increase Tenant's obligations under this Lease.

5.3 **Hazardous Materials**.

5.3.1 **Tenant's Obligations**.

5.3.1.1 **Prohibitions**. As a material inducement to Landlord to enter into this Lease with Tenant, Tenant has fully and accurately, to Tenant's knowledge as of the date of its signature thereon, completed Landlord's Pre-Leasing Environmental Exposure Questionnaire (the "**Environmental Questionnaire**"), which is attached as **Exhibit E** and identifies the "Hazardous Materials," as that term is defined below, that Tenant reasonably anticipates to be used at the Premises and any related environmental permits that may be required. Tenant agrees that neither Tenant nor Tenant's employees, contractors and subcontractors of any tier, entities with a contractual relationship with Tenant (other than Landlord), or any entity acting as an agent or sub-agent of Tenant (collectively, "**Tenant's Agents**") will produce, use, store or generate any Hazardous Materials, on, under or about the Premises in violation of Environmental Laws, nor cause or permit any Hazardous Material to be brought upon, placed, stored, manufactured, generated, blended, handled, recycled, used or "Released," as that term is defined below, on, in, under or about the Premises in violation of Environmental Laws. Upon Landlord's written request (but no more than once each Lease Year), or in the event of any material change in Tenant's use of Hazardous Materials resulting in a new class or category of Hazardous Materials being used in the Premises from that set forth in the Environmental Questionnaire then in place (i.e., changes in non Hazardous Materials or reasonable changes to the amounts or types of Hazardous Materials in the same category are exempt), Tenant shall deliver to Landlord an updated Environmental Questionnaire. Landlord's prior written consent shall be required to any Hazardous Materials use for the Premises that is not described on the Environmental Questionnaire, to the extent such use would result in a new class or category of Hazardous Materials being used in the Premises, such additional use shall be subject to Landlord's prior consent, which may be withheld in Landlord's reasonable discretion. For purposes of this Lease, "**Hazardous Materials**" means all flammable explosives, petroleum and petroleum products, waste oil, radon, radioactive materials, toxic pollutants, asbestos, polychlorinated biphenyls ("**PCBs**"), medical waste, chemicals known to cause cancer or reproductive toxicity, pollutants, contaminants, hazardous wastes, toxic substances or related materials, including without limitation any chemical, element, compound, mixture, solution, substance, object, waste or any combination thereof, which is or may be hazardous to human health, safety or to the environment due to its radioactivity, ignitability, corrosiveness, reactivity, explosiveness, toxicity, carcinogenicity, infectiousness or other harmful or potentially harmful properties or effects, or defined as, regulated as or included in, the definition of "hazardous substances," "hazardous wastes," "hazardous materials," or "toxic substances" under any Environmental Laws. The term "Hazardous Materials" for purposes of this Lease shall also include any mold, fungus or spores, whether or not the same is defined, listed, or otherwise classified as a "hazardous material" under any Environmental Laws, if such mold, fungus or spores may pose a risk to human health or the environment or negatively impact the value of the

Premises. For purposes of this Lease, "**Release**" or "**Released**" or "**Releases**" shall mean any release, deposit, discharge, emission, leaking, spilling, seeping, migrating, injecting, pumping, pouring, emptying, escaping, dumping, disposing, or other movement of Hazardous Materials into the environment in violation of Environmental Laws.

5.3.1.2 **Notices to Landlord**. Tenant shall notify Landlord in writing as soon as possible but in no event later than five (5) days after (i) Tenant becomes aware of the occurrence of any actual, alleged or threatened Release of any Hazardous Material caused by Tenant or Tenant's Agents in, on, under, from, about or in the vicinity of the Premises (whether past or present), regardless of the quantity of any such Release, or (ii) Tenant becomes aware of any regulatory actions, inquiries, inspections, investigations, directives, or any cleanup, compliance, enforcement or abatement proceedings (including any threatened or contemplated investigations or proceedings) relating to Releases of Hazardous Materials at the Premises, or (iii) Tenant becomes aware of any claims by any person or entity relating to any Release of Hazardous Materials in, on, under, from, about or in the vicinity of the Premises, whether relating to damage, contribution, cost recovery, compensation, loss or injury. Collectively, the matters set forth in clauses (i), (ii) and (iii) above are hereinafter referred to as "**Hazardous Materials Claims**". In the event Landlord has reasonable grounds to believe that Tenant has not provided the required notice of a Hazardous Materials Claim, Landlord shall have the right to deliver a written notice to Tenant inquiring as to the status of any Hazardous Materials Claim and Tenant shall promptly respond to such written request with the current status of any Hazardous Materials Claims impacting the Premises. Tenant shall promptly forward to Landlord copies of all orders, notices, permits, applications and other written communications and reports served upon Tenant or generated by or for Tenant in connection with any Hazardous Materials Claims. Additionally, Tenant shall promptly advise Landlord in writing of Tenant's discovery of any occurrence or condition on, in, under or about the Premises that could subject Tenant or Landlord to any material liability under any Environmental Laws. Tenant shall not enter into any legal proceeding or other action, settlement, consent decree or other compromise with respect to any Hazardous Materials Claims without first notifying Landlord of Tenant's intention to do so and affording Landlord the opportunity to join and participate, as a party if Landlord so elects, in such proceedings and in no event shall Tenant enter into any agreements which are binding on Landlord or the Premises without Landlord's prior written consent. If Landlord opts to join in such proceedings, Landlord shall not enter into any agreements which are binding on Tenant without Tenant's prior written consent. Landlord shall have the right to appear at and participate in, any and all legal or other administrative proceedings concerning any Hazardous Materials Claim. For purposes of this Lease, "**Environmental Laws**" means all applicable present and future laws relating to the protection of human health, safety, wildlife or the environment, including, without limitation, (i) all requirements pertaining to reporting, licensing, permitting, investigation and/or remediation of emissions, discharges, Releases, or threatened Releases of Hazardous Materials, whether solid, liquid, or gaseous in nature, into the air, surface water, groundwater, or land, or relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport, or handling of Hazardous Materials; and (ii) all requirements pertaining to the health and safety of employees or the public. Environmental Laws include, but are not limited to, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 USC § 9601, et seq., the Hazardous Materials Transportation Authorization Act of 1994, 49 USC § 5101, et seq., the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, and Hazardous and Solid Waste Amendments of 1984, 42 USC § 6901, et seq., the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, 33 USC § 1251, et seq., the Clean Air Act of 1966, 42 USC § 7401, et seq., the Toxic Substances Control Act of 1976, 15 USC § 2601, et seq., the Safe Drinking Water Act of 1974, 42 USC §§ 300f through 300j, the Occupational Safety and Health Act of 1970, as amended, 29 USC § 651 et seq., the Oil Pollution Act of 1990, 33 USC § 2701 et seq., the Emergency Planning and Community Right-To-Know Act of 1986, 42 USC § 11001 et seq., the National Environmental Policy Act of 1969, 42 USC § 4321 et seq., the Federal Insecticide, Fungicide and Rodenticide Act of 1947, 7 USC § 136 et seq., California Carpenter-Presley-Tanner Hazardous Substance Account Act, California Health & Safety Code §§ 25300 et seq., Hazardous Materials Release Response Plans and Inventory Act, California Health & Safety Code, §§ 25500 et seq., Underground Storage of Hazardous Substances provisions, California Health & Safety Code, §§ 25280 et seq., California Hazardous Waste Control Law, California Health & Safety Code, §§ 25100 et seq., and any other state or local law counterparts, as amended, as such applicable laws, are in effect as of the Lease Commencement Date, or thereafter adopted, published, or promulgated.

5.3.1.3 **Releases of Hazardous Materials**. If any Release of any Hazardous Material in, on, under, from or about the Premises shall occur at any time during the Lease Term caused by Tenant or Tenant's Agents, in addition to notifying Landlord as specified above, Tenant, at its own sole cost and expense, shall (i) promptly comply with any and all reporting requirements imposed pursuant to any and all Environmental Laws,

(ii) provide a written notification to Landlord indicating that Tenant has complied with all applicable reporting requirements, and (iii) take any and all necessary investigation, corrective and remedial action in accordance with any and all applicable Environmental Laws, all in accordance with the provisions and requirements of this Section 5.3, including, without limitation, Section 5.3.4.

5.3.1.4 **Indemnification**.

5.3.1.4.1 **In General**. Without limiting in any way Tenant's obligations under any other provision of this Lease, Tenant shall be solely responsible for and shall protect, defend, indemnify and hold the Landlord Parties harmless from and against any and all claims, judgments, losses, damages, costs, expenses, penalties, enforcement actions, taxes, fines, remedial actions, liabilities (including, without limitation, reasonable attorneys' fees, litigation, arbitration and administrative proceeding costs, expert and consultant fees and laboratory costs) and sums paid in settlement of claims, but excluding any consequential or special damages, which arise during or after the Lease Term, whether foreseeable or unforeseeable, to the extent arising out of or attributable to the Release of Hazardous Materials in, on, under or about the Premises by Tenant or Tenant's Agents in violation of Environmental Laws.

5.3.1.4.2 **Limitations**. Notwithstanding anything in **Section 5.3.1.4**, above, to the contrary, Tenant's indemnity of Landlord as set forth in **Section 5.3.1.4**, above, shall not be applicable to claims based upon Hazardous Materials not Released by Tenant or Tenant's Agents.

5.3.1.4.3 **Landlord Indemnity**. Under no circumstance shall Tenant be liable for, and Landlord shall indemnify, defend, protect and hold the Tenant Parties harmless from and against any and all claims, judgments, losses, damages, costs, expenses, penalties, enforcement actions, taxes, fines, remedial actions, liabilities (including, without limitation, reasonable attorneys' fees, litigation, arbitration and administrative proceeding costs, expert and consultant fees and laboratory costs) and sums paid in settlement of claims, but excluding any consequential or special damages, which arise during or after the Lease Term, whether foreseeable or unforeseeable, to the extent arising out of or attributable to any Hazardous Materials that exist in, on or about the Project as of the Lease Commencement Date or that exist after the expiration or termination of this Lease except to the extent such Hazardous Materials are the responsibility of Tenant in accordance with this Section 5.3, or the Release of Hazardous Materials in, on, under or about the Project by Landlord or any Landlord Parties in violation of Environmental Laws. Landlord will provide Tenant with any Hazardous Material reports relating to the Building or Project that Landlord has in its possession, or control. The provision of such reports shall be for informational purposes only, and Landlord does not make any representation or warranty as to the correctness or completeness of any such reports.

5.3.1.5 **Compliance with Environmental Laws**. Without limiting the generality of Tenant's obligation to comply with applicable laws as otherwise provided in this Lease, Tenant shall, at its sole cost and expense, comply with all Environmental Laws related to the use of Hazardous Materials by Tenant and Tenant's Agents. Tenant shall obtain and maintain any and all necessary permits, licenses, certifications and approvals appropriate or required for the use, handling, storage, and disposal of any Hazardous Materials used, stored, generated, transported, handled, blended, or recycled by Tenant on the Premises. Landlord shall have a continuing right, without obligation, to require Tenant to obtain, and to review and inspect any and all such permits, licenses, certifications and approvals, together with copies of any and all Hazardous Materials management plans and programs required by Environmental Laws, any and all Hazardous Materials risk management and pollution prevention programs required by Environmental Laws, and any and all Hazardous Materials emergency response and employee training programs respecting Tenant's use of Hazardous Materials. Upon request of Landlord (but no more than once every Lease Year, unless Landlord shall have reasonable grounds to believe that Tenant is not in compliance with its covenants under this Section 5.3), Tenant shall deliver to Landlord a notice certifying to Tenant's knowledge Tenant's compliance with all Environmental Laws and the terms of this Section 5.3.

5.3.2 **Assurance of Performance**.

5.3.2.1 **Environmental Assessments In General**. In the event Landlord has a reasonable basis for determining that Tenant has caused a Release of Hazardous Materials in violation of Environmental Laws,

Landlord may, but shall not be required to, engage from time to time such contractors as Landlord reasonably determines to be appropriate (and which are reasonably acceptable to Tenant) to perform environmental assessments of a scope reasonably determined by Landlord (an "**Environmental Assessment**") to evaluate Tenant's compliance with the requirements of this Lease with respect to any Release of Hazardous Materials. The environmental assessment conducted by Landlord's consultant shall not unreasonably interfere with Tenant's operations at the Premises. Landlord shall require its consultant to provide insurance against claims, damages, or costs arising from bodily injury or property damage caused to Tenant or the Premises by Landlord's consultant. The Environmental Assessment shall not include access to areas of Tenant's operations that are used for vivarium purposes or are protected as confidential business information or contain operations or processes that are protected under intellectual property rights, such as, but not limited to, trade secrets.

5.3.2.2 **Costs of Environmental Assessments**. All costs and expenses incurred by Landlord in connection with any such Environmental Assessment initially shall be paid by Landlord; provided that if any such Environmental Assessment demonstrates that Tenant has caused a Release of Hazardous Materials at or from the Premises, then all of the reasonable, out-of-pocket costs and expenses of such Environmental Assessment shall be reimbursed by Tenant as Additional Rent within thirty (30) days after receipt of written demand therefor.

5.3.3 **Tenant's Obligations upon Surrender**. At the expiration or earlier termination of the Lease Term, Tenant, at Tenant's sole cost and expense, shall: (i) cause a Phase I environmental assessment to be conducted in general conformance with ASTM Standard E 1527-13 or then applicable standard (a "**Phase I**") of the Premises to be conducted in accordance with **Section 15.3**; (ii) cause all Hazardous Materials brought onto the Premises by Tenant or Tenant's Agents to be removed from the Premises and disposed of in accordance with all Environmental Laws and cause all Hazardous Materials brought onto the Premises by Tenant or Tenant's Agents to be removed as necessary to allow the Premises to be used for the purposes allowed as of the date of this Lease; and (iii) cause to be removed all containers installed or used by Tenant or Tenant's Agents to store any Hazardous Materials on the Premises, and cause to be repaired any damage to the Premises caused by such removal.

5.3.4 **Clean-up**.

5.3.4.1 **Environmental Reports; Clean-Up**. If any written report containing results of any Environmental Assessment (an "**Environmental Report**") shall indicate (i) that Tenant or Tenant's Agents caused a Release of Hazardous Materials at the Premises, which Release of Hazardous Materials requires an investigation, characterization, monitoring, assessment, repair, closure, remediation, removal, or other clean-up under Environmental Laws (the "**Clean-up**"), Tenant shall promptly prepare and submit to Landlord within sixty (60) days after receipt of the Environmental Report, a comprehensive plan, subject to Landlord's reasonable review and comment, which review and comment Landlord shall promptly conduct and provide to Tenant specifying the actions to be taken by Tenant under Environmental Laws to perform the Clean-up so that all Hazardous Materials brought onto the Premises by Tenant or Tenant's Agents are removed. Upon Landlord's approval of the Clean-up plan, which approval shall not be unreasonably withheld or delayed, Tenant shall, at Tenant's sole cost and expense, without limitation on any rights and remedies of Landlord under this Lease, promptly implement such plan with a consultant selected by Tenant and reasonably acceptable to Landlord and proceed to Clean-Up Hazardous Materials Released by Tenant or Tenant's Agents, in accordance with Environmental Laws. If Tenant fails to complete the Clean-up in accordance with Environmental Laws within the designated time period to complete the Clean-up, or fails to meet any interim milestones with respect to such Clean-up, then Landlord shall have the right, but not the obligation, and without waiving any other rights under this Lease, after written notice to Tenant and providing a reasonable time period for Tenant to cure, to carry out such Clean-up required under Environmental Laws, and tender an indemnification claim to Tenant under Section 5.3.1.4.1 of this Lease.

5.3.4.2 **No Rent Abatement**. Tenant shall continue to pay all Rent due or accruing under this Lease during any Clean-up, and shall not be entitled to any reduction, offset or deferral of any Base Rent or Additional Rent due or accruing under this Lease during any such Clean-up.

5.3.4.3 **Surrender of Premises**. Tenant shall complete any Clean-up to the extent feasible prior to surrender of the Premises upon the expiration or earlier termination of this Lease. Tenant shall obtain and deliver to Landlord a letter or other written determination from the overseeing governmental authority confirming

that the Clean-up has been completed in accordance with all requirements of such governmental authority and that no further response action of any kind is required for the commercial/industrial use of the Premises reasonably consistent with the Permitted Use ("**Closure Letter**"). Upon the expiration or earlier termination of this Lease, Tenant shall also be obligated to close all permits obtained in connection with Hazardous Materials used by Tenant or Tenant's Agents in accordance with Environmental Laws.

5.3.4.4 **Failure to Timely Clean-Up**. Should any Clean-up for which Tenant is responsible not be completed, or should Tenant not receive the Closure Letter and any governmental approvals required under Environmental Laws in conjunction with such Clean-up prior to the expiration or earlier termination of this Lease, then, commencing on the later of the termination of this Lease and three (3) business days after Landlord's delivery of notice of such failure and that it elects to treat such failure as a holdover, Tenant shall be liable to Landlord as a holdover tenant (as more particularly provided in **Article 16**) until Tenant has fully complied with its obligations under this **Section 5.3**; provided, however, that Tenant shall be considered a holdover tenant only for the time that Hazardous Materials subject to Clean-up for which Tenant is responsible prevent the occupancy of the Premises in accordance with the San Francisco Bay Regional Water Quality Control Board's, the California Department of Toxic Substances Control's or the San Mateo County Environmental Health Services risk-based screening levels for commercial use.

5.3.5 **Confidentiality**. Unless compelled to do so by Applicable Law, valid order of a court or judicial or administrative process, Tenant agrees that Tenant shall not disclose, discuss, disseminate or copy any information, data, findings, communications, conclusions and reports regarding the environmental condition of the Premises to any Person (other than Tenant's consultants, attorneys, property managers, employees, shareholders, subtenants and assignees that have a need to know such information), including any governmental authority, without the prior written consent of Landlord. In the event Tenant reasonably believes that disclosure is compelled by applicable law, it shall provide Landlord ten (10) days' advance notice of disclosure of confidential information so that Landlord may attempt to obtain a protective order. Tenant may additionally release such information to bona fide prospective purchasers or lenders, subject to any such parties' written agreement to be bound by the terms of this **Section 5.3**.

5.3.6 **Copies of Environmental Reports**. Within thirty (30) days of receipt thereof, Tenant shall provide Landlord with a copy of any and all environmental assessments, audits, studies and reports regarding Tenant's activities with respect to a Release of Hazardous Materials at the Premises, or ground water beneath the Land, or the environmental condition or Clean-up thereof. Tenant shall be obligated to provide Landlord with a copy of such materials without regard to whether such materials are generated by Tenant or prepared for Tenant, or how Tenant comes into possession of such materials.

5.3.7 **Intentionally Omitted**.

5.3.8 **Signs, Response Plans, Etc**. Tenant shall be responsible for posting on the Premises any signs required under applicable Environmental Laws with respect to the use of Hazardous Materials by Tenant or Tenant's Agents. Tenant shall also complete and file any business response plans or inventories required by any Environmental Laws. Tenant shall concurrently file a copy of any such business response plan or inventory with Landlord.

5.3.9 **Survival**. Each covenant, agreement, representation, warranty and indemnification made by Tenant and Landlord set forth in this **Section 5.3** shall survive the expiration or earlier termination of this Lease and shall remain effective until all of its obligations under this **Section 5.3** have been completely performed and satisfied.

6. SERVICES AND UTILITIES

6.1 **In General**. From and after the Lease Commencement Date, Tenant will be responsible, at its sole cost and expense, for the furnishing of all services and utilities to the Premises, including, but not limited to heating, ventilation and air-conditioning, electricity, water, telephone, janitorial and interior Building security services.

6.1.1 All utilities (including electricity, gas, sewer and water) are separately metered or sub-metered to the Premises. After the Lease Commencement Date such utilities that are separately metered shall be contracted for and paid directly by Tenant to the applicable utility provider and with respect to such utilities to the Building that are sub-metered (instead of separately metered) to the Premises, then Tenant shall pay to Landlord, within thirty (30) days after billing, an equitable portion of the Building utility costs, based on Tenant's proportionate use thereof and the readings from such sub-meter.

6.1.2 Landlord shall not provide janitorial services for the interior of the Premises. Tenant shall be solely responsible for performing all janitorial services and other cleaning of the Premises, all in compliance with Applicable Laws. The janitorial and cleaning of the Premises shall be adequate to maintain the Premises in a manner consistent with Comparable Buildings.

Tenant shall cooperate fully with Landlord at all times and abide by all regulations and requirements that Landlord may reasonably prescribe for the proper functioning and protection of the HVAC, electrical, mechanical and plumbing systems. Provided that Landlord agrees to provide and maintain and keep in continuous service utility connections to the Building, including electricity, water and sewage connections, Landlord shall have no obligation to provide any services or utilities to the Building, including, but not limited to heating, ventilation and air-conditioning, electricity, water, telephone, janitorial and interior Building security services.

6.2 **Interruption of Use**. Tenant agrees that Landlord shall not be liable for damages, by abatement of Rent or otherwise, for failure to furnish or delay in furnishing any service (including telephone and telecommunication services), or for any diminution in the quality or quantity thereof, when such failure or delay or diminution is occasioned, in whole or in part, by breakage, repairs, replacements, or improvements, by any strike, lockout or other labor trouble, by inability to secure electricity, gas, water, or other fuel at the Building or Project after reasonable effort to do so, by any riot or other dangerous condition, emergency, accident or casualty whatsoever, by act or default of Tenant or other parties, or by any other cause; and such failures or delays or diminution shall never be deemed to constitute an eviction or disturbance of Tenant's use and possession of the Premises or relieve Tenant from paying Rent or performing any of its obligations under this Lease. Furthermore, Landlord shall not be liable under any circumstances for a loss of, or injury to, property or for injury to, or interference with, Tenant's business, including, without limitation, loss of profits, however occurring, through or in connection with or incidental to a failure to furnish any of the services or utilities as set forth in this Article 6.

6.3 **Energy Performance Disclosure Information**. Tenant hereby acknowledges that at some time after the date of this Lease Landlord may be required to disclose certain information concerning the energy performance of the Building pursuant to California Public Resources Code Section 25402.10 and the regulations adopted pursuant thereto (collectively the "**Energy Disclosure Requirements**"). If and to the extent Landlord is required in the future under the Energy Disclosure Requirements to disclose information concerning Tenant's energy usage to certain third parties, including, without limitation, prospective purchasers, lenders and tenants of the Building (the "**Tenant Energy Use Disclosure**"), Tenant hereby (A) consents to all such Tenant Energy Use Disclosures made by Landlord in accordance with the Energy Disclosure Requirements, and (B) acknowledges that Landlord shall not be required to notify Tenant of any Tenant Energy Use Disclosure. The terms of this Section 6.3 shall survive the expiration or earlier termination of this Lease for a period of one (1) year.

6.4 **Tenant's Emergency Generator**. In the event Tenant wishes to install a separate generator (i.e., in addition to the existing emergency generator) to provide back-up generator services to the Premises, subject to the receipt of all necessary approvals from the applicable governmental authority, Tenant, at Tenant's sole cost and expense, shall have the right to install a back-up generator in the Premises, or outside the Premises in the location reasonably designated by Landlord (subject to the same being approved by the city), as an Alteration (in which case such installation shall be governed by the terms of Article 8) (the "**Tenant Generator**"). Such Tenant Generator shall be installed pursuant to plans and specifications approved by Landlord, which approval shall not be unreasonably withheld, conditioned or delayed. Tenant acknowledges that Landlord has not made any representation regarding the receipt of approvals for the Tenant Generator, and if Tenant is unable for any reason to receive such approvals, Landlord shall not be liable for any damages resulting therefrom. In the event such Tenant Generator is installed, then during the Lease Term, Tenant shall maintain such Tenant Generator at Tenant's sole cost and expense. Notwithstanding the foregoing, Landlord shall not be liable for any damages whatsoever resulting from any failure in

operation of the Tenant Generator, or the failure of the Tenant Generator to provide suitable or adequate back-up power to the Premises, including but not limited to, loss of profits, loss of rents or other revenues, loss of business opportunity, loss of goodwill or loss of use, in each case, however occurring, or loss to inventory, scientific research, scientific experiments, laboratory animals, products, 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. Tenant's obligations with respect to the Premises, including the insurance and indemnification obligations contained in Article 10, below, shall apply to Tenant's use of the Tenant Generator and Tenant shall carry industry standard Boiler and machinery insurance covering the Tenant Generator. Tenant shall maintain all required permits in connection with the Tenant Generator throughout the Lease Term. If installed, at Landlord's election prior to the expiration or earlier termination of this Lease, Tenant shall either (A) leave the Tenant Generator in place, in which event Tenant shall surrender the Generator (and shall transfer to Landlord all permits maintained by Tenant in connection with the Generator during the Lease Term) concurrent with the surrender of the Premises to Landlord as required hereunder in good operating and working order, reasonable wear and tear and damage by casualty excepted, with all permits current, or (B) remove the Tenant Generator prior to the expiration or earlier termination of this Lease, and repair all damage to the Building and Premises resulting from such removal, at Tenant's sole cost and expense. In the event that Landlord fails to expressly elect to have the Tenant Generator removed upon the expiration or earlier termination of this Lease, then Landlord shall be deemed to have elected to have such Tenant Generator left in place.

6.5 **Rooftop Rights**. Provided that Tenant is then in occupancy of any portion of the Premises, then in accordance with, and subject to, the terms and conditions set forth in Article 8, and this Section 6.5, Tenant shall have the right to install and maintain, at Tenant's sole cost and expense but without the payment of any additional rent or fee, one (1) satellite dish/antennae on the roof of the Building (and reasonable equipment and cabling related thereto), for receiving or transmitting signals or broadcasts servicing the business conducted by Tenant from within the Premises (all such equipment is defined collectively as the "**Telecommunications Equipment**"). Landlord makes no representations or warranties whatsoever with respect to the condition of the roof of the Building, or the fitness or suitability of the roof of the Building for the installation, maintenance and operation of the Telecommunications Equipment, including, without limitation, with respect to the quality and clarity of any receptions and transmissions to or from the Telecommunications Equipment and the presence of any interference with such signals whether emanating from the Building or otherwise. The dimensions, physical appearance and the weight of the Telecommunications Equipment shall be subject to Landlord's reasonable approval, the location of any such installation of the Telecommunications Equipment shall be designated by Landlord subject to Tenant's reasonable approval and Landlord may require Tenant to install screening around such Telecommunications Equipment, at Tenant's sole cost and expense, as reasonably designated by Landlord. Tenant shall maintain such Telecommunications Equipment, at Tenant's sole cost and expense. In the event Tenant elects to exercise its right to install the Telecommunications Equipment, then Tenant shall give Landlord prior notice thereof. Tenant shall reimburse to Landlord any reasonable, out-of-pocket third party costs reasonably incurred by Landlord in approving such Telecommunications Equipment. Tenant shall remove such Telecommunications Equipment upon the expiration or earlier termination of this Lease, or, in the event Tenant no longer occupies any portion of the Premises, then upon the termination of Tenant's rights under this Section 6.5, and shall repair any damage to the affected portion of the rooftop and the Premises caused thereby. Such Telecommunications Equipment shall be installed pursuant to plans and specifications approved by Landlord (specifically including, without limitation, all mounting and waterproofing details), which approval will not be unreasonably withheld, conditioned, or delayed. Notwithstanding any such review or approval by Landlord, Tenant shall remain solely liable for any damage to any portion of the roof or roof membrane, specifically including any penetrations, in connection with Tenant's installation, use, maintenance and/or repair of such Telecommunications Equipment, and Landlord shall have no liability therewith. Such Telecommunications equipment shall, in all instances, comply with Applicable Laws. Tenant shall not be entitled to license its Telecommunications Equipment to any unrelated third party, nor shall Tenant be permitted to receive any revenues, fees or any other consideration for the use of such Telecommunications Equipment by an unrelated third party. Tenant's right to install such Telecommunication Equipment shall be non-exclusive, and Tenant hereby expressly acknowledges Landlord's continued right (i) to itself utilize any rooftop space, and (ii) to re-sell, license or lease any rooftop space to an unaffiliated third party; provided, however, such Landlord (or third-party) use shall not materially interfere with (or preclude the installation of) Tenant's Telecommunications Equipment.

7. REPAIRS

7.1 **Tenant Repair Obligations**. Tenant shall, throughout the Term, at its sole cost and expense, maintain, repair, and replace as required, the Premises and Building and every part thereof in a good standard of maintenance, repair and replacement as required, and in good and sanitary condition, all in accordance with the standards of Comparable Buildings, except for Landlord Repair Obligations and except for any damage by casualty which is not Tenant's obligation to repair pursuant to Article 11 below, whether or not such maintenance, repair or replacement is required in order to comply with Applicable Laws ("**Tenant's Repair Obligations**"), including, without limitation, the following: (1) glass, windows, window frames, window casements (including the repairing, resealing, cleaning and replacing of both interior and exterior windows) and skylights; (2) interior and exterior doors, door frames and door closers; (3) interior lighting (including, without limitation, light bulbs and ballasts); (4) the plumbing, sewer, drainage, electrical, fire protection, elevator, escalator, life safety and security systems and equipment, existing heating, ventilation and air-conditioning systems, and all other mechanical, electrical and communications systems and equipment (collectively, the "**Building Systems**"), including without limitation (i) any specialty or supplemental Building Systems installed by or for Tenant and (ii) all electrical facilities and equipment, including lighting fixtures, lamps, fans and any exhaust equipment and systems, electrical motors and all other appliances and equipment of every kind and nature located in, upon or about the Premises; (5) all communications systems serving the Premises; (6) all of Tenant's security systems in or about or serving the Premises; (7) Tenant's signage; and (8) interior demising walls and partitions (including painting and wall coverings), equipment, floors, and any roll-up doors, ramps and dock equipment. Tenant's Repair Obligations also includes the routine maintenance of the load bearing and exterior walls of the Building, including, without limitation, any painting, sealing, patching and waterproofing of such walls. Tenant shall additionally be responsible, at Tenant's sole cost and expense, to furnish all expendables, including light bulbs, paper goods and soaps, used in the Premises, and, to the extent that Landlord notifies Tenant in writing of its intention to no longer arrange for such monitoring, cause the fire alarm systems serving the Premises to be monitored by a monitoring or protective services firm approved by Landlord in writing. Landlord hereby assigns to Tenant all warranties and guaranties, if any, in existence with respect to the items which are Tenant's obligation to repair and maintain pursuant to this Section 7.1, which assignment shall be on a non-exclusive basis such that the warranties and guaranties may be enforced by Tenant and/or Landlord, and Landlord shall cooperate with Tenant in a commercially reasonable manner to assist in enforcing all such warranties and guaranties for the benefit of Tenant.

7.2 **Service Contracts**. All Building Systems, including HVAC, elevators, main electrical, plumbing and fire/life-safety systems, shall be maintained, and repaired by Tenant (with Landlord being responsible for replacement of the Building Systems pursuant to Section 7.4 below, provided that Tenant hereby agrees that replacement of a component part of a Building System which does not exceed $10,000.00 shall be deemed a repair for which Tenant shall be responsible hereunder and not a replacement of the applicable Building System) (i) in a commercially reasonable good and serviceable condition, (ii) in accordance with any applicable manufacturer specifications relating to any particular component of such Building Systems, (iii) in accordance with Applicable Laws. Tenant shall contract with a qualified, experienced professional third party service companies (a "**Service Contract**"). Tenant shall regularly, in accordance with commercially reasonable standards, generate and maintain preventive maintenance records relating to each Building's mechanical and main electrical systems, including life safety, elevators and the central plant ("Preventative Maintenance Records"). In addition, upon Landlord's written request, Tenant shall deliver a copy of all current Service Contracts to Landlord and/or a copy of the Preventative Maintenance Records.

7.3 **Landlord's Right to Perform Tenant's Repair Obligations**. Tenant shall notify Landlord in writing at least ten (10) business days prior to performing any Tenant's Repair Obligations which may have a material, adverse affect on the Building Systems or which is reasonably anticipated to cost more than $100,000.00. Upon receipt of such notice from Tenant, Landlord shall have the right to either (i) perform such material Tenant's Repair Obligation by delivering notice of such election to Tenant within ten (10) business days following receipt of Tenant's notice, and Tenant shall pay Landlord the cost thereof (including Landlord's reasonable out-of-pocket costs incurred in connection therewith) within thirty (30) days after receipt of an invoice therefor, or (ii) require Tenant to perform such Tenant's Repair Obligation at Tenant's sole cost and expense. If Tenant fails to perform any Tenant's Repair Obligation within a reasonable period of time, given the circumstances, after receipt of written notice from Landlord of the need for such repairs, but in any event not later than thirty (30) days after receipt of said notice (unless Tenant's

obligation cannot reasonably be performed within thirty (30) days, in which event Tenant shall be allowed additional time as is reasonably necessary to perform the obligation so long as Tenant begins performance within the initial thirty (30) days and diligently pursues performance to completion), or, in the event of an "Emergency", as defined in Section 7.5 below, not later than two (2) business days after receipt of such notice, then Landlord may, but need not, following delivery of notice to Tenant of such election, make such Tenant's Repair Obligation, and Tenant shall pay Landlord the cost thereof (including Landlord's reasonable out-of-pocket costs incurred in connection therewith) within thirty (30) days after receipt of an invoice therefor.

7.4 **Landlord Repair Obligations**. Landlord shall be responsible for repairing, maintaining and replacing as required, in a good standard of maintenance, repair and replacement as required, and in a good and sanitary condition, all in accordance with the standards of Comparable Buildings, whether or not such maintenance, repair or replacement is required in order to comply with Applicable Laws, the exterior walls, foundation and roof (including roof membrane) of the Building and the structural portions of all floors of the Building (collectively, the "**Building Structure**"), and all underground utilities and for replacing, as required, the Building Systems, except to the extent that such repairs are required due to the negligence or willful misconduct of Tenant (the "**Landlord Repair Obligation**"); provided, however, that if such repairs or maintenance are due to the negligence or willful misconduct of Tenant, Landlord shall nevertheless make such repairs at Tenant's expense, or, if covered by Landlord's insurance, Tenant shall only be obligated to pay any commercially reasonable deductible in connection therewith. Costs expended by Landlord in connection with the Landlord Repair Obligations shall be included in Operating Expenses to the extent allowed pursuant to the terms of Section 4.2.4 above. Landlord shall comply with the terms of Article 27 of this Lease in connection with any entry to the Premises necessary to complete Landlord Repair Obligations.

7.5 **Tenant's Right to Make Repairs**. Notwithstanding any provision to the contrary contained in this Lease, if Tenant provides written notice to Landlord of an event or circumstance which requires the action of Landlord under this Lease with respect to repair and/or maintenance required in the Premises, including repairs to the portions of the Building located within the Premises that are Landlord's responsibility under Section 7.4 (the "**Base Building**"), which event or circumstance with respect to the Base Building materially and adversely affects Tenant's use of or access to the Premises or the conduct of Tenant's business from the Premises, and Landlord fails to perform such corrective action within a reasonable period of time, given the circumstances, after the receipt of such notice, but in any event not later than thirty (30) days after receipt of said notice (unless Landlord's obligation cannot reasonably be performed within thirty (30) days, in which event Landlord shall be allowed additional time as is reasonably necessary to perform the obligation so long as Landlord begins performance within the initial thirty (30) days and diligently pursues performance to completion), or, in the event of an Emergency (as defined below), not later than two (2) business days after receipt of such notice, then Tenant shall have the right to undertake such actions as may be reasonably necessary to make such repairs if Landlord thereafter fails to commence corrective action within five (5) business days following Landlord's receipt of a second written notice from Tenant specifying that Tenant will undertake such actions if Landlord fails to timely do so (provided that such second notice shall include the following language in bold, capitalized text: "**IF LANDLORD FAILS TO COMMENCE THE REPAIRS DESCRIBED IN THIS LETTER WITHIN FIVE (5) BUSINESS DAYS FROM LANDLORD'S RECEIPT OF THIS LETTER, TENANT WILL PERFORM SUCH REPAIRS AT LANDLORD'S EXPENSE**"; provided, however, that in no event shall Tenant undertake any actions that could materially and adversely affect the Base Building. Notwithstanding the foregoing, in the event of an Emergency, no second written notice shall be required as long as Tenant advises Landlord in the first written notice of Tenant's intent to perform such Emergency repairs if Landlord does not commence the same within such two (2) business day period, utilizing the language required in second notices (but replacing "FIVE (5) BUSINESS DAYS" with "TWO (2) BUSINESS DAYS"). If such action was required under the terms of this Lease to be taken by Landlord and was not commenced by Landlord within such five (5) business day period (or within two (2) business days after the initial notice in the event of an Emergency) and thereafter diligently pursued to completion, then Tenant shall be entitled to prompt reimbursement by Landlord of the reasonable out-of-pocket third-party costs and expenses actually incurred by Tenant in taking such action. If Tenant undertakes such corrective actions pursuant to this Section 7.3, then (a) the insurance and indemnity provisions set forth in this Lease shall apply to Tenant's performance of such corrective actions, (b) Tenant shall proceed in accordance with all applicable laws, (c) Tenant shall retain to perform such corrective actions only such reputable contractors and suppliers as are duly licensed and qualified, (d) Tenant shall effect such repairs in a good and workmanlike and commercially reasonable manner, (e) Tenant shall use new or like new materials, and (f) Tenant shall take reasonable efforts to minimize any material interference or impact on the other tenants and occupants of the Building. Promptly following

completion of any work taken by Tenant pursuant to the terms of this Section 7.5, Tenant shall deliver a detailed invoice of the work completed, the materials used and the costs relating thereto, and within forty-five (45) days after receipt of such invoice Landlord shall reimburse Tenant the amounts expended by Tenant in connection with such work, provided that Landlord shall have the right to reasonably object if Landlord claims that such action did not have to be taken by Landlord pursuant to the terms of this Lease or that the charges are excessive (in which case Landlord shall pay within forty-five (45) days after receipt of the invoice the amount it contends would not have been excessive). If Landlord does not reimburse Tenant such amount within forty-five (45) days after receipt of such invoice or deliver a written objection to Tenant within forty-five (45) days after receipt of such invoice, then Tenant shall be entitled to deliver a reminder notice to Landlord with respect to such reimbursement obligation, and in the event Landlord fails to pay or provide a written objection within ten (10) days following receipt of the reminder notice, Tenant may deduct from Rent payable by Tenant under this Lease the amount set forth in such invoice. If, however, Landlord delivers to Tenant, within forty-five (45) days after receipt of Tenant's invoice (or within ten (10) days following receipt of a reminder notice), a written objection to the payment of such invoice, setting forth with reasonable particularity Landlord's reasons for its claim that such action did not have to be taken by Landlord pursuant to the terms of this Lease or that the charges are excessive, then Tenant shall not then be entitled to such deduction from Rent, and Tenant may institute legal proceedings against Landlord to collect the amount set forth in the subject invoice or pursue any other remedies under this Lease based upon a default by Landlord. If Tenant receives a final judgment against Landlord (whether by virtue of Landlord's failure to appeal or unsuccessful appeal of such judgment), Tenant may offset and deduct the amount of the judgment (including all fees, expenses and reasonable attorneys' fees actually incurred by Tenant in connection with such legal proceedings, to the extent included in such judgment), from the Rent next due and owing under this Lease. For purposes of this Section 7.5, an "**Emergency**" shall mean an event threatening immediate and material danger to people located in the Building or immediate, material damage to the Building, Base Building, the Tenant Improvements or Alterations, or creating a realistic possibility of an immediate and material interference with, or immediate and material interruption of a material aspect of Tenant's business operations.

8. ADDITIONS AND ALTERATIONS

8.1 **Landlord's Consent to Alterations**. Tenant may not make any improvements, alterations, additions or changes to the Premises or any mechanical, plumbing or HVAC facilities or systems pertaining to the Premises (collectively, the "**Alterations**") without first procuring the prior written consent of Landlord to such Alterations, which consent shall be requested by Tenant not less than thirty (30) days prior to the commencement thereof, and which consent shall not be unreasonably withheld or conditioned by Landlord, provided it shall be deemed reasonable for Landlord to withhold its consent to any Alteration which adversely affects the structural portions or the Building Systems or is visible from the exterior of the Building. Notwithstanding the foregoing, Tenant shall be permitted to make Alterations following ten (10) business days' notice to Landlord, but without Landlord's consent, to the extent that such Alterations (i) do not adversely affect the Building Systems, (ii) are not visible from the exterior of the Building, and (iii) cost less than $100,000.00 for a particular job of work. The construction of the initial improvements to the Premises shall be governed by the terms of the Tenant Work Letter and not the terms of this Article 8. The term "Alterations" do not include maintenance or repair required in connection with Tenant's Repair Obligations, which shall be governed by Section 7.1, above.

8.2 **Manner of Construction**. Landlord may impose, as a condition of its consent to any and all Alterations of the Premises or about the Premises, such requirements as Landlord in its reasonable discretion may deem desirable, including, but not limited to, the requirement that upon Landlord's written request made at the time of Landlord's consent to such Alterations, Tenant shall, at Tenant's expense, remove such Alterations upon the expiration or any early termination of the Lease Term, only if such Alterations are Specialty Improvements. Landlord's determination with respect to removal of any such Specialty Improvements shall include the extent to which Landlord shall require Tenant to perform any work to return the affected portion of the Premises to the condition existing prior to such Specialty Improvement, reasonable wear and tear excepted. For the avoidance of doubt, Tenant shall only be responsible for removing Specialty Improvements (hereafter defined), if at the time of its consent to such Specialty Improvements, Landlord advises in writing in its consent that Tenant is obligated to remove such Specialty Improvements at the expiration of the Term. "**Specialty Improvements**" means, collectively, any alterations, additions or improvements to the Premises which are not typical alterations, additions or improvements found in Comparable Buildings. Tenant shall not be required to remove any other Alterations at surrender of the Premises.

Tenant shall construct such Alterations and perform such repairs in a good and workmanlike manner, in conformance with Applicable Laws and pursuant to a valid building permit, issued by the city in which the Building is located (or other applicable governmental authority). Tenant shall not use (and upon notice from Landlord shall cease using) contractors, services, workmen, labor, materials or equipment that, in Landlord's reasonable judgment, would disturb labor harmony with the workforce or trades engaged in performing other work, labor or services in or about the Building or the Common Areas. Upon completion of any Alterations which are subject to Landlord's consent under this Article 8, Tenant shall deliver to Landlord final lien waivers from all contractors, and material subcontractors who performed such work to the extent required by Applicable Law. In addition to Tenant's obligations under Article 9 of this Lease, to the extent required by Applicable Law, upon completion of any Alterations, Tenant agrees to cause a Notice of Completion to be recorded in the office of the Recorder of the County of San Mateo in accordance with Section 3093 of the Civil Code of the State of California or any successor statute. Upon written request, Tenant shall deliver to the Project construction manager a reproducible copy of any "**as built**" drawings of the Alterations as well as all permits, approvals and other documents issued by any governmental agency in connection with the Alterations.

8.3 **Payment for Improvements**. If Tenant requests that any Alterations be completed by Landlord, and Landlord agrees, Tenant shall pay to Landlord an amount equal to five percent (5%) of the hard cost of such work to compensate Landlord for all overhead, general conditions, fees and other costs and expenses arising from Landlord's involvement with such work. If Tenant does not order any work directly from Landlord, Tenant shall reimburse Landlord for Landlord's reasonable, actual, out-of-pocket costs and expenses actually incurred in connection with Landlord's review of such work.

8.4 **Construction Insurance**. In addition to the requirements of Article 10 of this Lease, in the event that Tenant makes any Alterations, prior to the commencement of such Alterations, Tenant shall provide Landlord with evidence that Tenant or its general contractor carries "**Builder's All Risk**" insurance in an amount reasonably approved by Landlord covering the construction of such Alterations, it being understood and agreed that all of such Alterations shall be insured by Tenant pursuant to Article 10 of this Lease immediately upon completion thereof. In addition, Tenant's contractors and subcontractors shall be required to carry (i) Commercial General Liability Insurance in an amount reasonably approved by Landlord, with Landlord, and, at Landlord's option, Landlord's property manager and project manager, as additional insureds in an amount reasonably approved by Landlord, and otherwise in accordance with the requirements of Article 10 of this Lease, and (ii) workers compensation insurance with a waiver of subrogation in favor of Landlord. In connection with Alterations with a cost in excess of $500,000, Landlord may, in its discretion, require Tenant to obtain a lien and completion bond or some alternate form of security satisfactory to Landlord in an amount sufficient to ensure the lien-free completion of such Alterations and naming Landlord as a co-obligee.

8.5 **Landlord's Property**. All Alterations, improvements, fixtures, equipment and/or appurtenances which are permanently affixed to the Premises or which tie into the Building Systems installed in, on or about the Premises by or on behalf of Tenant, from time to time, shall be at the sole cost of Tenant and shall be and become the property of Landlord and remain in place at the Premises following the expiration or earlier termination of this Lease. Notwithstanding the foregoing, pursuant to Section 8.2 above, Landlord may, by written notice to Tenant at the time of its approval of working drawings, require Tenant, at Tenant's expense, to remove any Specialty Improvements within the Premises and to repair any damage to the Premises and Building caused by such removal and, if applicable pursuant to Section 8.2 above, return the affected portion of the Premises to the condition existing prior to such Specialty Improvement, reasonable wear and tear excepted. If Tenant fails to complete such removal and/or to repair any damage caused by the removal of Specialty Improvements in the Premises and return the affected portion of the Premises to the condition existing prior to such Specialty Improvement (reasonable wear and tear excepted), Landlord may do so and may charge the reasonable cost thereof to Tenant. Tenant hereby protects, defends, indemnifies and holds Landlord harmless from any liability, cost, obligation, expense or claim of lien in any manner relating to the installation, placement, removal (in the case of Specialty Improvements designated for removal pursuant to Section 8.2 above) or financing of any such Alterations, improvements, fixtures and/or equipment which are permanently affixed to the Premises or which tie into the Building Systems installed in, on or about the Premises by or on behalf of Tenant, which obligations of Tenant shall survive the expiration or earlier termination of this Lease. Notwithstanding anything to the contrary set forth in this Lease, upon the expiration of the Lease Term, or upon any earlier termination of this Lease, Tenant shall have no obligation to remove from the Premises (i) any of the Tenant Improvements initially constructed pursuant to the terms of the Tenant Work Letter or any other improvements,

fixtures, equipment and/or appurtenances existing in, on or about the Premises as of the date Landlord delivers possession of the Premises to Tenant, (ii) any Alterations which are not subject to Landlord's consent under this Article 8, or (iii) any Alterations (including any Specialty Improvements) which are not Specialty Improvements designated to be removed by Landlord pursuant to Section 8.2.

9. COVENANT AGAINST LIENS Tenant shall keep the Project and Premises free from any liens or encumbrances arising out of the work performed, materials furnished or obligations incurred by or on behalf of Tenant, and shall protect, defend, indemnify and hold Landlord harmless from and against any claims, liabilities, judgments or costs (including, without limitation, reasonable attorneys' fees and costs) arising out of same or in connection therewith. Tenant shall give Landlord notice at least twenty (20) days prior to the commencement of any such work on the Premises (or such additional time as may be necessary under Applicable Laws) to afford Landlord the opportunity of posting and recording appropriate notices of non-responsibility (to the extent applicable pursuant to then Applicable Laws). Tenant shall remove any such lien or encumbrance by bond or otherwise within ten (10) business days after written notice by Landlord, and if Tenant shall fail to do so, Landlord may pay the amount necessary to remove such lien or encumbrance, without being responsible for investigating the validity thereof.

10. INSURANCE

10.1 **Indemnification and Waiver**. Except to the extent due to the negligence, willful misconduct or violation of this Lease by Landlord or the Landlord Parties, Tenant hereby assumes all risk of damage to property or injury to persons in, upon or about the Premises from any cause whatsoever and agrees that Landlord, its partners, subpartners and their respective officers, agents, servants, employees, lenders, any property manager and independent contractors (individually, a "**Landlord Party**" and collectively, "**Landlord Parties**") shall not be liable for, and are hereby released from any responsibility for, any damage either to person or property or resulting from the loss of use thereof, which damage is sustained by Tenant or by other persons claiming through Tenant. Except to the extent due to the negligence, willful misconduct or violation of this Lease by Landlord or any Landlord Party, Tenant shall indemnify, defend, protect, and hold harmless the Landlord Parties from any and all claims, loss, cost, damage, injury, expense and liability (including without limitation court costs and reasonable attorneys' fees) incurred in connection with or arising from any cause in, on or about the Premises, any acts, omissions or negligence of Tenant or of any person claiming by, through or under Tenant, or of the contractors, agents, servants, employees, invitees, guests or licensees of Tenant or any such person, in, on or about the Project or any breach of the terms of this Lease. Notwithstanding anything to the contrary in this Lease, Landlord shall not be released or indemnified from, and shall indemnify, defend, protect and hold harmless Tenant, its agents, officers and employees, from, all losses, damages, liabilities, demands, claims, actions, attorneys' fees, costs and expenses arising from the negligence or willful misconduct of Landlord or its agents, contractors, employees, licensees or invitees, or a violation of Landlord's obligations or representations under this Lease, or resulting from the negligent or wrongful actions or omissions of Landlord or the Landlord Parties in, on or about the Common Areas, all except to the extent due to the negligence, willful misconduct or violation of this Lease by Tenant or its agents, contractors, employees, licensees or invitees. The provisions of this Section 10.1 shall survive the expiration or sooner termination of this Lease with respect to any claims or liability arising in connection with any event occurring prior to such expiration or termination.

10.2 **Landlord's Insurance; Tenant's Compliance With Landlord's Property Insurance**. Landlord shall insure the Building Tenant Improvements and any Alterations during the Lease Term against loss or damage under an "all risk" property insurance policy on a full replacement cost basis, with reasonable and customary deductible amounts not exceeding deductible amounts generally obtained by owners of Comparable Buildings. Such coverage shall be in such amounts, from such companies, and on such other terms and conditions, as Landlord may from time to time reasonably determine. Additionally, at the option of Landlord, such insurance coverage may include the risks of earthquakes and/or flood damage and additional hazards, a rental loss endorsement and one or more loss payee endorsements in favor of the holders of any mortgages or deeds of trust encumbering the interest of Landlord in the Building or the ground or underlying lessors of the Building, or any portion thereof. The costs of such insurance shall be included in Operating Expenses, subject to the terms of Section 4.2.4. Tenant shall, at Tenant's expense, comply with all insurance company requirements pertaining to the use of the Premises. If Tenant's conduct or use of the Premises causes any increase in the premium for such insurance policies then Tenant shall reimburse Landlord for any such increase. Tenant, at Tenant's expense, shall comply with all rules, orders, regulations or requirements of the American Insurance Association (formerly the National Board of Fire Underwriters) and with any similar body.

Tenant shall also provide Landlord and Landlord's insurer(s) with such information regarding the use of the Premises and any damage to the Premises as they may require in connection with the placement of insurance for the Premises or the adjusting of any losses to the Premises. Notwithstanding anything to the contrary in this Lease, Tenant shall not be required to comply with or cause the Premises to comply with any laws, rules, regulations or insurance requirements requiring the construction of alterations unless such compliance is necessitated solely due to Tenant's particular use of the Premises. Landlord shall also keep in full force and effect a policy of Commercial General Liability Insurance protecting Landlord against claims for bodily injury and property damage arising out of Landlord's ownership, use, occupancy or maintenance of the Building and the Common Areas. Such insurance shall be on an occurrence basis and shall include limits of liability not less than those required of Tenant under Section 10.3 and name Tenant as an additional insured.

10.3 **Tenant's Insurance**. Tenant shall maintain the following coverages in the following amounts.

10.3.1 Commercial General Liability Insurance on an occurrence form covering the insured against claims of bodily injury, personal injury and property damage (including loss of use thereof) arising out of Tenant's operations, and contractual liabilities including a contractual coverage, and including products and completed operations coverage, for limits of liability on a per location basis of not less than:

Bodily Injury and Property Damage Liability	$5,000,000 each occurrence $5,000,000 annual aggregate
Personal Injury Liability	$3,000,000 each occurrence $3,000,000 annual aggregate

10.3.2 Property Insurance covering all office furniture, business and trade fixtures, office equipment, free-standing cabinet work, movable partitions, merchandise and all other items of Tenant's property on the Premises installed by, for, or at the expense of Tenant. Such insurance shall be written on special form policies, for the full replacement cost value (subject to reasonable deductible amounts) new without deduction for depreciation of the covered items and in amounts that meet any co-insurance clauses of the policies of insurance and shall include coverage for damage or other loss caused by fire or other peril including, but not limited to, vandalism and malicious mischief, theft, water damage, including sprinkler leakage, bursting or stoppage of pipes, and explosion.

10.3.3 Business Income Interruption for six (6) months including Extra Expense insurance in such amounts as will reimburse Tenant for actual direct or indirect loss of earnings attributable to the risks outlined in Section 10.3.2 above.

10.3.4 Worker's Compensation and Employer's Liability or other similar insurance pursuant to all applicable state and local statutes and regulations. The policy shall include a waiver of subrogation in favor of Landlord, its employees, Lenders and any property manager or partners.

10.4 **Form of Policies**. The minimum limits of policies of insurance required of Tenant under this Lease shall in no event limit the liability of Tenant under this Lease. Such insurance shall (i) name Landlord, its subsidiaries and affiliates, its property manager (if any) and any other party the Landlord so specifies, as an additional insured or loss payee, as applicable, including Landlord's managing agent, if any; (ii) be issued by an insurance company having a rating of not less than A-:VII in Best's Insurance Guide or which is otherwise acceptable to Landlord and authorized to do business in the State of California; (iv) be primary insurance as to all claims thereunder and provide that any insurance carried by Landlord is excess and is non-contributing with any insurance required of Tenant; and (v) be in form and content reasonably acceptable to Landlord. Tenant shall promptly provide written notice of cancellation received by Tenant from its insurer. Tenant shall deliver certificates of said policies to Landlord on or before the Lease Commencement Date and at least ten (10) days before the expiration dates thereof. In the event Tenant shall fail to procure such insurance, or to deliver such certificate, and such failure continues for ten (10) days after written notice thereof from Landlord Tenant, Landlord may, at its option, procure such policies for the account of Tenant, and the cost thereof shall be paid to Landlord within thirty (30) days after delivery to Tenant of bills therefor.

10.5 **Subrogation**. Landlord and Tenant hereby agree to look solely to, and seek recovery only from, their respective insurance carriers in the event of a property or business interruption loss to the extent that such coverage is agreed to be provided hereunder. The parties each hereby waive all rights and claims against each other for such losses, and waive all rights of subrogation of their respective insurers, provided such waiver of subrogation shall not affect the right to the insured to recover thereunder. The parties agree that their respective insurance policies do now, or shall, contain the waiver of subrogation.

10.6 **Additional Insurance Obligations**. Tenant shall carry and maintain during the entire Lease Term, at Tenant's sole cost and expense, increased amounts of the insurance required to be carried by Tenant pursuant to this Article 10 and such other reasonable types of insurance coverage and in such reasonable amounts covering the Premises and Tenant's operations therein, as may be reasonably requested by Landlord or Landlord's lender, but in no event in excess of the amounts and types of insurance then being required by prudent owners of Comparable Buildings and Tenant shall only be obligated to modify coverage once every five (5) years.

11. DAMAGE AND DESTRUCTION

11.1 **Repair of Damage to Premises by Landlord**. Tenant shall promptly notify Landlord of any damage to the Premises resulting from fire or any other casualty. If the Premises or any Common Areas serving or providing access to the Premises shall be damaged by fire or other casualty, Landlord shall notify Tenant within sixty (60) days after the date of the damage whether Landlord will restore the Premises and Common Areas and, in Landlord's reasonable judgment, the time period within which the restoration can be completed. If Landlord elects to restore Premises and Common Areas, Landlord shall promptly and diligently, subject to reasonable delays for insurance adjustment or other matters beyond Landlord's reasonable control, and subject to all other terms of this Article 11, restore the Premises and such Common Areas pursuant to plans and specifications reasonably approved by Tenant. Such restoration shall be to substantially the same condition of the Premises and the Common Areas prior to the casualty, except for modifications required by zoning and building codes and other laws or any other modifications to the Common Areas deemed desirable by Landlord, which are consistent with the character of the Project, provided that access to the Premises and the parking facilities serving the Project shall not be materially impaired. Landlord's repair obligations shall include the Tenant Improvements and Tenant's Alterations installed in the Premises. Landlord shall not be liable for any inconvenience or annoyance to Tenant or its visitors, or injury to Tenant's business resulting in any way from such damage or the repair thereof; provided however, that if such fire or other casualty shall have damaged the Premises or Common Areas necessary to Tenant's occupancy, and the damaged portions of the Premises are not occupied by Tenant as a result thereof, then during the time and to the extent the Premises are unfit for occupancy, the Rent shall be abated in proportion to the ratio that the amount of rentable square feet of the Premises which is unfit for occupancy for the purposes permitted under this Lease bears to the total rentable square feet of the Premises.

11.2 **Landlord's Option to Repair**. Notwithstanding the terms of Section 11.1, Landlord may elect not to rebuild and/or restore the Premises, Building and/or Project, and instead terminate this Lease, by notifying Tenant in writing of such termination within sixty (60) days after the date of the damage, such notice to include a termination date giving Tenant sixty (60) days to vacate the Premises, but Landlord may so elect only if the Building shall be damaged by fire or other casualty or cause, and one or more of the following conditions is present: (i) in Landlord's reasonable judgment, repairs cannot reasonably be completed within one (1) year after the date of the damage (when such repairs are made without the payment of overtime or other premiums); (ii) the damage is due to a risk that Landlord is not required to insure under this Lease (and does not actually insure), and the cost of restoration exceed ten percent (10%) of the replacement cost of the Building (unless Tenant agrees to pay any uninsured amount in excess of such ten percent (10%)); or (iii) the damage occurs during the last twelve (12) months of the Lease Term and will take more than sixty (60) days to restore.

11.3 **Tenant's Option to Terminate.** Notwithstanding anything to the contrary in Section 11.1 or 11.2, if (a) the damage occurs during the last twelve (12) months of the Lease Term, and will take more than sixty (60) days to restore, or (b) in the reasonable judgment of Landlord, the repairs cannot be completed within eight (8) months days after the date of the damage (or are not in fact completed within nine (9) months after the date of the damage), Tenant may elect, no earlier than sixty (60) days after the date of the damage and not later than sixty (60) days after Tenant's receipt of Landlord's notice of the repair period, or within thirty (30) days after such repairs are not timely completed,

to terminate this Lease by written notice to Landlord effective as of the date specified in the notice, which date shall not be less than thirty (30) days nor more than sixty (60) days after the date such notice is given by Tenant.

11.4 **Waiver of Statutory Provisions**. The provisions of this Lease, including this Article 11, 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, the Building or the Project, and any statute or regulation of the State of California, including, without limitation, Sections 1932(2) and 1933(4) of the California Civil Code, with respect to any rights or obligations concerning damage or destruction in the absence of an express agreement between the parties, and any other statute or regulation, now or hereafter in effect, shall have no application to this Lease or any damage or destruction to all or any part of the Premises, the Building or the Project.

12. NONWAIVER No provision of this Lease shall be deemed waived by either party hereto unless expressly waived in a writing signed thereby. The waiver by either party hereto of any breach of any term, covenant or condition herein contained shall not be deemed to be a waiver of any subsequent breach of same or any other term, covenant or condition herein contained. The subsequent acceptance of Rent hereunder by Landlord shall not be deemed to be a waiver of any preceding breach by Tenant of any term, covenant or condition of this Lease, other than the failure of Tenant to pay the particular Rent so accepted, regardless of Landlord's knowledge of such preceding breach at the time of acceptance of such Rent. No acceptance of a lesser amount than the Rent herein stipulated shall be deemed a waiver of Landlord's right to receive the full amount due, nor shall any endorsement or statement on any check or payment or any letter accompanying such check or payment be deemed an accord and satisfaction, and Landlord may accept such check or payment without prejudice to Landlord's right to recover the full amount due. No receipt of monies by Landlord from Tenant after the termination of this Lease shall in any way alter the length of the Lease Term or of Tenant's right of possession hereunder, or after the giving of any notice shall reinstate, continue or extend the Lease Term or affect any notice given Tenant prior to the receipt of such monies, it being agreed that after the service of notice or the commencement of a suit, or after final judgment for possession of the Premises, Landlord may receive and collect any Rent due, and the payment of said Rent shall not waive or affect said notice, suit or judgment.

13. CONDEMNATION If the whole or any material part of the Premises, Building or Project shall be taken by power of eminent domain or condemned by any competent authority for any public or quasi-public use or purpose, or if any adjacent property or street shall be so taken or condemned, or reconfigured or vacated by such authority in such manner as to require the use, reconstruction or remodeling of any part of the Premises, Building or Project, or if Landlord shall grant a deed or other instrument in lieu of such taking by eminent domain or condemnation, Landlord shall have the option to terminate this Lease effective as of the date possession is required to be surrendered to the authority. If more than ten percent (10%) of the rentable square feet of the Premises is taken, or if access to the Premises is substantially impaired, in each case for a period in excess of ninety (90) days, Tenant shall have the option to terminate this Lease effective as of the date possession is required to be surrendered to the authority. Tenant shall not because of such taking assert any claim against Landlord or the authority for any compensation because of such taking and Landlord shall be entitled to the entire award or payment in connection therewith, except that Tenant shall have the right to file any separate claim available to Tenant for any taking of Tenant's personal property and fixtures belonging to Tenant and removable by Tenant upon expiration of the Lease Term pursuant to the terms of this Lease, and for moving expenses, so long as such claims do not diminish the award available to Landlord, its ground lessor with respect to the Building or Project or its mortgagee, and such claim is payable separately to Tenant. All Rent shall be apportioned as of the date of such termination. If any part of the Premises shall be taken, and this Lease shall not be so terminated, the Rent shall be proportionately abated. Tenant hereby waives any and all rights it might otherwise have pursuant to Section 1265.130 of The California Code of Civil Procedure. Notwithstanding anything to the contrary contained in this Article 13, in the event of a temporary taking of all or any portion of the Premises for a period of one hundred and eighty (180) days or less, then this Lease shall not terminate but the Base Rent and the Additional Rent shall be abated for the period of such taking in proportion to the ratio that the amount of rentable square feet of the Premises taken bears to the total rentable square feet of the Premises. Landlord shall be entitled to receive the entire award made in connection with any such temporary taking.

14. ASSIGNMENT AND SUBLETTING

14.1 **Transfers**. Except as permitted in Section 14.8 below, Tenant shall not, without the prior written consent of Landlord, assign, mortgage, pledge, hypothecate, encumber, or permit any lien to attach to, or otherwise

transfer, this Lease or any interest hereunder, permit any assignment, or other transfer of this Lease or any interest hereunder by operation of law, sublet the Premises or any part thereof, or enter into any license or concession agreements or otherwise permit the occupancy or use of the Premises or any part thereof by any persons other than Tenant and its employees, agents and contractors (all of the foregoing are hereinafter sometimes referred to collectively as "**Transfers**" and any person to whom any Transfer is made or sought to be made is hereinafter sometimes referred to as a "**Transferee**"). If Tenant desires Landlord's consent to any Transfer, Tenant shall notify Landlord in writing, which notice (the "**Transfer Notice**") shall include (i) the proposed effective date of the Transfer, which shall not be less than twenty (20) days nor more than one hundred eighty (180) days after the date of delivery of the Transfer Notice, (ii) a description of the portion of the Premises to be transferred (the "**Subject Space**"), (iii) the material terms of the proposed Transfer and the consideration therefor, including calculation of the "**Transfer Premium**", as that term is defined in Section 14.3 below, in connection with such Transfer, the name and address of the proposed Transferee, and a copy of all existing executed and/or proposed documentation pertaining to the proposed Transfer, (iv) current financial statements of the proposed Transferee certified by an officer, partner or owner thereof, and (v) any other information pertaining to the proposed Transfer reasonably requested by Landlord within ten (10) business days after its receipt of the Transfer Notice which will enable Landlord to determine the financial responsibility, character, and reputation of the proposed Transferee, nature of such Transferee's business and proposed use of the Subject Space. Any Transfer made without Landlord's prior written consent shall, at Landlord's option, be null, void and of no effect, and shall, at Landlord's option, constitute a default by Tenant under this Lease. Whether or not Landlord consents to any proposed Transfer, Tenant shall pay Landlord's reasonable review and processing fees, as well as any reasonable professional fees (including, without limitation, attorneys', accountants', architects', engineers' and consultants' fees) incurred by Landlord (not to exceed $3,500 in the aggregate for any particular Transfer), within thirty (30) days after written request by Landlord.

14.2 **Landlord's Consent**. Landlord shall not unreasonably withhold, condition or delay its consent to any proposed Transfer of the Subject Space to the Transferee on the terms specified in the Transfer Notice, and shall respond within twenty (20) days following the receipt of a Transfer Notice and all information required by the terms of Section 14.1 above. If Landlord fails to respond within such twenty (20) day period, then Tenant may send Landlord a reminder notice setting forth such failure containing the following sentence at the top of such notice in bold, capitalized font at least twelve (12) points in size: "LANDLORD'S FAILURE TO RESPOND TO THIS NOTICE WITHIN FIVE (5) BUSINESS DAYS SHALL RESULT IN LANDLORD'S DEEMED APPROVAL OF TENANT'S REQUEST FOR TRANSFER" (the "**Transfer Reminder Notice**"). Any such Transfer Reminder Notice shall include a complete copy of Tenant's Transfer Notice. If Landlord fails to respond within five (5) business days after receipt of a Transfer Reminder Notice, then Tenant' s Transfer for which Tenant requested Landlord's approval shall be deemed approved by Landlord. Without limitation as to other reasonable grounds for withholding consent, the parties hereby agree that it shall be reasonable under this Lease and under any Applicable Law for Landlord to withhold consent to any proposed Transfer where one or more of the following apply:

14.2.1 The Transferee is of a character or reputation or engaged in a business which is not consistent with the quality of the Building or the Project;

14.2.2 The Transferee is either a governmental agency or instrumentality thereof;

14.2.3 The Transferee is not a party of reasonable financial worth and/or financial stability in light of the responsibilities to be undertaken in connection with the Transfer on the date consent is requested; or

14.2.4 The proposed Transfer would cause a violation of another lease for space in the Project, or would give an occupant of the Project a right to cancel its lease.

If Landlord consents or is deemed to have consented to any Transfer pursuant to the terms of this Section 14.2 (and does not exercise any recapture rights Landlord may have under Section 14.4 of this Lease), Tenant may within six (6) months after Landlord's consent, but not later than the expiration of said six-month period, enter into such Transfer of the Premises or portion thereof, upon substantially the same terms and conditions as are set forth in the Transfer Notice furnished by Tenant to Landlord pursuant to Section 14.1 of this Lease, provided that if there are any material changes in the terms and conditions from those specified in the Transfer Notice such that Landlord would initially have been entitled to refuse its consent to such Transfer under this Section 14.2, Tenant shall again submit

the Transfer to Landlord for its approval and other action under this Article 14 (including Landlord's right of recapture, if any, under Section 14.4 of this Lease). Notwithstanding anything to the contrary in this Lease, if Tenant or any proposed Transferee claims that Landlord has unreasonably withheld or delayed its consent under Section 14.2 or otherwise has breached or acted unreasonably under this Article 14, their sole remedies shall be a suit for contract damages (other than damages for injury to, or interference with, Tenant's business including, without limitation, loss of profits, however occurring) or declaratory judgment and an injunction for the relief sought, and Tenant hereby waives all other remedies, including, without limitation, any right at law or equity to terminate this Lease, on its own behalf and, to the extent permitted under all Applicable Laws, on behalf of the proposed Transferee.

14.3 **Transfer Premium**. If Landlord consents to a Transfer, as a condition thereto which the parties hereby agree is reasonable, Tenant shall pay to Landlord fifty percent (50%) of any "**Transfer Premium**," as that term is defined in this Section 14.3, received by Tenant from such Transferee. "**Transfer Premium**" shall mean all rent, additional rent or other consideration payable by such Transferee in connection with the Transfer in excess of the Rent and Additional Rent payable by Tenant under this Lease during the term of the Transfer on a per rentable square foot basis if less than all of the Premises is transferred, and after deduction of (i) any costs of improvements made to the Subject Space in connection with such Transfer, (ii) brokerage commissions paid in connection with such Transfer, (iii) reasonable legal fees incurred in connection with such Transfer, (iv) any free base rent or other concessions reasonably provided to the Transferee, and (v) any fees paid to Landlord under Section 14.1. "**Transfer Premium**" shall also include, but not be limited to, key money, bonus money or other cash consideration paid by Transferee to Tenant in connection with such Transfer, and any payment in excess of fair market value for services rendered by Tenant to Transferee or for assets, fixtures, inventory, equipment, or furniture transferred by Tenant to Transferee in connection with such Transfer. The determination of the amount of Landlord's applicable share of the Transfer Premium shall be made on a monthly basis as rent or other consideration is received by Tenant under the Transfer.

14.4 **Landlord's Option as to Subject Space**. Notwithstanding anything to the contrary contained in this Article 14, in the event Tenant contemplates a Transfer which, together with all prior Transfers then remaining in effect, would cause more than fifty percent (50%) of the Premises to be Transferred for more than fifty percent (50%) of the then remaining Lease Term (taking into account any extension of the Lease Term which has irrevocably been exercised by Tenant), Tenant shall give Landlord notice (the "**Intention to Transfer Notice**") of such contemplated Transfer (whether or not the contemplated Transferee or the terms of such contemplated Transfer have been determined). The Intention to Transfer Notice shall specify the portion of and amount of rentable square feet of the Premises which Tenant intends to Transfer (the "**Contemplated Transfer Space**"), the contemplated date of commencement of the Contemplated Transfer (the "**Contemplated Effective Date**"), and the contemplated length of the term of such contemplated Transfer, and shall specify that such Intention to Transfer Notice is delivered to Landlord pursuant to this Section 14.4 in order to allow Landlord to elect to recapture the Contemplated Transfer Space. Thereafter, Landlord shall have the option, by giving written notice to Tenant within ten (10) business days after receipt of any Intention to Transfer Notice, to recapture the Contemplated Transfer Space. Such recapture shall cancel and terminate this Lease with respect to such Contemplated Transfer Space as of the Contemplated Effective Date. In the event of a recapture by Landlord, if this Lease shall be canceled with respect to less than the entire Premises, Landlord shall be responsible at its cost for demising the recaptured space from the remainder of the Premises, the Rent reserved herein shall be prorated on the basis of the number of rentable square feet retained by Tenant in proportion to the number of rentable square feet contained in the Premises, and this Lease as so amended shall continue thereafter in full force and effect, and upon request of either party, the parties shall execute written confirmation of the same. If Landlord declines, or fails to elect in a timely manner, to recapture such Contemplated Transfer Space under this Section 14.4, then, subject to the other terms of this Article 14, for a period of nine (9) months (the "**Nine Month Period**") commencing on the last day of such thirty (30) day period, Landlord shall not have any right to recapture the Contemplated Transfer Space with respect to any Transfer subject to Landlord's recapture right made during the Nine Month Period, provided that any such Transfer is substantially on the terms set forth in the Intention to Transfer Notice, and provided further that any such Transfer shall be subject to the remaining terms of this Article 14. If such a Transfer is not so consummated within the Nine Month Period (or if a Transfer is so consummated, then upon the expiration of the term of any Transfer of such Contemplated Transfer Space consummated within such Nine Month Period), Tenant shall again be required to submit a new Intention to Transfer Notice to Landlord with respect any contemplated Transfer, as provided above in this Section 14.4.

14.5 **Effect of Transfer**. If Landlord consents to a Transfer, (i) the terms and conditions of this Lease shall in no way be deemed to have been waived or modified, (ii) such consent shall not be deemed consent to any further Transfer by either Tenant or a Transferee, (iii) Tenant shall deliver to Landlord, promptly after execution, an original executed copy of all documentation pertaining to the Transfer in form reasonably acceptable to Landlord, (iv) Tenant shall furnish upon Landlord's request a complete statement, certified by a person which has the authority within Tenant's organization to certify the same, setting forth in detail the computation of any Transfer Premium Tenant has derived and shall derive from such Transfer, and (v) no Transfer relating to this Lease or agreement entered into with respect thereto, whether with or without Landlord's consent, shall relieve Tenant or any guarantor of the Lease from any liability under this Lease, including, without limitation, in connection with the Subject Space. If Landlord has a reasonable basis for determining that Tenant has understated the Transfer Premium, Landlord or its authorized representatives shall have the right at all reasonable times upon reasonable advanced notice to audit the books, records and papers of Tenant relating to any Transfer, and shall have the right to make copies thereof. If the Transfer Premium respecting any Transfer shall be found understated, Tenant shall, within thirty (30) days after demand, pay the deficiency, and if understated by more than five percent (5%), Tenant shall pay Landlord's reasonable, out-of-pocket costs of such audit.

14.6 **Additional Transfers**. For purposes of this Lease, the term "**Transfer**" shall also include (i) if Tenant is a partnership, the withdrawal or change, voluntary, involuntary or by operation of law, of more than fifty percent (50%) of the partners, or transfer of more than fifty percent (50%) of partnership interests, within a twelve (12)-month period, or the dissolution of the partnership without immediate reconstitution thereof, and (ii) if Tenant is a closely held corporation (*i.e.*, whose stock is not publicly held and not traded through an exchange or over the counter), (A) the dissolution, merger, consolidation or other reorganization of Tenant or (B) the sale or other transfer of an aggregate of more than fifty percent (50%) of the voting shares of Tenant (other than to immediate family members by reason of gift or death), within a twelve (12)-month period, or (C) the sale, mortgage, hypothecation or pledge of an aggregate of more than fifty percent (50%) of the value of the unencumbered assets of Tenant within a twelve (12)-month period.

14.7 **Occurrence of Default**. Any Transfer hereunder shall be subordinate and subject to the provisions of this Lease, and if this Lease shall be terminated during the term of any Transfer, Landlord shall have the right to: (i) treat such Transfer as cancelled and repossess the Subject Space by any lawful means, or (ii) require that such Transferee attorn to and recognize Landlord as its landlord under any such Transfer. If Tenant shall be in default under this Lease beyond applicable notice and cure periods, Landlord is hereby irrevocably authorized, as Tenant's agent and attorney-in-fact, to direct any Transferee to make all payments under or in connection with the Transfer directly to Landlord (which Landlord shall apply towards Tenant's obligations under this Lease) until such default is cured. Such Transferee shall rely on any representation by Landlord that Tenant is in default hereunder, without any need for confirmation thereof by Tenant. Upon any assignment, the assignee shall assume in writing all obligations and covenants of Tenant thereafter to be performed or observed under this Lease. No collection or acceptance of rent by Landlord from any Transferee shall be deemed a waiver of any provision of this Article 14 or the approval of any Transferee or a release of Tenant from any obligation under this Lease, whether theretofore or thereafter accruing. In no event shall Landlord's enforcement of any provision of this Lease against any Transferee be deemed a waiver of Landlord's right to enforce any term of this Lease against Tenant or any other person. If Tenant's obligations hereunder have been guaranteed, Landlord's consent to any Transfer shall not be effective unless the guarantor also consents to such Transfer.

14.8 **Non-Transfers**. Notwithstanding anything to the contrary contained in this Article 14, (i) an assignment or subletting of all or a portion of the Premises to an affiliate of Tenant (an entity that is controlled by, controls, or is under common control with, Tenant), (ii) an assignment of the Premises to an entity that acquires all or substantially all of the assets or interests (partnership, stock or other) of Tenant, or (iii) an assignment of the Premises to an entity that is the resulting entity of a merger or consolidation of Tenant with another entity (each, a "**Permitted Transferee**"), shall not be deemed a Transfer under this Article 14 (and for the avoidance of doubt, Sections 14.2, 14.3 and 14.4. shall not apply to such transaction), provided that (A) Tenant notifies Landlord of any such assignment or sublease and promptly supplies Landlord with any documents or information requested by Landlord regarding such assignment or sublease or such affiliate, (B) such assignment or sublease is not a subterfuge by Tenant to avoid its obligations under this Lease, and (C) such Permitted Transferee described in subpart (ii) or (iii) above in connection with an assignment shall have a tangible net worth (not including goodwill as an asset) computed in accordance with

generally accepted accounting principles ("**Net Worth**") at least equal to $150,000,000.00. An assignee of Tenant's entire interest that is also a Permitted Transferee may also be known as a "**Permitted Assignee**". "**Control**," as used in this Section 14.8, shall mean the ownership, directly or indirectly, of at least fifty-one percent (51%) of the voting securities of, or possession of the right to vote, in the ordinary direction of its affairs, of at least fifty-one percent (51%) of the voting interest in, any person or entity. No such permitted assignment or subletting shall serve to release Tenant from any of its obligations under this Lease.

15. SURRENDER OF PREMISES; OWNERSHIP AND REMOVAL OF TRADE FIXTURES

15.1 **Surrender of Premises**. No act or thing done by Landlord or any agent or employee of Landlord during the Lease Term shall be deemed to constitute an acceptance by Landlord of a surrender of the Premises unless such intent is specifically acknowledged in writing by Landlord. The delivery of keys to the Premises to Landlord or any agent or employee of Landlord shall not constitute a surrender of the Premises or effect a termination of this Lease, whether or not the keys are thereafter retained by Landlord, and notwithstanding such delivery Tenant shall be entitled to the return of such keys at any reasonable time upon request until this Lease shall have been properly terminated. The voluntary or other surrender of this Lease by Tenant, whether accepted by Landlord or not, or a mutual termination hereof, shall not work a merger, and at the option of Landlord shall operate as an assignment to Landlord of all subleases or subtenancies affecting the Premises or terminate any or all such sublessees or subtenancies.

15.2 **Removal of Tenant Property by Tenant**. Upon the expiration of the Lease Term, or upon any earlier termination of this Lease, Tenant shall, subject to the provisions of this Article 15, quit and surrender possession of the Premises to Landlord in as good order and condition as when Tenant took possession and as thereafter improved by Landlord and/or Tenant, reasonable wear and tear, damage by casualty and repairs which are specifically made the responsibility of Landlord hereunder excepted. Upon such expiration or termination, Tenant shall, without expense to Landlord, remove or cause to be removed from the Premises all debris and rubbish, and such items of furniture, equipment, free-standing cabinet work, movable partitions and other articles of personal property owned by Tenant or installed or placed by Tenant at its expense in the Premises, and such similar articles of any other persons claiming under Tenant, as Landlord may, in its sole discretion, require to be removed, and Tenant shall repair at its own expense all damage to the Premises and Building resulting from such removal.

15.3 **Environmental Assessment**. In connection with its surrender of the Premises, Tenant shall submit to Landlord, at least one hundred twenty (120) days prior to the expiration date of this Lease (or in the event of an earlier termination of this Lease, as soon as reasonably possible following such termination), a Phase I of the Premises by a competent and experienced environmental engineer or engineering firm selected by Tenant and reasonably satisfactory to Landlord (pursuant to a contract approved by Landlord and providing that Landlord can rely on the Phase I), which (i) evidences that the Premises are in a clean and safe condition and free and clear of any Hazardous Materials in violation of Environmental Laws; and (ii) includes a review of the Premises by an environmental consultant for asbestos, mold, fungus, spores, and other moisture conditions, on-site chemical use, and lead-based paint. If such Phase I reveals that Clean-up is required under any Environmental Laws, Tenant shall submit a remediation plan prepared by a recognized environmental consultant and shall be responsible for all costs of Clean-up, as more particularly provided in Section 5.3, above.

16. HOLDING OVER If Tenant holds over after the expiration of the Lease Term or earlier termination thereof, with the express or implied consent of Landlord, such tenancy shall be from month-to-month only, and shall not constitute a renewal hereof or an extension for any further term. If Tenant holds over after the expiration of the Lease Term of earlier termination thereof, without the express or implied consent of Landlord, such tenancy shall be deemed to be a tenancy by sufferance only, and shall not constitute a renewal hereof or an extension for any further term. In either case, Base Rent shall be payable at a monthly rate equal to 150% of the Base Rent applicable during the last rental period of the Lease Term under this Lease. Such month-to-month tenancy or tenancy by sufferance, as the case may be, shall be subject to every other applicable term, covenant and agreement contained herein. Nothing contained in this Article 16 shall be construed as consent by Landlord to any holding over by Tenant, and Landlord expressly reserves the right to require Tenant to surrender possession of the Premises to Landlord as provided in this Lease upon the expiration or other termination of this Lease. The provisions of this Article 16 shall not be deemed to limit or constitute a waiver of any other rights or remedies of Landlord provided herein or at law. If Tenant fails to

surrender the Premises within thirty (30) days following the termination or expiration of this Lease, in addition to any other liabilities to Landlord accruing therefrom, Tenant shall protect, defend, indemnify and hold Landlord harmless from all loss, costs (including reasonable attorneys' fees) and liability resulting from such failure, including, without limiting the generality of the foregoing, any claims made by any succeeding tenant founded upon such failure to surrender and any lost profits to Landlord resulting therefrom.

17. ESTOPPEL CERTIFICATES Within ten (10) business days following a request in writing by Landlord, Tenant shall execute and deliver to Landlord an estoppel certificate, which, as submitted by Landlord, shall be substantially in the form of **Exhibit D**, attached hereto (or such other customary form as may be reasonably required by any prospective mortgagee or purchaser of the Project, or any portion thereof), indicating therein any exceptions thereto that may exist at that time, and shall also contain any other factual information concerning this Lease reasonably requested by Landlord or Landlord's mortgagee or prospective mortgagee. Any such certificate may be relied upon by any prospective mortgagee or purchaser of all or any portion of the Project. At any time during the Lease Term (but not more than once in any calendar year unless in connection with the sale or proposed sale, or the financing/refinancing, of the Project or any portion thereof, upon a default by Tenant beyond any applicable notice and cure period expressly set forth in this Lease, or upon the filing of bankruptcy by Tenant), Landlord may require Tenant to provide Landlord with a current financial statement and financial statements of the two (2) years prior to the current financial statement year. Such statements shall be prepared in accordance with generally accepted accounting principles and, if such is the normal practice of Tenant, shall be audited by an independent certified public accountant. Landlord shall hold such statements confidential. Notwithstanding the foregoing, in the event that (i) stock in the entity which constitutes Tenant under this Lease or the entity that controls Tenant is publicly traded on NASDAQ or a national stock exchange and Tenant's financials are therefore publicly available, and (ii) Tenant has its own, separate and distinct 10K and 10Q filing requirements (as opposed joint or cumulative filings with an entity that controls Tenant or with entities which are otherwise affiliates of Tenant), then Tenant's obligation to provide Landlord with any financial statements hereunder shall be deemed satisfied. Failure of Tenant to timely execute and deliver such estoppel certificate, which failure continues for two (2) business days after a second request therefor in writing from Landlord to Tenant, shall constitute an acceptance of the Premises and an acknowledgment by Tenant that statements included in the estoppel certificate are true and correct, without exception.

18. **SUBORDINATION** Landlord hereby represents and warrants to Tenant that as of the date of this Lease the Project is not subject to any ground lease, or to the lien of any mortgage or deed of trust. Subject to the terms of this Article 18, this Lease shall be subject and subordinate to all future ground or underlying leases of the Building or Project and to the lien of any mortgage, trust deed or other encumbrances hereafter in force against the Building or Project or any part thereof, if any, and to all renewals, extensions, modifications, consolidations and replacements thereof, and to all advances made or hereafter to be made upon the security of such mortgages or trust deeds, unless the holders of such mortgages, trust deeds or other encumbrances, or the lessors under such ground lease or underlying leases, require in writing that this Lease be superior thereto. The subordination of this Lease to any such future ground or underlying leases of the Building or Project or to the lien of any mortgage, trust deed or other encumbrances, shall be subject to and conditioned upon Tenant's receipt of a commercially reasonable subordination, non-disturbance, and attornment agreement in favor of Tenant. Tenant covenants and agrees in the event any proceedings are brought for the foreclosure of any such mortgage or deed in lieu thereof (or if any ground lease is terminated), to attorn, without any deductions or set-offs whatsoever, to the lienholder or purchaser or any successors thereto upon any such foreclosure sale or deed in lieu thereof (or to the ground lessor), if so requested to do so by such purchaser or lienholder or ground lessor, and to recognize such purchaser or lienholder or ground lessor as the lessor under this Lease, provided such lienholder or purchaser or ground lessor shall agree to accept this Lease and not disturb Tenant's occupancy, so long as Tenant timely pays the rent and observes and performs the terms, covenants and conditions of this Lease to be observed and performed by Tenant. Landlord's interest herein may be assigned as security at any time to any lienholder. Tenant shall, within ten (10) business days of request by Landlord, execute such further commercially reasonable instruments or assurances consistent with this Article 18 as Landlord may reasonably deem necessary to evidence or confirm the subordination or superiority of this Lease to any such mortgages, trust deeds, ground leases or underlying leases. Tenant waives the provisions of any current or future statute, rule or law which may give or purport to give Tenant any right or election to terminate or otherwise adversely affect this Lease and the obligations of the Tenant hereunder in the event of any foreclosure proceeding or sale.

19. DEFAULTS; REMEDIES

19.1 **Events of Default**. The occurrence of any of the following shall constitute a default of this Lease by Tenant:

19.1.1 Any failure by Tenant to pay any Rent or any other charge required to be paid under this Lease, or any part thereof, when due unless such failure is cured within five (5) business days after written notice thereof from Landlord to Tenant; or

19.1.2 Any failure by Tenant to observe or perform any other provision, covenant or condition of this Lease to be observed or performed by Tenant where such failure continues for thirty (30) days after written notice thereof from Landlord to Tenant specifying in detail Tenant's failure to perform; provided that if the nature of such default is such that the same cannot reasonably be cured within a thirty (30) day period, Tenant shall not be deemed to be in default if it diligently commences such cure within such period and thereafter diligently proceeds to rectify and cure such default; or

19.1.3 Abandonment (as defined by Applicable Laws) of all or a substantial portion of the Premises by Tenant while Tenant is in default under this Lease; or

19.1.4 The failure by Tenant to observe or perform according to the provisions of Sections 5.1 and 5.2, and Articles 14, 17 or 18 of this Lease where such failure continues for more than five (5) business days after written notice thereof from Landlord to Tenant .

The notice periods provided herein are in lieu of, and not in addition to, any notice periods provided by law.

19.2 **Remedies Upon Default**. Upon the occurrence of any event of default by Tenant, Landlord shall have, in addition to any other remedies available to Landlord at law or in equity (all of which remedies shall be distinct, separate and cumulative), the option to pursue any one or more of the following remedies, each and all of which shall be cumulative and nonexclusive, without any notice or demand whatsoever.

19.2.1 Terminate this Lease, in which event Tenant shall immediately surrender the Premises to Landlord, and if Tenant fails to do so, Landlord may, without prejudice to any other remedy which it may have for possession or arrearages in rent, enter upon and take possession of the Premises and expel or remove Tenant and any other person who may be occupying the Premises or any part thereof, without being liable for prosecution or any claim or damages therefor; and Landlord may recover from Tenant the following:

(i) The worth at the time of award of the unpaid rent which has been earned at the time of such termination; plus

(ii) The worth at the time of award of the amount by which the unpaid rent which would have been earned after termination until the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided; plus

(iii) The worth at the time of award of the amount by which the unpaid rent for the balance of the Lease Term after the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided; plus

(iv) Any other amount necessary to compensate Landlord for all the detriment proximately caused by Tenant's failure to perform its obligations under this Lease or which in the ordinary course of things would be likely to result therefrom, specifically including but not limited to, brokerage commissions and advertising expenses incurred, expenses of remodeling the Premises or any portion thereof for a new tenant, whether for the same or a different use, and any special concessions made to obtain a new tenant; and

(v) At Landlord's election, such other amounts in addition to or in lieu of the foregoing as may be permitted from time to time by Applicable Law.

The term "**rent**" as used in this Section 19.2 shall be deemed to be and to mean all sums of every nature required to be paid by Tenant pursuant to the terms of this Lease, whether to Landlord or to others. As used in Sections 19.2.1(i) and (ii), above, the "worth at the time of award" shall be computed by allowing interest at the rate set forth in Article 25 of this Lease, but in no case greater than the maximum amount of such interest permitted by law. As used in Section 19.2.1(iii) above, the "**worth at the time of award**" shall be computed by discounting such amount at the discount rate of the Federal Reserve Bank of San Francisco at the time of award plus one percent (1%).

19.2.2 Landlord shall have the remedy described in California Civil Code Section 1951.4 (lessor may continue lease in effect after lessee's breach and abandonment and recover rent as it becomes due, if lessee has the right to sublet or assign, subject only to reasonable limitations). Accordingly, if Landlord does not elect to terminate this Lease on account of any default by Tenant, Landlord may, from time to time, without terminating this Lease, enforce all of its rights and remedies under this Lease, including the right to recover all rent as it becomes due.

19.2.3 Landlord shall at all times have the rights and remedies (which shall be cumulative with each other and cumulative and in addition to those rights and remedies available under Sections 19.2.1 and 19.2.2, above, or any law or other provision of this Lease), without prior demand or notice except as required by Applicable Law, to seek any declaratory, injunctive or other equitable relief, and specifically enforce this Lease, or restrain or enjoin a violation or breach of any provision hereof.

19.3 **Subleases of Tenant**. If Landlord elects to terminate this Lease on account of any default by Tenant, as set forth in this Article 19, Landlord shall have the right to terminate any and all subleases, licenses, concessions or other consensual arrangements for possession entered into by Tenant and affecting the Premises or may, in Landlord's sole discretion, succeed to Tenant's interest in such subleases, licenses, concessions or arrangements. In the event of Landlord's election to succeed to Tenant's interest in any such subleases, licenses, concessions or arrangements, Tenant shall, as of the date of notice by Landlord of such election, have no further right to or interest in the rent or other consideration receivable thereunder.

19.4 **Efforts to Relet**. No re-entry or repossession, repairs, maintenance, changes, alterations and additions, reletting, appointment of a receiver to protect Landlord's interests hereunder, or any other action or omission by Landlord shall be construed as an election by Landlord to terminate this Lease or Tenant's right to possession, or to accept a surrender of the Premises, nor shall same operate to release Tenant in whole or in part from any of Tenant's obligations hereunder, unless express written notice of such intention is sent by Landlord to Tenant. Tenant hereby irrevocably waives any right otherwise available under any law to redeem or reinstate this Lease.

19.5 **Landlord Default**.

19.5.1 **In General**. Notwithstanding anything to the contrary set forth in this Lease, Landlord shall not be in default in the performance of any obligation required to be performed by Landlord pursuant to this Lease unless Landlord fails to perform such obligation within thirty (30) days after written notice thereof from Tenant to Landlord specifying in detail Landlord's failure to perform; provided, however, if the nature of Landlord's obligation is such that the same cannot reasonably be cured within a thirty (30) day period, then Landlord shall not be in default under this Lease if it shall diligently commence such cure within such thirty (30) day period and thereafter diligently pursue the same to completion. Upon any such default by Landlord under this Lease, Tenant may, except as otherwise specifically provided in this Lease to the contrary, exercise any of its rights provided under this Lease at law or in equity.

19.5.2 **Abatement of Rent**. In the event that Tenant is prevented from using, and does not use, the Premises or any portion thereof, as a result of (i) any repair, maintenance or alteration performed by Landlord which is required due to Landlord's negligence, willful misconduct or breach of this Lease or which is negligently performed by Landlord, (ii) any failure to perform any repair, maintenance or alteration required by this Lease and which is reasonably within the control of Landlord to correct, or (iii) any failure to provide services, utilities or access to the Premises as required by this Lease and which is reasonably within the control of Landlord to correct (and except

to the extent such failure is caused by the action or inaction of Tenant) (any such set of circumstances as set forth in items (i), (ii) or (iii), above, to be known as an "**Abatement Event**"), then Tenant shall give Landlord notice of such Abatement Event, and if such Abatement Event continues for five (5) consecutive business days after Landlord's receipt of any such notice (the "**Eligibility Period**"), then the Base Rent, Tenant's Share of Direct Expenses, and Tenant's obligation, if any, to pay for parking (to the extent not utilized by Tenant) shall be abated or reduced, as the case may be, after expiration of the Eligibility Period for such time that Tenant continues to be so prevented from using, and does not use for the normal conduct of Tenant's business, the Premises or a portion thereof, in the proportion that the rentable area of the portion of the Premises that Tenant is prevented from using, and does not use, bears to the total rentable area of the Premises; provided, however, in the event that Tenant is prevented from using, and does not use, a portion of the Premises for a period of time in excess of the Eligibility Period and the remaining portion of the Premises is not sufficient to allow Tenant to effectively conduct its business therein, and if Tenant does not effectively conduct its business from such remaining portion, then for such time after expiration of the Eligibility Period during which Tenant is so prevented from effectively conducting its business therein, the Base Rent and Tenant's Share of Direct Expenses for the entire Premises and Tenant's obligation to pay for parking, if any, shall be abated for such time as Tenant continues to be so prevented from using, and does not use, the Premises. If, however, Tenant reoccupies any portion of the Premises during such period, the Rent allocable to such reoccupied portion, based on the proportion that the rentable area of such reoccupied portion of the Premises bears to the total rentable area of the Premises, shall be payable by Tenant from the date Tenant reoccupies such portion of the Premises. In addition, if, as a result of an Abatement Event, Tenant is prevented from using, and does not use, the Premises or any portion thereof for a continuous period of seventy five (75) days, then Tenant shall have the right to terminate this Lease upon ten (10) days' written notice to Landlord, in which event this Lease shall terminate upon the expiration of such ten (10) day period unless such use is restored within such ten (10) day period. In the event of any Abatement Event, Landlord shall diligently pursue the remedy of the same as promptly as possible. To the extent an Abatement Event is caused by an event covered by Articles 11 or 13 of this Lease, then Tenant's right to abate rent shall be governed by the terms of such Article 11 or 13, as applicable, and the Eligibility Period shall not be applicable thereto. Except as provided in this Section 19.5.2, nothing contained herein shall be interpreted to mean that Tenant is excused from paying Rent due hereunder.

20. COVENANT OF QUIET ENJOYMENT Landlord covenants that Tenant, on paying the Rent, charges for services and other payments herein reserved and on keeping, observing and performing all the other terms, covenants, conditions, provisions and agreements herein contained on the part of Tenant to be kept, observed and performed, shall, during the Lease Term, peaceably and quietly have, hold and enjoy the Premises subject to the terms, covenants, conditions, provisions and agreements hereof without interference by any persons lawfully claiming by or through Landlord. The foregoing covenant is in lieu of any other covenant express or implied.

21. LETTER OF CREDIT

21.1 **Delivery of Letter of Credit**. Tenant shall deliver to Landlord, concurrently with Tenant's execution of this Lease, an unconditional, clean, irrevocable letter of credit (the "**L-C**") in the amount set forth in Section 8 of the Lease Summary (the "**L-C Amount**"), which L-C shall be issued by a money-center, solvent and nationally recognized bank (a bank which accepts deposits, maintains accounts, has a local San Francisco Bay Area office which will negotiate a letter of credit, and whose deposits are insured by the FDIC) reasonably acceptable to Landlord (such approved, issuing bank being referred to herein as the "**Bank**"), which Bank must have a rating from Standard and Poors Corporation of A- or better (or any equivalent rating thereto from any successor or substitute rating service selected by Lessor) and a letter of credit issuer rating from Moody's Investor Service of A3 or better (or any equivalent rating thereto from any successor rating agency thereto)) (collectively, the "**Bank's Credit Rating Threshold**"), and which L-C shall be substantially in the form of Exhibit F, attached hereto or such other form as is reasonably acceptable to Landlord. Tenant shall pay all expenses, points and/or fees incurred by Tenant in obtaining the L-C. The L-C shall (i) be "callable" at sight, irrevocable and unconditional, (ii) be maintained in effect, whether through renewal or extension, for the period commencing on the date of this Lease and continuing until the date (the "**L-C Expiration Date**") that is no less than ninety-five (95) days after the expiration of the Lease Term as the same may be extended, and Tenant shall deliver a new L-C or certificate of renewal or extension to Landlord at least thirty (30) days prior to the expiration of the L-C then held by Landlord, without any action whatsoever on the part of Landlord, (iii) be fully assignable by Landlord, its successors and assigns, (iv) permit partial draws and multiple presentations and drawings, and (v) be otherwise subject to the Uniform Customs and Practices for Documentary

Credits (1993-Rev), International Chamber of Commerce Publication #500, or the International Standby Practices-ISP 98, International Chamber of Commerce Publication #590. Landlord, or its then managing agent, shall have the right to draw down an amount up to the face amount of the L-C if any of the following shall have occurred or be applicable: (A) such amount is due to Landlord under the terms and conditions of this Lease, and has not been paid within applicable notice and cure periods (or, if Landlord is prevented by Applicable Law from providing notice, within the period for payment set forth in the Lease), or (B) Tenant has filed a voluntary petition under the U. S. Bankruptcy Code or any state bankruptcy code (collectively, "**Bankruptcy Code**"), or (C) an involuntary petition has been filed against Tenant under the Bankruptcy Code that is not dismissed within thirty (30) days, or (D) the Lease has been rejected, or is deemed rejected, under Section 365 of the U.S. Bankruptcy Code, following the filing of a voluntary petition by Tenant under the Bankruptcy Code, or the filing of an involuntary petition against Tenant under the Bankruptcy Code, or (E) the Bank has notified Landlord that the L-C will not be renewed or extended through the L-C Expiration Date, and Tenant has not provided a replacement L-C that satisfies the requirements of this Lease at least thirty (30) days prior to such expiration, or (F) Tenant is placed into receivership or conservatorship, or becomes subject to similar proceedings under Federal or State law, or (G) Tenant executes an assignment for the benefit of creditors, or (H) if any of the Bank's Fitch Ratings (or other comparable ratings to the extent the Fitch Ratings are no longer available) have been reduced below the Bank's Credit Rating Threshold, and Tenant has failed to provide Landlord with a replacement letter of credit, conforming in all respects to the requirements of this Article 21 (including, but not limited to, the requirements placed on the issuing Bank more particularly set forth in this Section 21.1 above), in the amount of the applicable L-C Amount, within ten (10) days following Landlord's written demand therefor (with no other notice or cure or grace period being applicable thereto, notwithstanding anything in this Lease to the contrary) (each of the foregoing being an "**L-C Draw Event**"). The L-C shall be honored by the Bank regardless of whether Tenant disputes Landlord's right to draw upon the L-C. In addition, in the event the Bank is placed into receivership or conservatorship by the Federal Deposit Insurance Corporation or any successor or similar entity, then, effective as of the date such receivership or conservatorship occurs, said L-C shall be deemed to fail to meet the requirements of this Article 21, and, within ten (10) days following Landlord's written notice to Tenant of such receivership or conservatorship (the "**L-C FDIC Replacement Notice**"), Tenant shall replace such L-C with a substitute letter of credit from a different issuer (which issuer shall meet or exceed the Bank's Credit Rating Threshold and shall otherwise be acceptable to Landlord in its reasonable discretion) and that complies in all respects with the requirements of this Article 21. If Tenant fails to replace such L-C with such conforming, substitute letter of credit pursuant to the terms and conditions of this Section 21.1, then, notwithstanding anything in this Lease to the contrary, Landlord shall have the right to declare Tenant in default of this Lease for which there shall be no notice or grace or cure periods being applicable thereto (other than the aforesaid ten (10) day period). Tenant shall be responsible for the payment of any and all Tenant's and Bank's costs incurred with the review of any replacement L-C, which replacement is required pursuant to this Section or is otherwise requested by Tenant. In the event of an assignment by Tenant of its interest in the Lease (and irrespective of whether Landlord's consent is required for such assignment), the acceptance of any replacement or substitute letter of credit by Landlord from the assignee shall be subject to Landlord's prior written approval, in Landlord's reasonable discretion, and the actual, reasonable out-of-pocket attorney's fees incurred by Landlord in connection with such determination shall be payable by Tenant to Landlord within thirty (30) days of billing.

21.2 **Application of L-C**. Tenant hereby acknowledges and agrees that Landlord is entering into this Lease in material reliance upon the ability of Landlord to draw upon the L-C upon the occurrence of any L-C Draw Event. In the event of any L-C Draw Event, Landlord may, but without obligation to do so, and without notice to Tenant (except in connection with an L-C Draw Event under Section 21.1(H) above), draw upon the L-C, in part or in whole, in the amount necessary to cure any such L-C Draw Event and/or to compensate Landlord for any and all damages of any kind or nature sustained or which Landlord reasonably estimates that it will sustain resulting from Tenant's breach or default of the Lease or other L-C Draw Event and/or to compensate Landlord for any and all damages arising out of, or incurred in connection with, the termination of this Lease, including, without limitation, those specifically identified in Section 1951.2 of the California Civil Code. The use, application or retention of the L-C, or any portion thereof, by Landlord shall not prevent Landlord from exercising any other right or remedy provided by this Lease or by any Applicable Law, it being intended that Landlord shall not first be required to proceed against the L-C, and such L-C shall not operate as a limitation on any recovery to which Landlord may otherwise be entitled. Tenant agrees and acknowledges that (i) the L-C constitutes a separate and independent contract between Landlord and the Bank, (ii) Tenant is not a third party beneficiary of such contract, (iii) Tenant has no property interest whatsoever in the L-C or the proceeds thereof, and (iv) in the event Tenant becomes a debtor under any chapter of the

Bankruptcy Code, Tenant is placed into receivership or conservatorship, and/or there is an event of a receivership, conservatorship or a bankruptcy filing by, or on behalf of, Tenant, neither Tenant, any trustee, nor Tenant's bankruptcy estate shall have any right to restrict or limit Landlord's claim and/or rights to the L-C and/or the proceeds thereof by application of Section 502(b)(6) of the U. S. Bankruptcy Code or otherwise.

21.3 **Maintenance of L-C by Tenant**. If, as a result of any drawing by Landlord of all or any portion of the L-C in accordance with the terms of this Article 21, the amount of the L-C shall be less than the L-C Amount, Tenant shall, within five (5) business days thereafter, provide Landlord with additional letter(s) of credit in an amount equal to the deficiency, and any such additional letter(s) of credit shall comply with all of the provisions of this Article 21. Tenant further covenants and warrants that it will neither assign nor encumber the L-C or any part thereof and that neither Landlord nor its successors or assigns will be bound by any such assignment, encumbrance, attempted assignment or attempted encumbrance. Without limiting the generality of the foregoing, if the L-C expires earlier than the L-C Expiration Date, Landlord will accept a renewal thereof (such renewal letter of credit to be in effect and delivered to Landlord, as applicable, not later than thirty (30) days prior to the expiration of the L-C), which shall be irrevocable and automatically renewable as above provided through the L-C Expiration Date upon the same terms as the expiring L-C or such other terms as may be acceptable to Landlord in its sole discretion. If Tenant exercises its option to extend the Lease Term pursuant to Section 2.2 of this Lease then, unless the parties have agreed otherwise in writing, not later than thirty (30) days prior to the commencement of the Option Term, Tenant shall deliver to Landlord a new L C or certificate of renewal or extension evidencing the L-C Expiration Date as thirty (30) days after the expiration of the Option Term. However, if the L-C is not timely renewed, or if Tenant fails to maintain the L-C in the amount and in accordance with the terms set forth in this Article 21, Landlord shall have the right to present the L-C to the Bank in accordance with the terms of this Article 21, and the proceeds of the L-C may be applied by Landlord against any Rent payable by Tenant under this Lease that is not paid when due and/or to pay for all losses and damages that Landlord has suffered or that Landlord reasonably estimates that it will suffer as a result of any breach or default by Tenant under this Lease. In the event Landlord elects to exercise its rights as provided above, (I) any unused proceeds shall constitute the property of Landlord (and not Tenant’s property or, in the event of a receivership, conservatorship, or a bankruptcy filing by, or on behalf of, Tenant, property of such receivership, conservatorship or Tenant’s bankruptcy estate) and need not be segregated from Landlord’s other assets, and (II) Landlord agrees to pay to Tenant within thirty (30) days after the L-C Expiration Date the amount of any proceeds of the L-C received by Landlord and not applied against any Rent payable by Tenant under this Lease that was not paid when due or used to pay for any losses and/or damages suffered by Landlord (or reasonably estimated by Landlord that it will suffer) as a result of any breach or default by Tenant under this Lease; provided, however, that if prior to the L-C Expiration Date a voluntary petition is filed by Tenant, or an involuntary petition is filed against Tenant by any of Tenant’s creditors, under the Bankruptcy Code, then Landlord shall not be obligated to make such payment in the amount of the unused L-C proceeds until either all preference issues relating to payments under this Lease have been resolved in such bankruptcy or reorganization case or such bankruptcy or reorganization case has been dismissed. If Landlord draws on the L-C due to Tenant’s failure to timely renew or provide a replacement L-C, such failure shall not be considered a default under this Lease and Landlord shall return such cash proceeds upon Tenant’s presentation of a replacement L-C that satisfies the requirements of this Lease, subject to reasonable satisfaction of any preference risk to Landlord.

21.4 **Transfer and Encumbrance**. The L-C shall also provide that Landlord may, at any time and without notice to Tenant and without first obtaining Tenant's consent thereto, transfer (one or more times) its interest in and to the L-C to another party, person or entity in connection with the assignment by Landlord of its rights and interests in and to this Lease. In the event of a transfer of Landlord's interest in under this Lease, and upon the transferee’s written assumption of Landlord’s obligations under this Lease (including with respect to the L-C), Landlord shall transfer the L-C to the transferee and thereupon Landlord shall, without any further agreement between the parties, be released by Tenant from all liability therefor, and it is agreed that the provisions hereof shall apply to every transfer or assignment of the whole of said L-C to a new landlord. In connection with any such transfer of the L-C by Landlord, Tenant shall, at Tenant's sole cost and expense, execute and submit to the Bank such commercially reasonable applications, documents and instruments as may be necessary to effectuate such transfer and, Tenant shall be responsible for paying the Bank's transfer and processing fees in connection therewith; provided that, Landlord shall have the right (in its sole discretion), but not the obligation, to pay such fees on behalf of Tenant, in which case Tenant shall reimburse Landlord within thirty (30) days after Tenant's receipt of an invoice from Landlord therefor.

21.5 **L-C Not a Security Deposit**. Landlord and Tenant (1) acknowledge and agree that in no event or circumstance shall the L-C or any renewal thereof or substitute therefor or any proceeds thereof be deemed to be or treated as a "security deposit" under any law applicable to security deposits in the commercial context, including, but not limited to, Section 1950.7 of the California Civil Code, as such Section now exists or as it may be hereafter amended or succeeded (the "**Security Deposit Laws"**), (2) acknowledge and agree that the L-C (including any renewal thereof or substitute therefor or any proceeds thereof) is not intended to serve as a security deposit, and the Security Deposit Laws shall have no applicability or relevancy thereto, and (3) waive any and all rights, duties and obligations that any such party may now, or in the future will, have relating to or arising from the Security Deposit Laws. Tenant hereby irrevocably waives and relinquishes the provisions of Section 1950.7 of the California Civil Code and any successor statute, and all other provisions of law, now or hereafter in effect, which (x) establish the time frame by which a landlord must refund a security deposit under a lease, and/or (y) provide that a 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 a tenant or to clean the premises, it being agreed that Landlord may, in addition, claim those sums specified in this Article 21 and/or those sums reasonably necessary to (a) compensate Landlord for any loss or damage caused by Tenant's breach of this Lease, including any damages Landlord suffers following termination of this Lease, and/or (b) compensate Landlord for any and all damages arising out of, or incurred in connection with, the termination of this Lease, including, without limitation, those specifically identified in Section 1951.2 of the California Civil Code. Tenant agrees not to interfere in any way with any payment to Landlord of the proceeds of the L-C, either prior to or following a "draw" by Landlord of all or any portion of the L-C, regardless of whether any dispute exists between Tenant and Landlord as to Landlord's right to draw down all or any portion of the L-C. No condition or term of this Lease shall be deemed to render the L-C conditional and thereby afford the Bank a justification for failing to honor a drawing upon such L-C in a timely manner. Tenant shall not request or instruct the Bank of any L-C to refrain from paying sight draft(s) drawn under such L-C.

21.6 **Remedy for Improper Drafts**. Tenant's sole remedy in connection with the improper presentment or payment of sight drafts drawn under any L-C shall be the right to obtain from Landlord a refund of the amount of any sight draft(s) that were improperly presented or the proceeds of which were misapplied, and reasonable actual out-of-pocket attorneys' fees, provided that at the time of such refund, Tenant increases the amount of such L-C to the amount (if any) then required under the applicable provisions of this Lease. Tenant acknowledges that the presentment of sight drafts drawn under any L-C, or the Bank's payment of sight drafts drawn under such L-C, could not under any circumstances cause Tenant injury that could not be remedied by an award of money damages, and that the recovery of money damages would be an adequate remedy therefor. In the event Tenant shall be entitled to a refund as aforesaid and Landlord shall fail to make such payment within ten (10) business days after demand, Tenant shall have the right to deduct the amount thereof from the next installment(s) of Base Rent.

22. COMMUNICATIONS AND COMPUTER LINE Tenant may install, maintain, replace, remove or use any communications or computer wires and cables serving the Premises (collectively, the "**Lines**"), provided that Tenant shall use an experienced and qualified contractor reasonably approved in writing by Landlord, and comply with all of the other provisions of Articles 7 and 8 of this Lease. Tenant shall pay all costs in connection therewith. Tenant shall have no obligation to remove any Lines installed by Tenant located in or serving the Premises upon the expiration or earlier termination of this Lease.

23. SIGNS

23.1 **Exterior Signage**. Tenant, at its sole cost and expense, may install (i) its prorata share of identification signage on the existing monument sign located at the Project, and (ii) at the entrance to the Building, and on the exterior of the Building (collectively, "**Tenant Signage**"); provided, however, in no event shall Tenant's Signage include an "Objectionable Name," as that term is defined in Section 23.2 of this Lease. All such signage shall be subject to Tenant's obtaining all required governmental approvals. All permitted signs shall be maintained by Tenant at its expense in a good and safe condition and appearance. Upon the expiration or earlier termination of this Lease, Tenant shall remove all of its signs at Tenant's sole cost and expense. The graphics, materials, color, design, lettering, lighting, size, illumination, specifications and exact location of Tenant's Signage (collectively, the "**Sign Specifications**") shall be subject to the prior written approval of Landlord, which approval shall not be unreasonably withheld, conditioned or delayed, and shall be consistent and compatible with the quality and nature of the Project. Tenant hereby acknowledges that, notwithstanding Landlord's approval of Tenant's Signage, Landlord has made no representation or warranty to

Tenant with respect to the probability of obtaining all necessary governmental approvals and permits for Tenant's Signage. In the event Tenant does not receive the necessary governmental approvals and permits for Tenant's Signage, Tenant's and Landlord's rights and obligations under the remaining TCCs of this Lease shall be unaffected.

23.2 **Objectionable Name**. Tenant's Signage shall not include a name or logo which relates to an entity which is of a character or reputation, or is associated with a political faction or orientation, which as reasonably determined by Landlord is inconsistent with the quality of the Project, or which would otherwise reasonably offend a landlord of the Comparable Buildings (an "**Objectionable Name**"). Landlord hereby agrees that the following name, or any reasonable derivation thereof, is not an Objectionable Name: "Unity Biotechnology."

23.3 **Prohibited Signage and Other Items**. Any signs, notices, logos, pictures, names or advertisements visible from the exterior of the Premises or Building which are installed and that have not been separately approved by Landlord may be removed without notice by Landlord at the sole expense of Tenant. Any signs, window coverings, or blinds (even if the same are located behind the Landlord-approved window coverings for the Building), or other items visible from the exterior of the Premises or Building, shall be subject to the prior approval of Landlord, in its reasonable discretion.

23.4 **Termination of Right to Tenant's Signage**. The rights contained in this Article 23 shall be personal to Original Tenant and any Transferee approved or deemed approved by Landlord under Article 14 or any transferee under a transaction not subject to Landlord's consent under Article 14, and may only be exercised and maintained by such parties (and not any other assignee, sublessee or other transferee of the Original Tenant's interest in this Lease) to the extent (*x*) they are not in default under this Lease (beyond any applicable notice and cure period) *and* (y) with respect to any signage on the exterior of the Building, if they lease at least fifty percent (50%) of the rentable square footage of the Building.

24. COMPLIANCE WITH LAW Landlord shall promptly comply with and be responsible, at its sole cost and expense, except to the extent permitted to be included in Operating Expenses pursuant to Section 4.2.4 above, to comply with all Applicable Laws with respect to the Base Building and Common Areas, and Landlord shall make all alterations to the Base Building and Common Areas as are required to comply with Applicable Laws (but subject to possible reimbursement by Tenant pursuant to the terms hereof). Tenant shall not do anything or suffer anything to be done in or about the Premises or the Project which will in any way conflict with any law, statute, ordinance, code or other governmental rule, regulation or requirement now in force or which may hereafter be enacted or promulgated (collectively, "**Applicable Laws**"). After the Lease Commencement Date, at its sole cost and expense, Tenant shall promptly comply with all such Applicable Laws with respect to the Premises, and Tenant shall make all alterations to the Premises as are required to comply with Applicable Laws. The judgment of any court of competent jurisdiction or the admission of Tenant in any judicial action, regardless of whether Landlord is a party thereto, that Tenant has violated any of said Applicable Laws, shall be conclusive of that fact as between Landlord and Tenant. Notwithstanding the foregoing, to the extent Landlord's compliance obligations set forth in the first sentence of this Article 24 (a) are triggered by Alterations which are Specialty Improvements made by Tenant to the Premises after completion of the Tenant Improvements (with the parties acknowledging that responsibility for compliance with Applicable Laws regarding or triggered by the Tenant Improvements is Landlord's responsibility pursuant to **Exhibit B** and is not governed by this Article 24) or by Tenant's particular manner of use of the Premises (as distinguished from the Permitted Use), and (b) are not to correct violations of Applicable Law existing as of the Lease Commencement Date (any such compliance obligations satisfying the criteria in subsections (a), and (b), the "**Tenant Reimbursable Obligations**"), Tenant shall reimburse Landlord for the cost incurred by Landlord for the Tenant Reimbursable Obligations within thirty (30) days after receipt of an invoice from Landlord. For purposes of Section 1938 of the California Civil Code, Landlord hereby discloses to Tenant, and Tenant hereby acknowledges, that as of the date of this Lease the Project, Building and Premises have not undergone inspection by a Certified Access Specialist (CASp). As required by Section 1938(e) of the California Civil Code, Landlord hereby states as follows: "A Certified Access Specialist (CASp) can inspect the subject premises and determine whether the subject premises comply with all of the applicable construction-related accessibility standards under state law. Although state law does not require a CASp inspection of the subject premises, the commercial property owner or lessor may not prohibit the lessee or tenant from obtaining a CASp inspection of the subject premises for the occupancy or potential occupancy of the lessee or tenant, if requested by the lessee or tenant. The parties shall mutually agree on the arrangements for the time and manner of the CASp inspection, the payment of the fee for the CASp inspection, and the cost of making

any repairs necessary to correct violations of construction-related accessibility standards within the premises." In furtherance of the foregoing, Landlord and Tenant hereby agree as follows: (a) any CASp inspection requested by Tenant shall be conducted, at Tenant's sole cost and expense, by a CASp reasonably approved in advance by Landlord; and (b) Tenant, at its cost, is responsible for making any repairs or modifications within the Premises to correct violations of construction-related accessibility standards identified by any such CASp inspection requested by Tenant.

25. LATE CHARGES If any installment of Rent or any other sum due from Tenant shall not be received by Landlord or Landlord's designee within five (5) business days after Tenant's receipt of written notice from Landlord that said amount is due, then Tenant shall pay to Landlord a late charge equal to four percent (4%) of the overdue amount plus any reasonable attorneys' fees incurred by Landlord by reason of Tenant's failure to pay Rent and/or other charges when due hereunder; provided, however, with regard to the first such failure in any twelve (12) month period, Landlord will waive such late charge and attorneys' fees to the extent Tenant cures such failure within five (5) business days following Tenant's receipt of written notice from Landlord that the same was not received when due. The late charge shall be deemed Additional Rent and the right to require it shall be in addition to all of Landlord's other rights and remedies hereunder or at law and shall not be construed as liquidated damages or as limiting Landlord's remedies in any manner. In addition to the late charge described above, any Rent or other amounts owing hereunder which are not paid within ten (10) days after the date they are due shall bear interest from the date when due until paid at a rate per annum equal to the lesser of (i) the annual "Bank Prime Loan" rate cited in the Federal Reserve Statistical Release Publication G.13(415), published on the first Tuesday of each calendar month (or such other comparable index as Landlord and Tenant shall reasonably agree upon if such rate ceases to be published) plus three (3) percentage points, and (ii) the highest rate permitted by Applicable Law.

26. LANDLORD'S RIGHT TO CURE DEFAULT; PAYMENTS BY TENANT

26.1 **Landlord's Cure**. All covenants and agreements to be kept or performed by Tenant under this Lease shall be performed by Tenant at Tenant's sole cost and expense and without any reduction of Rent, except to the extent, if any, otherwise expressly provided herein. If Tenant shall fail to perform any obligation under this Lease, and such failure shall continue in excess of the time allowed under Section 19.1.2, above, unless a specific time period is otherwise stated in this Lease, Landlord may, but shall not be obligated to, make any such payment or perform any such act on Tenant's part without waiving its rights based upon any default of Tenant and without releasing Tenant from any obligations hereunder.

26.2 **Tenant's Reimbursement**. Except as may be specifically provided to the contrary in this Lease, Tenant shall pay to Landlord, within thirty (30) days after delivery by Landlord to Tenant of statements therefor: (i) sums equal to expenditures reasonably made and obligations incurred by Landlord in connection with the remedying by Landlord of Tenant's defaults pursuant to the provisions of Section 26.1; and (ii) sums equal to all losses, costs, liabilities, damages and expenses finally adjudicated and for which Tenant is responsible under Article 10 of this Lease. Tenant's obligations under this Section 26.2 shall survive the expiration or sooner termination of the Lease Term.

27. ENTRY BY LANDLORD Landlord reserves the right, upon not less than one (1) business day's prior notice to Tenant (except in the case of an Emergency) to enter the Premises at all reasonable times to (i) inspect them; (ii) show the Premises to prospective purchasers, or to current or prospective mortgagees, ground or underlying lessors or insurers or, during the last nine (9) months of the Lease Term, to prospective tenants; (iii) post notices of nonresponsibility (to the extent applicable pursuant to then Applicable Law); or (iv) alter, improve or repair the Premises or the Building, or for structural alterations, repairs or improvements to the Building or the Building's systems and equipment, in each case as authorized under this Lease. Landlord may make any such entries without the abatement of Rent, except as otherwise provided in this Lease, and may take such reasonable steps as required to accomplish the stated purposes. In an Emergency, Landlord shall have the right to use any means that Landlord may deem proper to open the doors in and to the Premises. Any entry into the Premises by Landlord in the manner hereinbefore described shall not be deemed to be a forcible or unlawful entry into, or a detainer of, the Premises, or an actual or constructive eviction of Tenant from any portion of the Premises. Landlord shall use commercially reasonable efforts to minimize any interference with Tenant's use of or access to the Premises or business operations in connection with any such entry and shall comply with Tenant's reasonable security measures, including that Tenant may require that Landlord be accompanied by an employee of Tenant during any such entry into the Premises by

Landlord (except in the event of an Emergency in which case no escort shall be required); provided, however, that in no event shall the unavailability of such escort at the time that Landlord is permitted to enter the Premises delay Landlord's entry into the Premises as permitted hereunder. Without limiting the foregoing, except in an Emergency, Landlord shall not enter into any portion of the Premises used for vivarium purposes or enter into any portion of the Premises identified to Landlord as an area containing sensitive business information unless accompanied by a representative of Tenant. Landlord shall hold confidential any information regarding Tenant's business that it may learn as a result of any such entry.

28. TENANT PARKING Without additional charge, throughout the Lease Term, Tenant shall have the right to use the amount of parking set forth in Section 9 of the Summary, in the on-site parking facility (or facilities) which serve the Project. Tenant shall abide by all reasonable and non-discriminatory rules and regulations which are prescribed from time to time and either posted at the parking facility or provided to Tenant in writing for the orderly operation and use of the parking facility where the parking passes are located (including any sticker or other identification system established by Landlord and the prohibition of vehicle repair and maintenance activities in the parking facilities), and shall cooperate in seeing that Tenant's employees and visitors also comply with such rules and regulations. Tenant's use of the Project parking facility shall be at Tenant's sole risk and Tenant acknowledges and agrees that Landlord shall have no liability whatsoever for damage to the vehicles of Tenant, its employees and/or visitors, or for other personal injury or property damage or theft relating to or connected with the parking rights granted herein or any of Tenant's, its employees' and/or visitors' use of the parking facilities, except to the extent caused by the negligence or willful misconduct of Landlord or its agents, employees or contractors.

29. MISCELLANEOUS PROVISIONS

29.1 **Terms; Captions**. The words "**Landlord**" and "**Tenant**" as used herein shall include the plural as well as the singular. The necessary grammatical changes required to make the provisions hereof apply either to corporations or partnerships or individuals, men or women, as the case may require, shall in all cases be assumed as though in each case fully expressed. The captions of Articles and Sections are for convenience only and shall not be deemed to limit, construe, affect or alter the meaning of such Articles and Sections.

29.2 **Binding Effect**. Subject to all other provisions of this Lease, each of the covenants, conditions and provisions of this Lease shall extend to and shall, as the case may require, bind or inure to the benefit not only of Landlord and of Tenant, but also of their respective heirs, personal representatives, successors or assigns, provided this clause shall not permit any assignment by Tenant contrary to the provisions of Article 14 of this Lease.

29.3 **No Air Rights**. No rights to any view or to light or air over any property, whether belonging to Landlord or any other person, are granted to Tenant by this Lease. If at any time any windows of the Premises are temporarily darkened or the light or view therefrom is temporarily obstructed by reason of any repairs, improvements, maintenance or cleaning in or about the Project, the same shall be without liability to Landlord and without any reduction or diminution of Tenant's obligations under this Lease.

29.4 **Modification of Lease**. Should any current or prospective mortgagee or ground lessor for the Building or Project require a modification of this Lease, which modification will not cause an increased cost or expense to Tenant or in any other way materially and adversely change the rights and obligations of Tenant hereunder, then and in such event, Tenant agrees that this Lease may be so modified and agrees to execute whatever commercially reasonable documents are reasonably required therefor and to deliver the same to Landlord within ten (10) business days following a request therefor. At the request of Landlord or any mortgagee or ground lessor, Tenant agrees to execute a short form of Lease and deliver the same to Landlord within ten (10) business days following the request therefor.

29.5 **Transfer of Landlord's Interest**. Tenant acknowledges that Landlord has the right to transfer all or any portion of its interest in the Project or Building and in this Lease, and Tenant agrees that in the event of any such transfer, Landlord shall automatically be released from all liability under this Lease and Tenant agrees to look solely to such transferee for the performance of Landlord's obligations hereunder after the date of transfer and such transferee shall be deemed to have fully assumed and be liable for all obligations of this Lease to be performed by Landlord, including the return of any Security Deposit, and Tenant shall attorn to such transferee.

29.6 **Prohibition Against Recording**. Except as provided in Section 29.4 of this Lease, neither this Lease, nor any memorandum, affidavit or other writing with respect thereto, shall be recorded by Tenant or by anyone acting through, under or on behalf of Tenant.

29.7 **Landlord's Title**. Landlord's title is and always shall be paramount to the title of Tenant. Nothing herein contained shall empower Tenant to do any act which can, shall or may encumber the title of Landlord.

29.8 **Relationship of Parties**. Nothing contained in this Lease shall be deemed or construed by the parties hereto or by any third party to create the relationship of principal and agent, partnership, joint venturer or any association between Landlord and Tenant.

29.9 **Application of Payments**. Landlord shall have the right to apply payments received from Tenant pursuant to this Lease, regardless of Tenant's designation of such payments, to satisfy any obligations of Tenant that are then due and payable hereunder, in such order and amounts as Landlord, in its sole discretion, may elect.

29.10 **Time of Essence**. Time is of the essence with respect to the performance of every provision of this Lease in which time of performance is a factor.

29.11 **Partial Invalidity**. If any term, provision or condition contained in this Lease shall, to any extent, be invalid or unenforceable, the remainder of this Lease, or the application of such term, provision or condition to persons or circumstances other than those with respect to which it is invalid or unenforceable, shall not be affected thereby, and each and every other term, provision and condition of this Lease shall be valid and enforceable to the fullest extent possible permitted by law.

29.12 **No Warranty**. In executing and delivering this Lease, Tenant has not relied on any representations, including, but not limited to, any representation as to the amount of any item comprising Additional Rent or the amount of the Additional Rent in the aggregate or that Landlord is furnishing the same services to other tenants, at all, on the same level or on the same basis, or any warranty or any statement of Landlord which is not set forth herein or in one or more of the exhibits attached hereto.

29.13 **Landlord Exculpation**. The liability of Landlord or the Landlord Parties to Tenant for any default by Landlord under this Lease or arising in connection herewith or with Landlord's operation, management, leasing, repair, renovation, alteration or any other matter relating to the Project or the Premises shall be limited solely and exclusively to an amount which is equal to the interest of Landlord in the Project (including any rental, insurance, sale and/or condemnation proceeds derived therefrom). Neither Landlord, nor any of the Landlord Parties shall have any personal liability therefor, and Tenant hereby expressly waives and releases such personal liability on behalf of itself and all persons claiming by, through or under Tenant. The limitations of liability contained in this Section 29.13 shall inure to the benefit of Landlord's and the Landlord Parties' present and future partners, beneficiaries, officers, directors, trustees, shareholders, agents and employees, and their respective partners, heirs, successors and assigns. Under no circumstances shall any present or future partner of Landlord (if Landlord is a partnership), or trustee or beneficiary (if Landlord or any partner of Landlord is a trust), have any liability for the performance of Landlord's obligations under this Lease. Notwithstanding any contrary provision herein, neither Landlord nor the Landlord Parties shall be liable under any circumstances for injury or damage to, or interference with, Tenant's business, including but not limited to, loss of profits, loss of rents or other revenues, loss of business opportunity, loss of goodwill or loss of use, in each case, however occurring, or loss to inventory, scientific research, scientific experiments, laboratory animals, products, 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; similarly, notwithstanding any contrary provision herein, except and then only to the extent as set forth in Article 16 above, neither Tenant nor the Tenant Parties shall be liable under any circumstances for injury or damage to, or interference with, Landlord’s business, including but not limited to, loss of profits, loss of rents or other revenues, loss of business opportunity, loss of goodwill or loss of use, in each case, however occurring.

29.14 **Entire Agreement**. It is understood and acknowledged that there are no oral agreements between the parties hereto affecting this Lease and this Lease constitutes the parties' entire agreement with respect to the leasing of the Premises and supersedes and cancels any and all previous negotiations, arrangements, brochures, agreements

and understandings, if any, between the parties hereto or displayed by Landlord to Tenant with respect to the subject matter thereof, and none thereof shall be used to interpret or construe this Lease. None of the terms, covenants, conditions or provisions of this Lease can be modified, deleted or added to except in writing signed by the parties hereto.

29.15 **Right to Lease**. Landlord reserves the absolute right to effect such other tenancies in the Project as Landlord in the exercise of its sole business judgment shall determine to best promote the interests of the Building or Project. Tenant does not rely on the fact, nor does Landlord represent, that any specific tenant or type or number of tenants shall, during the Lease Term, occupy any space in the Building or Project.

29.16 **Force Majeure**. Any prevention, delay or stoppage due to strikes, lockouts, labor disputes, acts of God, acts of war, terrorist acts, inability to obtain services, labor, or materials or reasonable substitutes therefor, governmental actions, civil commotions, fire or other casualty, and other causes beyond the reasonable control of the party obligated to perform, except with respect to the obligations imposed with regard to Rent and other charges to be paid by Landlord or Tenant pursuant to this Lease (collectively, a "**Force Majeure**"), notwithstanding anything to the contrary contained in this Lease, shall excuse the performance of such party for a period equal to any such prevention, delay or stoppage and, therefore, if this Lease specifies a time period for performance of an obligation of either party, that time period shall be extended by the period of any delay in such party's performance caused by a Force Majeure.

29.17 **Waiver of Redemption by Tenant**. Tenant hereby waives, for Tenant and for all those claiming under Tenant, any and all rights now or hereafter existing to redeem by order or judgment of any court or by any legal process or writ, Tenant's right of occupancy of the Premises after any termination of this Lease.

29.18 **Notices**. All notices, demands, statements, designations, approvals or other communications (collectively, "**Notices**") given or required to be given by either party to the other hereunder or by law shall be in writing, shall be (A) sent by United States certified or registered mail, postage prepaid, return receipt requested ("**Mail**"), (B) transmitted by telecopy, if such telecopy is promptly followed by a Notice sent by Mail, (C) delivered by a nationally recognized overnight courier, or (D) delivered personally. Any Notice shall be sent, transmitted, or delivered, as the case may be, to Tenant at the appropriate address set forth in Section 10 of the Summary, or to such other place as Tenant may from time to time designate in a Notice to Landlord, or to Landlord at the addresses set forth below, or to such other places as Landlord may from time to time designate in a Notice to Tenant. Any Notice will be deemed given (i) three (3) days after the date it is posted if sent by Mail, (ii) the date the telecopy is transmitted, (iii) the date the overnight courier delivery is made, or (iv) the date personal delivery is made. As of the date of this Lease, any Notices to Landlord must be sent, transmitted, or delivered, as the case may be, to the following addresses:

BAYSIDE AREA DEVELOPMENT, LLC
c/o HCP Life Science Estates
c/o HCP, Inc.
1920 Main Street, Suite 1200
Irvine, CA 92614
Attn: Legal Department
with a copy to:

BAYSIDE AREA DEVELOPMENT, LLC
c/o HCP Life Science Estates
950 Tower Lane, Suite 1650
Foster City, CA 94404

and

Allen Matkins Leck Gamble Mallory & Natsis LLP
1901 Avenue of the Stars, Suite 1800
Los Angeles, California 90067
Attention: Anton N. Natsis, Esq.

29.19 **Joint and Several**. If there is more than one tenant, the obligations imposed upon Tenant under this Lease shall be joint and several.

29.20 **Authority**. If Tenant is a corporation, trust or partnership, each individual executing this Lease on behalf of Tenant hereby represents and warrants that Tenant is a duly formed and existing entity qualified to do business in the State of California and that Tenant has full right and authority to execute and deliver this Lease and that each person signing on behalf of Tenant is authorized to do so. In such event, Tenant shall, within ten (10) days after execution of this Lease, deliver to Landlord satisfactory evidence of such authority and, if a corporation, upon demand by Landlord, also deliver to Landlord satisfactory evidence of (i) good standing in Tenant's state of incorporation and (ii) qualification to do business in the State of California.

29.21 **Attorneys' Fees**. In the event that either Landlord or Tenant should bring suit for the possession of the Premises, for the recovery of any sum due under this Lease, or because of the breach of any provision of this Lease or for any other relief against the other, then all costs and expenses, including reasonable attorneys' fees, incurred by the prevailing party therein shall be paid by the other party, which obligation on the part of the other party shall be deemed to have accrued on the date of the commencement of such action and shall be enforceable whether or not the action is prosecuted to judgment.

29.22 **Governing Law; WAIVER OF TRIAL BY JURY**. This Lease shall be construed and enforced in accordance with the laws of the State of California. IN ANY ACTION OR PROCEEDING ARISING HEREFROM, LANDLORD AND TENANT HEREBY CONSENT TO (I) THE JURISDICTION OF ANY COMPETENT COURT WITHIN THE STATE OF CALIFORNIA, (II) SERVICE OF PROCESS BY ANY MEANS AUTHORIZED BY CALIFORNIA LAW, AND (III) IN THE INTEREST OF SAVING TIME AND EXPENSE, TRIAL WITHOUT A JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM BROUGHT BY EITHER OF THE PARTIES HERETO AGAINST THE OTHER OR THEIR SUCCESSORS IN RESPECT OF ANY MATTER ARISING OUT OF OR IN CONNECTION WITH THIS LEASE, THE RELATIONSHIP OF LANDLORD AND TENANT HEREUNDER, TENANT'S USE OR OCCUPANCY OF THE PREMISES, AND/OR ANY CLAIM FOR INJURY OR DAMAGE, OR ANY EMERGENCY OR STATUTORY REMEDY. IN THE EVENT LANDLORD COMMENCES ANY SUMMARY PROCEEDINGS OR ACTION FOR NONPAYMENT OF BASE RENT OR ADDITIONAL RENT, TENANT SHALL NOT INTERPOSE ANY COUNTERCLAIM OF ANY NATURE OR DESCRIPTION (UNLESS SUCH COUNTERCLAIM SHALL BE MANDATORY) IN ANY SUCH PROCEEDING OR ACTION, BUT SHALL BE RELEGATED TO AN INDEPENDENT ACTION AT LAW.

29.23 **Submission of Lease**. Submission of this instrument for examination or signature by Tenant does not constitute a reservation of, option for or option to lease, and it is not effective as a lease or otherwise until execution and delivery by both Landlord and Tenant.

29.24 **Brokers**. Landlord and Tenant hereby warrant to each other that they have had no dealings with any real estate broker or agent in connection with the negotiation of this Lease, excepting only the real estate brokers or agents specified in Section 12 of the Summary (the "**Brokers**"), and that they know of no other real estate broker or agent who is entitled to a commission in connection with this Lease. Landlord shall be responsible for paying a commission to the Brokers in connection with this Lease pursuant to a separate agreement. Each party agrees to indemnify and defend the other party against and hold the other party harmless from any and all claims, demands, losses, liabilities, lawsuits, judgments, costs and expenses (including without limitation reasonable attorneys' fees) with respect to any leasing commission or equivalent compensation alleged to be owing on account of any dealings with any real estate broker or agent, other than the Brokers, occurring by, through, or under the indemnifying party. The terms of this Section 29.24 shall survive the expiration or earlier termination of the Lease Term.

29.25 **Independent Covenants**. This Lease shall be construed as though the covenants herein between Landlord and Tenant are independent and not dependent and Tenant hereby expressly waives the benefit of any statute

to the contrary and agrees that if Landlord fails to perform its obligations set forth herein, Tenant shall not be entitled to make any repairs or perform any acts hereunder at Landlord's expense or to any setoff of the Rent or other amounts owing hereunder against Landlord (except to the extent otherwise expressly provided in this Lease).

29.26 **Project or Building Name, Address and Signage**. Landlord shall have the right at any time to change the name and/or address of the Project or Building (and Landlord shall reimburse Tenant its reasonable out-of-pocket costs incurred as a result of such change) and, subject to Article 23 above, to install, affix and maintain any and all signs on the exterior and on the interior of the Project or Building as Landlord may, in Landlord's sole discretion, desire. Tenant shall not use the name of the Project or Building or use pictures or illustrations of the Project or Building in advertising or other publicity or for any purpose other than as the address of the business to be conducted by Tenant in the Premises, without the prior written consent of Landlord.

29.27 **Counterparts**. This Lease may be executed in counterparts with the same effect as if both parties hereto had executed the same document. Both counterparts shall be construed together and shall constitute a single lease.

29.28 **Confidentiality**. Landlord acknowledges that while this Lease is in effect, Landlord and its Representatives (as defined below) may have access to proprietary information or material non-public information about Tenant, a publicly traded company. Landlord and its Representatives shall not disclose such proprietary information or material non-public information about Tenant, provided that in no event shall any disclosure as required by Applicable Law, court order or a governmental agency, or to Landlord's financial, legal, accounting consultants, lenders, assignees, purchasers, partners, members and investors be deemed a breach of the foregoing (provided Landlord shall communicate the confidential nature of such information). As used herein, "**Representatives**" means the officers, directors, employees, agents, advisors, subcontractors, and consultants of a party and its affiliate.

29.29 **Development of the Project**.

29.29.1 **Subdivision**. Landlord, at its sole cost and expense, reserves the right to subdivide all or a portion of the buildings and Common Areas. Tenant agrees to execute and deliver, upon demand by Landlord and in the commercially reasonable form requested by Landlord, any additional documents needed to conform this Lease to the circumstances resulting from a subdivision and any all maps in connection therewith. Notwithstanding anything to the contrary set forth in this Lease, the separate ownership of any buildings and/or Common Areas by an entity other than Landlord shall not affect the calculation of Direct Expenses or Tenant's payment of Tenant's Share of Direct Expenses or materially and adversely change the rights and obligations of Tenant hereunder.

29.29.2 **Construction of Property and Other Improvements**. Tenant acknowledges that portions of the Project may be under construction by Landlord following Tenant's occupancy of the Premises, and that such construction may temporarily for a commercially reasonable period of time result in levels of noise, dust, obstruction of access, etc. which are in excess of that present in a fully constructed project. Landlord hereby agrees that Landlord shall perform all construction in a good and workmanlike manner, in accordance with all Applicable Laws, and further agrees to perform any such construction in a manner reasonably calculated to minimize interference with Tenant's use of (including without limitation, Tenant's vivarium operations) or access to the Premises or the parking facilities serving the Project. Subject to the terms of Section 19.5 of this Lease, Tenant hereby waives any and all rent offsets or claims of constructive eviction which may arise in connection with such construction performed in accordance with this Section 29.29.2. Landlord shall provide not less than ten (10) business days' prior written notice to Tenant of any construction that may impact Tenant's use of or access to the Premises the parking facilities and accommodate reasonable requests of Tenant with respect to the same to delay the scheduling of or to minimize the impact of such construction on Tenant's business operations at the Premises..

29.30 **No Violation**. Tenant hereby warrants and represents that neither its execution of nor performance under this Lease shall cause Tenant to be in violation of any agreement, instrument, contract, law, rule or regulation by which Tenant is bound, and Tenant shall protect, defend, indemnify and hold Landlord harmless against any claims, demands, losses, damages, liabilities, costs and expenses, including, without limitation, reasonable attorneys' fees and costs, arising from Tenant's breach of this warranty and representation.

29.31 **Transportation Management**. Tenant shall fully comply with all present or future governmentally mandated programs intended to manage parking, transportation or traffic in and around the Project and/or the Building, and in connection therewith, Tenant shall use commercially reasonable efforts to take responsible action for the transportation planning and management of all employees located at the Premises by working directly with Landlord, any governmental transportation management organization or any other transportation-related committees or entities. Such programs may include, without limitation: (i) restrictions on the number of peak-hour vehicle trips generated by Tenant; (ii) increased vehicle occupancy; (iii) implementation of an in-house ridesharing program and an employee transportation coordinator; (iv) working with employees and any Project, Building or area-wide ridesharing program manager; (v) instituting employer-sponsored incentives (financial or in-kind) to encourage employees to rideshare; and (vi) utilizing flexible work shifts for employees.

IN WITNESS WHEREOF, Landlord and Tenant have caused this Lease to be executed the day and date first above written.

LANDLORD:	TENANT:
BAYSIDE AREA DEVELOPMENT, LLC, a Delaware limited liability company	**UNITY BIOTECHNOLOGY, INC.**, a Delaware corporation
By: ____ Print Name	By: ____ Print Name
Its: ____	Its: ____

EXHIBIT A

285 EAST GRAND AVENUE

OUTLINE OF PREMISES

EXHIBIT A-1

285 EAST GRAND AVENUE

PROJECT SITE PLAN

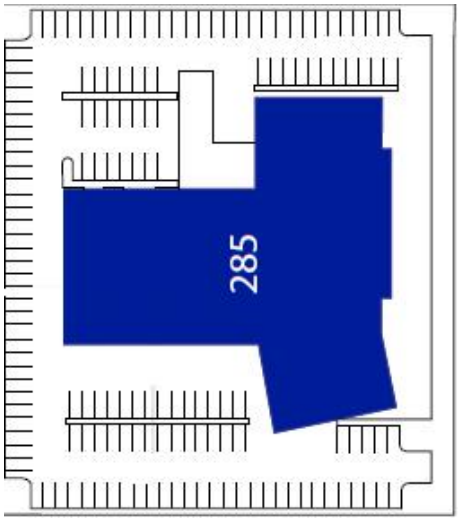


EXHIBIT B

285 EAST GRAND AVENUE

TENANT WORK LETTER

1. **Defined Terms**. As used in this Tenant Work Letter, the following capitalized terms have the following meanings:

(a) **Approved TI Plans**: Plans and specifications prepared by the applicable Architect for the Tenant Improvements and approved by Landlord and Tenant in accordance with Paragraph 2 of this Tenant Work Letter, subject to further modification from time to time to the extent provided in and in accordance with such Paragraph 2.

(b) **Architect**: CAC Architects.

(c) **Tenant Change Request**: See definition in Paragraph 2(c)(ii) hereof.

(d) **Final TI Working Drawings**: See definition in Paragraph 2(a) hereof.

(e) **General Contractor**: Landmark Builders. Tenant shall have no right to direct or control such General Contractor.

(f) **Landlord's TI Work**: Any Tenant Improvements which Landlord is to construct or install pursuant to this Tenant Work Letter.

(g) **Project Manager**. Project Management Advisors, Inc., or any other project manager designated by Landlord in its reasonable discretion from time to time to act in a supervisory, oversight, project management or other similar capacity on behalf of Landlord in connection with the design and/or construction of the Tenant Improvements and the oversight of the General Contractor.

(h) **Punch List Work**: Minor corrections of construction or decoration details, and minor mechanical adjustments, that are required in order to cause any applicable portion of the Tenant Improvements as constructed to conform to the Approved Plans in all material respects and that do not materially interfere with Tenant's use or occupancy of the Building and the Premises.

(i) **Substantial Completion Certificate**: See definition in Paragraph 3(a) hereof.

(j) **Tenant Delay**: Any of the following types of delay in the completion of construction of Landlord's TI Work (but in each instance, only to the extent that any of the following has actually and proximately caused substantial completion of Landlord's TI Work to be delayed) beyond December 4, 2019:

(i) Any delay resulting from Tenant's failure to furnish, in a timely manner, information reasonably requested by Landlord or by Landlord's Project Manager in connection with the design or construction of Landlord's TI Work, or from Tenant's failure to approve in a timely manner any matters requiring approval by Tenant;

(ii) Any delay resulting from Tenant Change Requests initiated by Tenant, including any delay resulting from the need to revise any drawings or obtain further governmental approvals as a result of any such Tenant Change Request; or

(iii) Any delay caused by Tenant (or Tenant's contractors, agents or employees) materially interfering with the performance of Landlord's TI Work, provided that Landlord shall have given Tenant prompt notice of such material interference.

Landlord shall promptly notify Tenant in writing of any potential Tenant Delay and Tenant shall have two (2) business days after receipt of Landlord's notice to cure the same before it constitutes Tenant Delay. In addition, Landlord shall use commercially reasonable efforts to mitigate any potential Tenant Delay.

(k) **Tenant Improvements**: The improvements to or within the Building shown on the Approved Plans from time to time and to be constructed by Landlord pursuant to the Lease and this Tenant Work Letter. The term "Tenant Improvements" does not include the improvements existing in the Building and Premises at the date of execution of the Lease.

(l) **Unavoidable Delays**: Delays due to acts of God, acts of public agencies, labor disputes, strikes, fires, freight embargoes, inability (despite the exercise of due diligence) to obtain supplies, materials, fuels or permits, or other causes or contingencies (excluding financial inability) beyond the reasonable control of Landlord or Tenant, as applicable.

(m) Capitalized terms not otherwise defined in this Tenant Work Letter shall have the definitions set forth in the Lease.

2. **Plans and Construction**. Landlord and Tenant shall comply with the procedures set forth in this Paragraph 2 in preparing, delivering and approving matters relating to the Tenant Improvements.

(a) **Approved Plans and Working Drawings for Tenant Improvements**. Prior to the date of the Lease, Landlord and Tenant mutually approved schematic plans and outline specifications for the Tenant Improvements prepared by the Architect (the "**Approved Schematic Plans**"), which Approved Schematic Plans are attached hereto as **Schedule 2**. Following the execution of this Lease, Tenant shall cause to be prepared, promptly and with reasonable diligence (assuming timely delivery by Landlord of any information and decisions required to be furnished or made by Landlord in order to permit preparation of final working drawings, all of which information and decisions Landlord will deliver promptly and with reasonable diligence), and delivered to Landlord for approval (which approval shall not be unreasonably withheld, conditioned or delayed by Landlord) final detailed working drawings and specifications for the Tenant Improvements, including (without limitation) any applicable life safety, mechanical, electrical and plumbing working drawings and final architectural drawings (collectively, "**Final TI Working Drawings**"), which Final TI Working Drawings shall substantially conform to the Approved Schematic Plans. Upon receipt from Tenant of proposed Final TI Working Drawings, any other plans and specifications, or any revisions or resubmittals of any of the foregoing, as applicable, Landlord shall promptly and diligently (and in all events within 10 days after receipt in the case of an initial submittal of proposed Final TI Working Drawings, and within 7 days after receipt in the case of any other plans and specifications or any revisions or resubmittals of any of the foregoing) either approve such proposed Final TI Working Drawings or other plans and specifications, as applicable, or set forth in writing with particularity any changes necessary to bring the aspects of such proposed Final TI Working Drawings or other plans and specifications into a form which will be reasonably acceptable to Landlord. If Landlord fails to respond within such ten (10) day or seven (7) day period, as applicable, then Tenant may send Landlord a reminder notice via email to Scott Bohn <sbohn@HCPI.COM> and Natalia De Michele <ndemichele@HCPI.COM> setting forth such failure containing the following sentence at the top of such notice in bold, capitalized font at least twelve (12) points in size: "LANDLORD'S FAILURE TO RESPOND TO THIS NOTICE WITHIN TWO (2) BUSINESS DAYS SHALL RESULT IN LANDLORD'S DEEMED APPROVAL OF TENANT'S FINAL TI WORKING DRAWINGS" (the "**Tenant Improvements Reminder Notice**"). Any such Tenant Improvements Reminder Notice shall include a complete copy of the Final TI Working Drawings. If Landlord fails to respond within two (2) business days after receipt of a Tenant Improvements Reminder Notice, then Tenant's Final TI Working Drawings for which Tenant requested Landlord's approval shall be deemed approved by Landlord. Upon approval of the Final TI Working Drawings by Landlord and Tenant, the Final TI Working Drawings shall constitute the "Approved TI Plans," superseding (to the extent of any inconsistencies) any inconsistent features of the previously existing Approved Schematic Plans.

(b) **Cost of Improvements**. "**Cost of Improvement**" shall mean, with respect to any item or component for which a cost must be determined in order to allocate such cost, or an increase in such cost, to Tenant pursuant to this Tenant Work Letter, the sum of the following (unless otherwise agreed in writing by Landlord and Tenant with respect to any specific item or component or any category of items or components): (i) all sums paid to contractors or subcontractors for labor and materials furnished in connection with construction of such item or

component; (ii) all costs, expenses, payments, fees and charges (other than penalties) paid to or at the direction of any city, county or other governmental or quasi-governmental authority or agency which are required to be paid in order to obtain all necessary governmental permits, licenses, inspections and approvals relating to construction of such item or component; (iii) engineering and architectural fees for services rendered in connection with the design and construction of such item or component (including, but not limited to, the TI Architect for such item or component and an electrical engineer, mechanical engineer and civil engineer, if applicable); (iv) sales and use taxes; (v) testing and inspection costs; (vi) the cost of power, water and other utility facilities and the cost of collection and removal of debris required in connection with construction of such item or component; (vii) costs for builder's risk insurance; and (viii) all other "hard" and "soft" costs incurred in the construction of such item or component in accordance with the Approved TI Plans (if applicable) and this Tenant Work Letter; provided that the Cost of Improvements shall not include any internal or third-party costs incurred by Landlord. Further, the Cost of Improvements shall not include any costs incurred by Landlord to bring the Base Building or Common Areas into compliance with Applicable Laws as of the Lease Commencement Date (including without limitation, with respect to any alterations or improvements to the same that are triggered by the Tenant Improvements) or satisfy Landlord's warranty and delivery obligations under Section 1.1.1 and Section 5.3.1.4 of the Lease.

(c) **Construction of Landlord's TI Work**. Following completion of the Approved TI Plans, Landlord shall apply for and use reasonable efforts to obtain the necessary permits and approvals to allow construction of all Tenant Improvements. Upon receipt of such permits and approvals, Landlord shall, at Tenant's expense (subject to Landlord's payment of the Tenant Improvement Allowance), construct and complete the Tenant Improvements substantially in accordance with the Approved TI Plans, subject to Unavoidable Delays and Tenant Delays (if any). Such construction shall be performed in a neat, good and workmanlike manner and shall comply with and conform to all Applicable Laws and Underlying Documents applicable thereto in force at the time such work is completed. Landlord shall cause Landmark Builders to bid on general conditions and fee for construction of the Tenant Improvements and provide an estimate for the direct cost of the Tenant Improvements. Tenant shall also have the right to approve all subcontractors engaged by the General Contractor, which subcontractors shall be competitively bid and which approval shall not be unreasonably withheld, conditioned or delayed.

(d) **Changes**.

(i) If Landlord determines at any time that changes in the Final TI Working Drawings or in any other aspect of the Approved TI Plans relating to any item of Landlord's TI Work are required as a result of Applicable Laws, or are required at the insistence of the applicable governmental authority whose approval is required with respect to Landlord's TI Work, or are required as a result of unanticipated conditions encountered in the course of construction, then Landlord shall promptly (A) advise Tenant of such circumstances and (B) at Tenant's sole cost and expense, subject to Landlord's payment of the Tenant Improvement Allowance (subject to Landlord's responsibilities under Section 2(b) above), cause revised Final TI Working Drawings to be prepared by the Architect and submitted to Tenant, for Tenant's information.

(ii) If Tenant at any time desires any changes, alterations or additions to the Final TI Working Drawings, Tenant shall submit a detailed written request to Landlord specifying such changes, alterations or additions (a "**Tenant Change Request**"). Upon receipt of any such request, Landlord shall within five (5) business days thereafter notify Tenant of (A) whether the matters proposed in the Tenant Change Request are approved by Landlord (which approval shall not be unreasonably withheld, conditioned or delayed by Landlord), (B) Landlord's estimate of the number of days of delay, if any, which shall be caused in the construction of the Tenant Improvements by such Tenant Change Request if implemented (including, without limitation, delays due to the need to obtain any revised plans or drawings and any governmental approvals), and (C) Landlord's estimate of the increase, if any, which shall occur in the cost of construction of the Tenant Improvements affected by such Tenant Change Request if such Tenant Change Request is implemented (including, but not limited to, any costs of compliance with laws or governmental regulations that become applicable because of the implementation of the Tenant Change Request). If Landlord approves the Tenant Change Request and Tenant notifies Landlord in writing, within three (3) business days after receipt of such notice from Landlord, of Tenant's approval of the Tenant Change Request (including the estimated delays and cost increases, if any, described in Landlord's notice), then Landlord shall cause such Tenant Change Request to be implemented and Tenant shall be responsible for all actual costs or cost increases resulting from or attributable to the implementation of the Tenant Change Request, and any delays resulting therefrom which shall cause construction of Landlord's TI Work to be delayed beyond December 4, 2019 shall be deemed to be a Tenant Delay (subject to Landlord's payment

of the Tenant Improvement Allowance). If Tenant fails to notify Landlord in writing of Tenant's approval of such Tenant Change Request within said three (3) business day period, then such Tenant Change Request shall be deemed to be withdrawn and shall be of no further effect.

(d) **Project Management**. Unless and until revoked by Landlord by written notice delivered to Tenant, Landlord hereby (i) delegates to Project Manager the authority to exercise all approval rights, supervisory rights and other rights or powers of Landlord under this Tenant Work Letter with respect to the design and construction of the Tenant Improvements, and (ii) requests that Tenant work with Project Manager with respect to any logistical or other coordination matters arising in the course of construction of the Tenant Improvements, including monitoring Tenant's and Landlord's compliance with its obligations under this Tenant Work Letter and under the Lease with respect to the design and construction of the Tenant Improvements. Tenant acknowledges the foregoing delegation and request, and agrees to cooperate reasonably with Project Manager as Landlord's representative pursuant to such delegation and request. Fees and charges of Project Manager for such services shall be at Tenant's sole expense, subject to Landlord's payment of the Tenant Improvement Allowance. Such fees shall equal the sum of (X) the product of (A) 2.65% and (B) the amount of the Tenant Improvement Allowance and Additional TI Allowance which Tenant elects to utilize, and (Y) the product of (C) 2.0% and (D) the amount of Tenant Funds Amount which Tenant elects to utilize.

3. **Completion**.

(a) When Landlord receives written certification from Architect that construction of the Tenant Improvements in the Building has been completed in accordance with the Approved TI Plans (except for Punch List Work), Landlord shall prepare and deliver to Tenant a certificate signed by both Landlord and Architect (the "**Substantial Completion Certificate**") (i) certifying that the construction of the Tenant Improvements has been substantially completed in a good and workmanlike manner in accordance with the Approved TI Plans in all material respects, subject only to completion of Punch List Work, and specifying the date of that completion, and (ii) certifying that the Tenant Improvements comply in all material respects with all laws, rules, regulations, codes, ordinances, requirements, covenants, conditions and restrictions applicable thereto at the time of such delivery. Upon receipt by Tenant of the Substantial Completion Certificate and tender of possession of the Premises by Landlord to Tenant, and receipt of any certificate of occupancy or its legal equivalent, or other required sign-offs from any applicable governmental authority, allowing the legal occupancy of the Premises, the Tenant Improvements will be deemed delivered to Tenant and "**Ready for Occupancy**" for all purposes of the Lease (subject to Landlord's continuing obligations with respect to any Punch List Work, and to any other express obligations of Landlord under the Lease or this Tenant Work Letter with respect to such Tenant Improvements).

(b) Promptly following delivery of the Substantial Completion Certificate for the Tenant Improvements in the Building, Project Manager or other representatives of Landlord shall conduct one or more "walkthroughs" of the Building with Tenant and Tenant's representatives, to identify any items of Punch List Work that may require correction and to prepare a joint punch list reflecting any such items, following which Landlord shall diligently complete the Punch List Work reflected in such joint punch list. At any time within thirty (30) days after delivery of such Substantial Completion Certificate, Tenant shall be entitled to submit one or more lists to Landlord supplementing such joint punch list by specifying any additional items of Punch List Work to be performed on the applicable Tenant Improvements, and upon receipt of such list(s), Landlord shall diligently complete such additional Punch List Work. Promptly after Landlord provides Tenant with the Substantial Completion Certificate and completes all applicable Punch List Work for the Building, Landlord shall cause the recordation of a Notice of Completion (as defined in the California Civil Code) with respect to the Tenant Improvements.

(c) The General Contractor shall furnish at a minimum an industry standard one (1) year warranty covering all Tenant Improvements. All construction, product and equipment warranties and guaranties obtained by Landlord with respect to the Tenant Improvements shall, to the extent reasonably obtainable, include a provision that such warranties and guaranties shall also run to the benefit of Tenant, and Landlord shall cooperate with Tenant in a commercially reasonable manner to assist in enforcing all such warranties and guaranties for the benefit of Tenant. Landlord shall cause Tenant to be named as an additional insured on the general liability insurance and Landlord shall cause the General Contractor to maintain worker's compensation insurance pursuant to applicable state and local statutes and regulations.

(d) Notwithstanding any other provisions of this Tenant Work Letter or of the Lease, if Landlord is delayed in substantially completing any of the Tenant Improvements as a result of any Tenant Delay, then the Premises shall be deemed to have been Ready for Occupancy on the date the Premises would have been Ready for Occupancy absent such Tenant Delay.

4. **Payment of Costs**.

(a) **Tenant Improvement Allowance**. Subject to any restrictions, conditions or limitations expressly set forth in this Tenant Work Letter or in the Lease or as otherwise expressly provided by mutual written agreement of Landlord and Tenant, the cost of construction of the Tenant Improvements shall be paid or reimbursed by Landlord up to a maximum amount equal to $125.00 per rentable square foot of the Premises (*i.e.*, $7,831,875.00 based upon 62,655 rentable square feet in the Premises) (the "**Tenant Improvement Allowance**"), which amount is being made available by Landlord to be applied towards the Cost of Improvements for the construction of the Tenant Improvements in the Premises, less any reduction in or charge against such amount pursuant to any applicable provisions of this Tenant Work Letter. Tenant shall be responsible, at its sole cost and expense, for payment of the entire Cost of Improvements of the Tenant Improvements in excess of the Tenant Improvement Allowance (such excess amount is referred to herein as the "**Tenant Funds Amount**", including (but not limited to) any costs or cost increases incurred as a result of delays (unless caused by Landlord), governmental requirements or unanticipated conditions (unless caused by Landlord), and for payment of any and all costs and expenses relating to any alterations, additions, improvements, furniture, furnishings, equipment, fixtures and personal property items which are not eligible for application of Tenant Improvement Allowance funds under the restrictions expressly set forth below in this paragraph, but Tenant shall be entitled to use or apply the entire Tenant Improvement Allowance toward the Cost of Improvements of the Tenant Improvements (subject to any applicable restrictions, conditions, limitations, reductions or charges set forth in the Lease or in this Tenant Work Letter) prior to being required to expend any of Tenant's own funds for the Tenant Improvements. The funding of the Tenant Improvement Allowance shall be made on a monthly basis or at other convenient intervals mutually approved by Landlord and Tenant and in all other respects shall be based on such commercially reasonable disbursement conditions and procedures as Landlord, Project Manager and Landlord's lender (if any) may reasonably prescribe. Notwithstanding the foregoing provisions, under no circumstances shall the Tenant Improvement Allowance or any portion thereof be used or useable by Tenant for any moving or relocation expenses of Tenant, or for any Cost of Improvement (or any other cost or expense) associated with any moveable furniture or trade fixtures, personal property or any other item or element which, under the applicable provisions of the Lease, will not become Landlord's property and remain with the Building upon expiration or termination of the Lease.

(b) **Additional TI Allowance**. In addition to the Tenant Improvement Allowance, Tenant shall have the right, by written notice to Landlord given on or before the Lease Commencement Date, to use up to $45.00 per rentable square foot of the Premises (i.e., up to $2,819,475.00) (the "**Additional TI Allowance**") towards the payment of the costs of the Tenant Improvement Allowance Items. In the event Tenant exercises its right to use all or any portion of the Additional TI Allowance, Tenant shall be required to pay Landlord, commencing on the Lease Commencement Date (the "**Additional Payment Commencement Date**"), the "Additional TI Allowance Payment," as that term is defined below, in consideration of Landlord provision of the Additional TI Allowance. The "**Additional TI Allowance Payment**" shall be determined as the missing component of an annuity, which annuity shall have (i) the amount of the Additional TI Allowance utilized by Tenant as the present value amount, (ii) a number equal to the number of full calendar months then remaining in the Lease Term as the number of payments, (iii) a monthly interest factor equal to 0.75%, which is equal to nine percent (9%) divided by twelve (12) months per year, and (iv) the Additional TI Allowance Payment as the missing component of the annuity. Following the calculation of the Additional TI Allowance Payment, Landlord and Tenant will enter into a lease amendment to confirm the amount thereof. Any portion of the Additional TI Allowance which has not been claimed or drawn by Tenant prior to December 31, 2020, shall expire and shall no longer be available to Tenant thereafter.

(c) **Tenant Funds**. For additional funds required to complete the cost of the work, that are in excess of, or elected by Tenant to be used in place of the Tenant Improvement Allowance, and the Additional TI Allowance, these shall be considered "**Tenant Funds**." The total cost to construct the Tenant Improvements as managed by Landlord and the Project Manager under this Work Letter shall be the "**Project Budget**." Landlord understands that at the time of the agreed upon Guaranteed Maximum Price (GMP), the Tenant Funds amount is an estimate and exact costs will not be known until project closeout. Tenant is required, at the time of agreement of the GMP, to provide a

purchase order to Landlord for the full estimated amount of the Tenant Funds, provided that Tenant shall not be required to make payment, if any, until the close out of the project and a true up of costs are provided to Tenant. In the event the Tenant Funds at project closeout are less than the amount agreed upon within the Project Budget, Landlord will only bill Tenant for the Tenant Funds that have been utilized. In the event the Tenant Funds exceed the amount agreed upon within the Project Budget, through added scope changes requested by Tenant, the Tenant shall provide additional purchase orders to Landlord, which will be included in the Tenant Change Request process that the Landlord's representative administers.

5. **No Agency**. Nothing contained in this Tenant Work Letter shall make or constitute Tenant as the agent of Landlord.

6. **Miscellaneous**. All references in this Tenant Work Letter to a number of days shall be construed to refer to calendar days, unless otherwise specified herein. In all instances where Landlord's or Tenant's approval is required, if no written notice of disapproval is given within the applicable time period, at the end of that period Landlord or Tenant shall be deemed to have given approval (unless the provision requiring Landlord's or Tenant's approval expressly states that non-response is deemed to be a disapproval or withdrawal of the pending action or request, in which event such express statement shall be controlling over the general statement set forth in this sentence) and the next succeeding time period shall commence. If any item requiring approval is disapproved by Landlord or Tenant (as applicable) in a timely manner, the procedure for preparation of that item and approval shall be repeated.

7. **Removal of Tenant Improvements**. Landlord hereby acknowledges that the Tenant Improvements constructed pursuant to the terms of this Tenant Work Letter shall not be subject to removal upon the expiration or earlier termination of this Lease.

8. **Time Deadlines**. Each of Landlord and Tenant shall use commercially reasonable, good faith, efforts and all due diligence to cooperate with the Architect, General Contractor and the other to complete all phases of the construction drawings set forth in this Tenant Work Letter and the permitting process and to receive the permits as soon as possible after the execution of the Lease. The applicable anticipated dates for approval of items, plans and drawings, submittal for issuance of permits, and completion of the Tenant Improvements as described in this Tenant Work Letter are set forth and further elaborated upon in Schedule 1 to this Exhibit B attached hereto (the "**Time Deadlines**"), attached hereto. Each of Landlord and Tenant agrees to utilize commercially reasonable efforts to comply with the Time Deadlines.

SCHEDULE 1

TIME DEADLINES

Project Management Advisors, Inc.

Unity Bio TI
285 E Grand Ave
South San Francisco, CA

Updated: 02/11/2019

Tenant Improvement Milestone Schedule

11/09/2018	TI Design Commencement
12/03/2018	Tenant Selection of General Contractor
01/15/2019	Tenant Approval of Test-fit
02/05/2019	Tenant Approval of 100% Schematic Design Drawings
02/07/2019	Tenant Approval of Preliminary Project Budget (based on Test Fit v6)
02/14/2019	Tenant Submission of Final Equipment List
02/27/2019	Tenant Approval of 100% Design Development Drawings
03/05/2019	Tenant Submission of HMIS (Hazardous Material Inventory Statement)
03/22/2019	Tenant Approval of Final Project Budget*
03/29/2019	Anticipated Submittal of Issue for Permit Documents to City
03/29/2019	Tenant Approval of Issue for Permit Drawings
05/06/2019	Anticipated Construction Commencement
05/30/2019	Anticipated Permit Issuance from City
12/04/2019	Anticipated Substantial Completion/Rent Commencement

*Final Project Budget is based on pricing of 100% Design Development Package. Changes to Budget & Schedule thereafter shall be approved via TCR process.

SCHEDULE 2

APPROVED SCHEMATIC PLANS

792986.06/WLA
186772-00003/2-28-19/gjn/gjn

Bayside Area Development, LLC
[285 East Grand Avenue]
[Unity Biotechnology, Inc.].


Department Legend
UNITY
A102-SD

EXHIBIT C

285 EAST GRAND AVENUE

NOTICE OF LEASE TERM DATES

To: _____
_____
_____
_____

Re: Lease dated _____, 20__ between _____, a _____ ("**Landlord**"), and _____, a _____ ("**Tenant**") concerning Suite _____ on floor(s) _____ of the building located at _____, California.

Gentlemen:

In accordance with the Lease (the "**Lease**"), we wish to advise you and/or confirm as follows:

1. The Lease Term shall commence on or has commenced on _____ for a term of _____ ending on _____.

2. Rent commenced to accrue on _____.

3. If the Lease Commencement Date is other than the first day of the month, the first billing will contain a pro rata adjustment. Each billing thereafter, with the exception of the final billing, shall be for the full amount of the monthly installment as provided for in the Lease.

4. Your rent checks should be made payable to _____ at _____.

"Landlord":

_____,
a _____

By: _____
Its: _____

Agreed to and Accepted as
of _____, 200_.

"Tenant":

a _____

By: _____
Its: _____

EXHIBIT D

285 EAST GRAND AVENUE

FORM OF TENANT'S ESTOPPEL CERTIFICATE

The undersigned as Tenant under that certain Lease (the "**Lease**") made and entered into as of _____, 20___ by and between _____ as Landlord, and the undersigned as Tenant, for Premises consisting of the entire office building located at _____, California, certifies as follows as of the date hereof:

1. Attached hereto as **Exhibit A** is a true and correct copy of the Lease and all amendments and modifications thereto. The documents contained in **Exhibit A** represent the entire agreement between the parties as to the Premises.

2. The undersigned currently occupies the Premises described in the Lease, the Lease Term commenced on _____, and the Lease Term expires on _____, and the undersigned has no option to terminate or cancel the Lease or to purchase all or any part of the Premises, the Building and/or the Project.

3. Base Rent became payable on _____.

4. The Lease is in full force and effect and has not been modified, supplemented or amended in any way except as provided in **Exhibit A**.

5. Tenant has not transferred, assigned, or sublet any portion of the Premises nor entered into any license or concession agreements with respect thereto which are in effect as of the date hereof except as follows:

6. All monthly installments of Base Rent, all Additional Rent and all monthly installments of estimated Additional Rent have been paid when due through _____. The current monthly installment of Base Rent is $_____.

7. To the undersigned's knowledge, Landlord is not in default thereunder. In addition, the undersigned has not delivered any notice to Landlord regarding a default by Landlord thereunder. The Lease does not require Landlord to provide any rental concessions or to pay any leasing brokerage commissions except as expressly set forth therein.

8. No rental has been paid more than thirty (30) days in advance and no security has been deposited with Landlord except as provided in the Lease.

9. As of the date hereof, to the undersigned’s knowledge there are no existing defenses or offsets, or, to the undersigned's knowledge, claims or any basis for a claim, that Tenant has against Landlord.

10. If Tenant is a corporation or partnership, each individual executing this Estoppel Certificate on behalf of Tenant hereby represents and warrants that Tenant is a duly formed and existing entity qualified to do business in California and that Tenant has full right and authority to execute and deliver this Estoppel Certificate and that each person signing on behalf of Tenant is authorized to do so.

11. To the undersigned’s knowledge, there are no actions pending against the undersigned under the bankruptcy or similar laws of the United States or any state.

12. Tenant has not received written notice of its non-compliance or violation of Applicable Laws with respect to its use of the Premises, including, but not limited to, Applicable Laws relating to Hazardous Materials, which remains uncured.

13. To the undersigned's knowledge, all tenant improvement work to be performed by Landlord under the Lease as of the date hereof has been completed in accordance with the Lease and has been accepted by the undersigned and all reimbursements and allowances due to the undersigned under the Lease as of the date hereof in connection with any tenant improvement work have been paid in full.

The undersigned acknowledges that this Estoppel Certificate may be delivered to Landlord or to a prospective mortgagee or prospective purchaser, and acknowledges that said prospective mortgagee or prospective purchaser will be relying upon the statements contained herein in making the loan or acquiring the property of which the Premises are a part and that receipt by it of this certificate is a condition of making such loan or acquiring such property.

Executed at _____ on the ____ day of _____, 200_.

"Tenant":

_____,
a _____

By: _____
Its: _____

By: _____
Its: _____

EXHIBIT E

285 EAST GRAND AVENUE

ENVIRONMENTAL QUESTIONNAIRE

ENVIRONMENTAL QUESTIONNAIRE
FOR COMMERCIAL AND INDUSTRIAL PROPERTIES

Tenant Name: _____
Lease Address: _____

Lease Type (check correct box – *right click to properties*):

☐ **Primary Lease/Lessee**
☐ **Sublease from:** _____

Instructions: The following questionnaire is to be completed by the Lessee representative with knowledge of the planned operations for the specified building/location. Please print clearly and attach additional sheets as necessary.

1.0 PROCESS INFORMATION

Describe planned site use, including a brief description of manufacturing processes and/or pilot plants planned for this site, if any.

_____

_____

_____

2.0 HAZARDOUS MATERIALS – OTHER THAN WASTE

Will (or are) non-waste hazardous materials be/being used or stored at this site? If so, continue with the next question. If not, go to Section 3.0.

2.1 Are any of the following materials handled on the Property? ☐ Yes ☐ No

[*A material is handled if it is used, generated, processed, produced, packaged, treated, stored, emitted, discharged, or disposed.]* If YES, check *(right click to properties)* the applicable correct Fire Code hazard categories below.

☐	Combustible dusts/fibers	☐	Explosives	☐	Flammable liquids
☐	Combustible liquids (e.g., oils)	☐	Compressed gas - inert	☐	Flammable solids/pyrophorics
☐	Cryogenic liquids - inert	☐	Compressed gas - flammable/pyrophoric	☐	Organic peroxides
☐	Cryogenic liquids - flammable	☐	Compressed gas - oxidizing	☐	Oxidizers - solid or liquid
☐	Cryogenic liquids - oxidizing	☐	Compressed gas - toxic	☐	Reactives - unstable or water reactive
☐	Corrosives - solid or liquid	☐	Compressed gas - corrosive	☐	Toxics - solid or liquid

2-2. For all materials checked in Section 2.1 above, please list the specific material(s), use(s), and quantities of each used or stored on the site in the table below; or attach a separate inventory. *NOTE: If proprietary, the constituents need not be named but the hazard information and volumes are required.*

Material/ Chemical	Physical State (Solid, Liquid, or Gas)	Container Size	Number of Containers Used & Stored	Total Quantity	Units (pounds for solids, gallons or liters for liquids, & cubic feet for gases)

2-3. Describe the planned storage area location(s) for the materials in Section 2-2 above. Include site maps and drawings as appropriate.

2-4. Other hazardous materials. Check below (*right click to properties)* if applicable. *NOTE: If either of the latter two are checked (BSL-3 and/or radioisotope/radiation), be advised that not all lease locations/cities or lease agreements allow these hazards; and if either of these hazards are planned, additional information will be required with copies of oversight agency authorizations/licenses as they become available.*

☐	Risk Group 2/Biosafety Level-2 Biohazards	☐	Risk Group 3/Biosafety Level-3 Biohazards	☐	Radioisotopes/Radiation

3.0 HAZARDOUS WASTE (i.e., REGULATED CHEMICAL WASTE)

Are (or will) hazardous wastes (be) generated? ☐ Yes ☐ No

If YES, continue with the next question. If not, skip this section and go to section 4.0.

3.1 Are or will any of the following hazardous (CHEMICAL) wastes generated, handled, or disposed of (where applicable and allowed) on the property?

☐	Liquids	☐	Process sludges	☐	PCBs
☐	Solids	☐	Metals	☐	wastewater

3-2. List and estimate the quantities of hazardous waste identified in Question 3-1 above.

HAZRDOUS (CHEMICAL) WASTE GENERATED	SOURCE	WASTE TYPE		APPROX. MONTHLY QUANTITY with units	DISPOSITION [e.g., off-site landfill, incineration, fuel blending scrap metal; wastewater neutralization (onsite or off-site)]
		RCRA listed (federal)	Non-RCRA (Calif-ornia ONLY or recycle)		
		☐	☐		
		☐	☐		
		☐	☐		
		☐	☐		
		☐	☐		

3-3. Waste characterization by: Process knowledge ☐ EPA lab analysis ☐ Both ☐

3-4. Please include name, location, and permit number (e.g. EPA ID No.) for transporter and disposal facility if applicable. Attach separate pages as necessary. *If not yet known, write "TBD."*

Hazardous Waste Transporter/Disposal Facility Name	Facility Location	Transporter (T) or Disposal (D) Facility	Permit Number

3-5. Are pollution controls or monitoring employed in the process to prevent or minimize the release of wastes into the environment? *NOTE: This does NOT mean fume hoods; examples include air scrubbers, cyclones, carbon or HEPA filters at building exhaust fans, sedimentation tanks, pH neutralization systems for wastewater, etc.*

☐ Yes ☐ No

If YES, please list/describe:

4.0 OTHER REGULATED WASTE (i.e., REGULATED BIOLOGICAL WASTE, referred to as "Medical Waste" in California)

4-1. Will (or do) you generate medical waste? ☐ Yes ☐ No If NO, skip to Section 5.0.

4-2. Check the types of waste that will be generated, all of which fall under the California Medical Waste Act:

☐	Contaminated sharps (i.e., if contaminated with ≥ Risk Group 2 materials)	☐	Animal carcasses	☐	Pathology waste known or suspected to be contaminated with ≥ Risk Group 2 pathogens)
☐	Red bag biohazardous waste (i.e., with ≥ Risk Group 2 materials) for autoclaving	☐	Human or non-human primate blood, tissues, etc. (e.g., clinical specimens)	☐	Trace Chemotherapeutic Waste and/or Pharmaceutical waste NOT otherwise regulated as RCRA chemical waste

4-3. What vendor will be used for off-site autoclaving and/or incineration?

4-5. Do you have a Medical Waste Permit for this site? ☐ Yes ☐ No, not required.
☐ No, but an application will be submitted.

5.0 UNDERGROUND STORAGE TANKS (USTS) & ABOVEGROUND STORAGE TANKS (ASTS)

5-1. Are underground storage tanks (USTs), aboveground storage tanks (ASTs), or associated pipelines used for the storage of petroleum products, chemicals, or liquid wastes present on site (lease renewals) or required for planned operations (new tenants)? ☐ Yes ☐ No

NOTE: If you will have your own diesel emergency power generator, then you will have at least one AST! [NOTE: If a backup generator services multiple tenants, then the landlord usually handles the permits.]

If NO, skip to section 6.0. If YES, please describe capacity, contents, age, type of the USTs or ASTs, as well any associated leak detection/spill prevention measures. Please attach additional pages if necessary.

UST or AST	Capacity (gallons)	Contents	Year Installed	Type (Steel, Fiberglass, etc.)	Associated Leak Detection / Spill Prevention Measures*

*NOTE: The following are examples of leak detection / spill prevention measures: integrity testing, inventory reconciliation, leak detection system, overfill spill protection, secondary containment, cathodic protection.

5-2. Please provide copies of written tank integrity test results and/or monitoring documentation, if available.

5-3. Is the UST/AST registered and permitted with the appropriate regulatory agencies? ☐ Yes ☐ No, not yet

If YES, please attach a copy of the required permit(s). *See Section 7-1 for the oversight agencies that issue permits, with the exception of those for diesel emergency power generators which are permitted by the local Air Quality District (Bay Area Air Quality Management District = BAAQMD; or San Diego Air Pollution Control District = San Diego APCD).*

5-4. If this Questionnaire is being completed for a lease renewal, and if any of the USTs/ASTs have leaked, please state the substance released, the media(s) impacted (e.g., soil, water, asphalt, etc.), the actions taken, and all remedial responses to the incident.

5-5. If this Questionnaire is being completed for a lease renewal, have USTs/ASTs been removed from the Property?

☐ Yes ☐ No

If YES, please provide any official closure letters or reports and supporting documentation (e.g., analytical test results, remediation report results, etc.).

5-6. For Lease renewals, are there any above or below ground pipelines on site used to transfer chemicals or wastes?

☐ Yes ☐ No

For new tenants, are installations of this type required for the planned operations? ☐ Yes ☐ No

If YES to either question in this section 5-6, please describe.

6.0 ASBESTOS CONTAINING BUILDING MATERIALS

Please be advised that an asbestos survey may have been performed at the Property. If provided, please review the information that identifies the locations of known asbestos containing material or presumed asbestos containing material. All personnel and appropriate subcontractors should be notified of the presence of these materials, and informed not to disturb these materials. Any activity that involves the disturbance or removal of these materials must be done by an appropriately trained individual/contractor.

7.0 OTHER REGULATORY PERMITS/REQUIREMENTS

7-1. Does the operation have or require an industrial wastewater permit to discharge into the local National Pollutant Discharge Elimination System (NPDES)? *[Example: This applies when wastewater from equipment cleaning is routed through a pH neutralization system prior to discharge into the sanitary or lab sewer for certain pharmaceutical manufacturing wastewater; etc.]* Permits are obtained from the regional sanitation district that is treating wastewater.

☐ Yes ☐ No ☐ No, but one will be prepared and submitted to the Landlord property management company.

If so, please attach a copy of this permit or provide it later when it has been prepared.

7-2. Has a Hazardous Materials Business Plan (HMBP) been developed for the site and submitted via the State of California Electronic Reporting System (CERS)? *[NOTE: The trigger limits for having to do this are ≥ 200 cubic feet if any one type of compressed gas(except for carbon dioxide and inert simple asphyxiant gases, which have a higher trigger limit of ≥ 1,000 cubic feet); ≥ 55 gallons if any one type*

of hazardous chemical liquid; and ≥500 pounds of any one type of hazardous chemical solid. So a full-sixe gas cylinder and a 260-liter of liquid nitrogen are triggers! Don't forget the diesel fuel in a backup emergency generator if the diesel tank size is ≥ 55 gallons and it is permitted under the tenant (rather than under the landlord).] NOTE: Each local Certified Unified Program Agency (CUPA) in California governs the HMBP process so start there. Examples: the CUPA for cities in San Mateo County is the County Environmental Health Department; the CUPA for the City of Hayward, CA is the Hayward Fire Department; the CUPA for Mountain View is the Mountain View Fire Department; and, the CUPA for San Diego is the County of San Diego Hazardous Materials Division (HMD),

☐ Yes ☐ No, not required. ☐ No, but one will be prepared and submitted, and a copy will be provided to the landlord property management company.

If one has been completed, please attach a copy. Continue to provide updated versions as they are completed. This is a legal requirement in that State law requires that the owner/operator of a business located on leased or rented real property shall notify, in writing, the owner of the property that the business is subject to and is in compliance with the Hazardous Materials Business Plan requirements (Health and Safety Code Chapter 6.95 Section 25505.1).

7-3. NOTE: Please be advised that if you are involved in any tenant improvements that require a construction permit, you will be asked to provide the local city with a Hazardous Materials Inventory Statement (HMIS) to ensure that your hazardous chemicals fall within the applicable Fire Code fire control area limits for the applicable construction occupancy of the particular building. The HMIS will include much of the information listed in Section 2-2. Neither the landlord nor the landlord's property management company expressly warrants that the inventory provided in Section 2-2 will necessarily meet the applicable California Fire Code fire control area limits for building occupancy, especially in shared tenant occupancy situations. It is the responsibility of the tenant to ensure that a facility and site can legally handle the intended operations and hazardous materials desired/ needed for its operations, but the landlord is happy to assist in this determination when possible.

CERTIFICATION

I am familiar with the real property described in this questionnaire. By signing below, I represent and warrant that the answers to the above questions are complete and accurate to the best of my knowledge. I also understand that Lessor will rely on the completeness and accuracy of my answers in assessing any environmental liability risks associated with the property.

Signature: _____

Name: _____

Title: _____

Date: _____

Telephone: _____

EXHIBIT F

285 EAST GRAND AVENUE

(Letterhead of a money center bank acceptable to the Landlord)

FAX NO. [(___) ___-____]
SWIFT: [Insert No., if any]

[Insert Bank Name And Address]

DATE OF ISSUE: _____

BENEFICIARY:
[Insert Beneficiary Name And Address]

APPLICANT:
[Insert Applicant Name And Address]

LETTER OF CREDIT NO. _____

EXPIRATION DATE:
_____ AT OUR COUNTERS

AMOUNT AVAILABLE:
USD[Insert Dollar Amount]
(U.S. DOLLARS [Insert Dollar Amount])

LADIES AND GENTLEMEN:

WE HEREBY ESTABLISH OUR IRREVOCABLE STANDBY LETTER OF CREDIT NO. _____ IN YOUR FAVOR FOR THE ACCOUNT OF [Insert Tenant's Name], A [Insert Entity Type], UP TO THE AGGREGATE AMOUNT OF USD[Insert Dollar Amount] ([Insert Dollar Amount] U.S. DOLLARS) EFFECTIVE IMMEDIATELY AND EXPIRING ON ___(Expiration Date)___ AVAILABLE BY PAYMENT UPON PRESENTATION OF YOUR DRAFT AT SIGHT DRAWN ON [Insert Bank Name] WHEN ACCOMPANIED BY THE FOLLOWING DOCUMENT(S):

1. THE ORIGINAL OF THIS IRREVOCABLE STANDBY LETTER OF CREDIT AND AMENDMENT(S), IF ANY.

2. BENEFICIARY'S SIGNED STATEMENT PURPORTEDLY SIGNED BY AN AUTHORIZED REPRESENTATIVE OF [Insert Landlord's Name], A [Insert Entity Type] ("LANDLORD") STATING THE FOLLOWING:

"THE UNDERSIGNED HEREBY CERTIFIES THAT THE LANDLORD, EITHER (A) UNDER THE LEASE (DEFINED BELOW), OR (B) AS A RESULT OF THE TERMINATION OF SUCH LEASE, HAS THE RIGHT TO DRAW DOWN THE AMOUNT OF USD _____ IN ACCORDANCE WITH THE TERMS OF THAT CERTAIN OFFICE LEASE DATED [Insert Lease Date], AS AMENDED (COLLECTIVELY, THE "LEASE"), OR SUCH AMOUNT CONSTITUTES DAMAGES OWING BY THE TENANT TO BENEFICIARY RESULTING FROM THE BREACH OF SUCH LEASE BY THE TENANT THEREUNDER, OR THE TERMINATION OF SUCH LEASE, AND SUCH AMOUNT REMAINS UNPAID AT THE TIME OF THIS DRAWING."

OR

"THE UNDERSIGNED HEREBY CERTIFIES THAT WE HAVE RECEIVED A WRITTEN NOTICE OF [Insert Bank Name]'S ELECTION NOT TO EXTEND ITS STANDBY LETTER OF CREDIT NO. _____ AND HAVE NOT RECEIVED A REPLACEMENT LETTER OF CREDIT WITHIN AT LEAST SIXTY (60) DAYS PRIOR TO THE PRESENT EXPIRATION DATE."

OR

"THE UNDERSIGNED HEREBY CERTIFIES THAT BENEFICIARY IS ENTITLED TO DRAW DOWN THE FULL AMOUNT OF LETTER OF CREDIT NO. _____ AS THE RESULT OF THE FILING OF A VOLUNTARY PETITION UNDER THE U.S. BANKRUPTCY CODE OR A STATE BANKRUPTCY CODE BY THE TENANT UNDER THAT CERTAIN OFFICE LEASE DATED [Insert Lease Date], AS AMENDED (COLLECTIVELY, THE "LEASE"), WHICH FILING HAS NOT BEEN DISMISSED AT THE TIME OF THIS DRAWING."

OR

"THE UNDERSIGNED HEREBY CERTIFIES THAT BENEFICIARY IS ENTITLED TO DRAW DOWN THE FULL AMOUNT OF LETTER OF CREDIT NO. _____ AS THE RESULT OF AN INVOLUNTARY PETITION HAVING BEEN FILED UNDER THE U.S. BANKRUPTCY CODE OR A STATE BANKRUPTCY CODE AGAINST THE TENANT UNDER THAT CERTAIN OFFICE LEASE DATED [Insert Lease Date], AS AMENDED (COLLECTIVELY, THE "LEASE"), WHICH FILING HAS NOT BEEN DISMISSED AT THE TIME OF THIS DRAWING."

OR

"THE UNDERSIGNED HEREBY CERTIFIES THAT BENEFICIARY IS ENTITLED TO DRAW DOWN THE FULL AMOUNT OF LETTER OF CREDIT NO. _____ AS THE RESULT OF THE REJECTION, OR DEEMED REJECTION, OF THAT CERTAIN OFFICE LEASE DATED [Insert Lease Date], AS AMENDED, UNDER SECTION 365 OF THE U.S. BANKRUPTCY CODE."

SPECIAL CONDITIONS:

PARTIAL DRAWINGS AND MULTIPLE PRESENTATIONS MAY BE MADE UNDER THIS STANDBY LETTER OF CREDIT, PROVIDED, HOWEVER, THAT EACH SUCH DEMAND THAT IS PAID BY US SHALL REDUCE THE AMOUNT AVAILABLE UNDER THIS STANDBY LETTER OF CREDIT.

ALL INFORMATION REQUIRED WHETHER INDICATED BY BLANKS, BRACKETS OR OTHERWISE, MUST BE COMPLETED AT THE TIME OF DRAWING. [Please Provide The Required Forms For Review, And Attach As Schedules To The Letter Of Credit.]

ALL SIGNATURES MUST BE MANUALLY EXECUTED IN ORIGINALS.

ALL BANKING CHARGES ARE FOR THE APPLICANT'S ACCOUNT.

IT IS A CONDITION OF THIS STANDBY LETTER OF CREDIT THAT IT SHALL BE DEEMED AUTOMATICALLY EXTENDED WITHOUT AMENDMENT FOR A PERIOD OF ONE YEAR FROM THE PRESENT OR ANY FUTURE EXPIRATION DATE, UNLESS AT LEAST SIXTY (60) DAYS PRIOR TO THE EXPIRATION DATE WE SEND YOU NOTICE BY NATIONALLY RECOGNIZED OVERNIGHT COURIER SERVICE THAT WE ELECT NOT TO EXTEND THIS LETTER OF CREDIT FOR ANY SUCH ADDITIONAL PERIOD. SAID NOTICE WILL BE SENT TO THE ADDRESS INDICATED ABOVE, UNLESS A CHANGE OF ADDRESS IS OTHERWISE NOTIFIED BY YOU TO US IN WRITING BY RECEIPTED MAIL OR COURIER. ANY NOTICE TO US WILL BE DEEMED EFFECTIVE ONLY UPON ACTUAL RECEIPT BY US AT OUR DESIGNATED OFFICE. IN NO EVENT, AND WITHOUT FURTHER NOTICE FROM OURSELVES, SHALL THE EXPIRATION DATE BE EXTENDED BEYOND A FINAL EXPIRATION DATE OF ___ (120 days from the Lease Expiration Date).

THIS LETTER OF CREDIT MAY BE TRANSFERRED SUCCESSIVELY IN WHOLE OR IN PART ONLY UP TO THE THEN AVAILABLE AMOUNT IN FAVOR OF A NOMINATED TRANSFEREE ("TRANSFEREE"),

ASSUMING SUCH TRANSFER TO SUCH TRANSFEREE IS IN COMPLIANCE WITH ALL APPLICABLE U.S. LAWS AND REGULATIONS. AT THE TIME OF TRANSFER, THE ORIGINAL LETTER OF CREDIT AND ORIGINAL AMENDMENT(S) IF ANY, MUST BE SURRENDERED TO US TOGETHER WITH OUR TRANSFER FORM (AVAILABLE UPON REQUEST) AND PAYMENT OF OUR CUSTOMARY TRANSFER FEES, WHICH FEES SHALL BE PAYABLE BY APPLICANT (PROVIDED THAT BENEFICIARY MAY, BUT SHALL NOT BE OBLIGATED TO, PAY SUCH FEES TO US ON BEHALF OF APPLICANT, AND SEEK REIMBURSEMENT THEREOF FROM APPLICANT). IN CASE OF ANY TRANSFER UNDER THIS LETTER OF CREDIT, THE DRAFT AND ANY REQUIRED STATEMENT MUST BE EXECUTED BY THE TRANSFEREE AND WHERE THE BENEFICIARY'S NAME APPEARS WITHIN THIS STANDBY LETTER OF CREDIT, THE TRANSFEREE'S NAME IS AUTOMATICALLY SUBSTITUTED THEREFOR.

ALL DRAFTS REQUIRED UNDER THIS STANDBY LETTER OF CREDIT MUST BE MARKED: "DRAWN UNDER [Insert Bank Name] STANDBY LETTER OF CREDIT NO. _____."

WE HEREBY AGREE WITH YOU THAT IF DRAFTS ARE PRESENTED TO [Insert Bank Name] UNDER THIS LETTER OF CREDIT AT OR PRIOR TO [Insert Time – (*e.g.*, 11:00 AM)], ON A BUSINESS DAY, AND PROVIDED THAT SUCH DRAFTS PRESENTED CONFORM TO THE TERMS AND CONDITIONS OF THIS LETTER OF CREDIT, PAYMENT SHALL BE INITIATED BY US IN IMMEDIATELY AVAILABLE FUNDS BY OUR CLOSE OF BUSINESS ON THE SUCCEEDING BUSINESS DAY. IF DRAFTS ARE PRESENTED TO [Insert Bank Name] UNDER THIS LETTER OF CREDIT AFTER [Insert Time – (*e.g.*, 11:00 AM)], ON A BUSINESS DAY, AND PROVIDED THAT SUCH DRAFTS CONFORM WITH THE TERMS AND CONDITIONS OF THIS LETTER OF CREDIT, PAYMENT SHALL BE INITIATED BY US IN IMMEDIATELY AVAILABLE FUNDS BY OUR CLOSE OF BUSINESS ON THE SECOND SUCCEEDING BUSINESS DAY. AS USED IN THIS LETTER OF CREDIT, "BUSINESS DAY" SHALL MEAN ANY DAY OTHER THAN A SATURDAY, SUNDAY OR A DAY ON WHICH BANKING INSTITUTIONS IN THE STATE OF CALIFORNIA ARE AUTHORIZED OR REQUIRED BY LAW TO CLOSE. IF THE EXPIRATION DATE FOR THIS LETTER OF CREDIT SHALL EVER FALL ON A DAY WHICH IS NOT A BUSINESS DAY THEN SUCH EXPIRATION DATE SHALL AUTOMATICALLY BE EXTENDED TO THE DATE WHICH IS THE NEXT BUSINESS DAY.

PRESENTATION OF A DRAWING UNDER THIS LETTER OF CREDIT MAY BE MADE ON OR PRIOR TO THE THEN CURRENT EXPIRATION DATE HEREOF BY HAND DELIVERY, COURIER SERVICE, OVERNIGHT MAIL, OR FACSIMILE. PRESENTATION BY FACSIMILE TRANSMISSION SHALL BE BY TRANSMISSION OF THE ABOVE REQUIRED SIGHT DRAFT DRAWN ON US TOGETHER WITH THIS LETTER OF CREDIT TO OUR FACSIMILE NUMBER, [Insert Fax Number – (___) ___-____], ATTENTION: [Insert Appropriate Recipient], WITH TELEPHONIC CONFIRMATION OF OUR RECEIPT OF SUCH FACSIMILE TRANSMISSION AT OUR TELEPHONE NUMBER [Insert Telephone Number – (___) ___-____] OR TO SUCH OTHER FACSIMILE OR TELEPHONE NUMBERS, AS TO WHICH YOU HAVE RECEIVED WRITTEN NOTICE FROM US AS BEING THE APPLICABLE SUCH NUMBER. WE AGREE TO NOTIFY YOU IN WRITING, BY NATIONALLY RECOGNIZED OVERNIGHT COURIER SERVICE, OF ANY CHANGE IN SUCH DIRECTION. ANY FACSIMILE PRESENTATION PURSUANT TO THIS PARAGRAPH SHALL ALSO STATE THEREON THAT THE ORIGINAL OF SUCH SIGHT DRAFT AND LETTER OF CREDIT ARE BEING REMITTED, FOR DELIVERY ON THE NEXT BUSINESS DAY, TO [Insert Bank Name] AT THE APPLICABLE ADDRESS FOR PRESENTMENT PURSUANT TO THE PARAGRAPH FOLLOWING THIS ONE.

WE HEREBY ENGAGE WITH YOU THAT ALL DOCUMENT(S) DRAWN UNDER AND IN COMPLIANCE WITH THE TERMS OF THIS STANDBY LETTER OF CREDIT WILL BE DULY HONORED IF DRAWN AND PRESENTED FOR PAYMENT AT OUR OFFICE LOCATED AT [Insert Bank Name], [Insert Bank Address], ATTN: [Insert Appropriate Recipient], ON OR BEFORE THE EXPIRATION DATE OF THIS CREDIT, ___(Expiration Date)___.

IN THE EVENT THAT THE ORIGINAL OF THIS STANDBY LETTER OF CREDIT IS LOST, STOLEN, MUTILATED, OR OTHERWISE DESTROYED, WE HEREBY AGREE TO ISSUE A DUPLICATE ORIGINAL HEREOF UPON RECEIPT OF A WRITTEN REQUEST FROM YOU AND A CERTIFICATION BY YOU (PURPORTEDLY SIGNED BY YOUR AUTHORIZED REPRESENTATIVE) OF THE LOSS, THEFT, MUTILATION, OR OTHER DESTRUCTION OF THE ORIGINAL HEREOF.

EXCEPT SO FAR AS OTHERWISE EXPRESSLY STATED HEREIN, THIS STANDBY LETTER OF CREDIT IS SUBJECT TO THE "INTERNATIONAL STANDBY PRACTICES" (ISP 98) INTERNATIONAL CHAMBER OF COMMERCE (PUBLICATION NO. 590).

Very truly yours,

(Name of Issuing Bank)

By: _____

LEASE

285 EAST GRAND AVENUE

BAYSIDE AREA DEVELOPMENT, LLC,

a Delaware limited liability company,

as Landlord,

and

UNITY BIOTECHNOLOGY, INC.,

a Delaware corporation,

as Tenant.

TABLE OF CONTENTS

INDEX

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement (Form S-8 No. 333-224726) pertaining to the 2013 Equity Incentive Plan, the 2018 Incentive Award Plan and 2018 Employee Stock Purchase Plan of Unity Biotechnology, Inc. of our report dated March 6, 2019, with respect to the financial statements of Unity Biotechnology, Inc. included in this Annual Report (Form 10-K) for the year ended December 31, 2018.

/s/ Ernst & Young LLP

Redwood City, California
March 6, 2019

Exhibit 31.1

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Keith R. Leonard Jr., certify that:

1. I have reviewed this Annual Report on Form 10-K of Unity Biotechnology, Inc. for the year ended December 31, 2018;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (c) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 6, 2019

By: /s/ Keith R. Leonard Jr.

Keith R. Leonard Jr.
Chairman and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Robert C. Goeltz II, certify that:

1. I have reviewed this Annual Report on Form 10-K of Unity Biotechnology, Inc. for the year ended December 31, 2018;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (c) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 6, 2019

By: /s/ Robert C. Goeltz II

Robert C. Goeltz II
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Unity Biotechnology, Inc. (the "Company") on Form 10-K for the year ending December 31, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Keith R. Leonard Jr., Chairman and Chief Executive Officer of the Company, and Robert C. Goeltz II, Chief Financial Officer of the Company, do each hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company for the period covered by the Report.

Date: March 6, 2019

By: /s/ Keith R. Leonard Jr.

Keith R. Leonard Jr.
Chairman and Chief Executive Officer
(Principal Executive Officer)

Date: March 6, 2019

By: /s/ Robert C. Goeltz II

Robert C. Goeltz II
Chief Financial Officer
(Principal Financial Officer)