CytomX Therapeutics, Inc.
Form 10-K
February 27, 2019

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 001-37587

CytomX Therapeutics, Inc.

(Exact Name of Registrant as Specified in Its Charter)

Delaware	27-3521219
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
151 Oyster Point Boulevard, Suite 400	
South San Francisco, California	94080
(Address of principal executive offices)	(Zip Code)

(650) 515-3185

(Registrant’s telephone number, including area code)3

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, $0.00001 par value	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 Section 15(d) of the Act. Yes No

Indicate by check mark whether the issuer (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

As of June 30, 2018, the last business day of the registrant's most recently completed second fiscal quarter, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was approximately $876.4 million, based on the closing price of the registrant's common stock on Nasdaq Global Select Market on June 30, 2018 of $22.86 per share. Shares of the registrant's common stock held by each officer and director and each person known to the registrant to own 10% or more of the outstanding common stock of the registrant have been excluded in that such persons may be deemed affiliates. This determination of affiliate status is not a determination for other purposes.

As of January 31, 2019, 45,111,282 shares of the registrant's common stock, $0.00001 par value per share, were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement to be filed for its 2019 Annual Meeting of Stockholders are incorporated by reference into Part III hereof. 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.

CYTOMX THERAPEUTICS, INC.

ANNUAL REPORT ON FORM 10-K

TABLE OF CONTENTS

Forward-Looking Statements

This Annual Report on Form 10-K contains certain forward-looking statements that involve risks and uncertainties. These forward-looking statements reflect our current views with respect to, among other things, future events and our financial performance. These statements are often, but not always, made through the use of words or phrases such as "may," "might," "should," "could," "predict," "potential," "believe," "expect," "continue," "will," "anticipate," "seek," "estima "projection," "would," "annualized" and "outlook," or the negative version of those words or other comparable words or phrases of a future or forward-looking nature. These forward-looking statements are not historical facts, and are based on current expectations, estimates and projections about our industry, management's beliefs and certain assumptions made by management, many of which, by their nature, are inherently uncertain and beyond our control. Accordingly, we caution you that any such forward-looking statements are not guarantees of future performance and are subject to risks, assumptions, estimates and uncertainties that are difficult to predict. Although we believe that the expectations reflected in these forward-looking statements are reasonable as of the date made, actual results may prove to be materially different from the results expressed or implied by the forward-looking statements.

A number of important factors could cause our actual results to differ materially from those indicated in these forward-looking statements, including those factors identified in "Risk Factors" or "Management's Discussion and Analysis of Financial Condition and Results of Operations" or the following:

- our expectations regarding the potential benefits, activity, effectiveness and safety of our product candidates and therapeutics developed utilizing our Probody platform technology;

- the initiation, timing, progress and results of our ongoing clinical trials, research and development programs, preclinical studies, and Investigational New Drug application ("IND"), Clinical Trial Application, New Drug Application ("NDA"), Biologics License Application ("BLA") and other regulatory submissions;

- the timing of the completion of our ongoing clinical trials and the timing and availability of clinical data from such clinical trials;

- our ability to identify and develop additional product candidates;

- our dependence on collaborators for developing, obtaining regulatory approval for and commercializing product candidates in the collaboration;

- our or a collaborator's ability to obtain and maintain regulatory approval of any of our product candidates;

- our receipt and timing of any milestone payments or royalties under any research collaboration and license agreements or arrangements;

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our expectations and beliefs regarding the evolution of the market for cancer therapies and development of the immuno-oncology industry;

- the rate and degree of market acceptance of any approved products candidates;
- the commercialization of any approved product candidates;
- our ability to establish and maintain collaborations and retain commercial rights for our product candidates in such collaborations;
- the implementation of our business model and strategic plans for our business, technologies and product candidates;
- our estimates of our expenses, ongoing losses, future revenue and capital requirements;
- our ability to obtain additional funds for our operations;
- our or any collaborator's ability to obtain and maintain intellectual property protection for our technologies and product candidates and our ability to operate our business without infringing the intellectual property rights of others;
- our reliance on third parties to conduct our preclinical studies or any future clinical trials;
- our reliance on third-party supply and manufacturing partners to supply the materials and components for, and manufacture, our research and development, preclinical and clinical trial product supplies;

1

- our ability to attract and retain qualified key management and technical personnel;
- our ability to secure and maintain licenses of intellectual property to protect our technologies and product candidates;
- our financial performance; and
- developments relating to our competitors or our industry.

Any forward-looking statements in this Annual Report on Form 10-K reflect our current views 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. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under Part I, Item 1A. Risk Factors and discussed elsewhere in this Annual Report on Form 10-K. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, 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 and therapeutic biologics, 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 these 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 these data are derived.

Except where the context otherwise requires, in this Annual Report on Form 10-K, “we,” “us,” “our” and the “Company” refer to CytomX Therapeutics, Inc.

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

We are a clinical-stage, oncology-focused biopharmaceutical company with a vision of transforming lives with safer, more effective therapies. We are pioneering a novel class of investigational antibody therapeutics, based on our Probody™ technology platform, for the treatment of cancer. The Probody therapeutic approach is designed to more specifically target antibody therapeutics to the tumor microenvironment and minimize drug activity in healthy tissue and in circulation. We believe this approach has the potential to make meaningful enhancements to the combined efficacy and safety profile of antibody therapeutics, known as the "therapeutic window" and also to enable new targeted therapies. We believe that Probody therapeutics have the potential to create or widen the therapeutic window for certain antibody therapeutics, allowing for the development of new approaches to the treatment of cancer. We are utilizing our Probody Platform to develop a pipeline, shown below, of potential best-in-class immunotherapies against clinically-validated targets and potential first-in-class therapeutics against novel, difficult to drug targets. Furthermore, we believe the Probody therapeutic approach has the potential to enable safer, more effective combination therapy for cancer.

CytomX pipeline of Probody Therapeutics

We believe there is a significant opportunity in localizing antibody therapeutics to the tumor microenvironment, and therefore the market opportunity for Probody therapeutics could be large. Cancer is the second leading cause of mortality in the United States and accounts for nearly one in every five deaths. Early cancer research and treatment relied on relatively non-specific and highly toxic small molecule chemotherapies. Over the last twenty years, a new paradigm of cancer treatment has emerged that is focused on more targeted therapies, including monoclonal antibody modalities, which represent some of the most effective and top-selling therapies on the market today. In 2017, half of the top 10 best-selling drugs on the market were monoclonal antibodies. More recently, immuno-oncology has emerged as a promising new field of cancer therapy that aims to enhance anti-tumor immune responses by, for example, overcoming suppressive mechanisms that cancer cells have developed to evade the immune system. In addition, new classes of monoclonal antibody-based therapeutics have also reached the market. These new classes include Antibody Drug Conjugates ("ADCs"), bispecific antibodies, and Chimeric Antigen Receptor ("CAR") based cellular therapies. We have demonstrated that our Probody therapeutic technology can be applied to many antibody modalities, including antibodies against immuno-oncology targets, ADCs, and bispecific antibodies, and therefore we believe that significant opportunities exist for CytomX to develop and capture market share with innovative anti-cancer treatments.

Our most advanced product candidate is CX-072, a wholly owned Probody therapeutic targeting programmed cell death ligand 1 ("PD-L1"), a clinically and commercially validated immuno-oncology target. In normal physiology, PD-L1 plays a role in suppressing the immune system in healthy tissue, preventing autoimmunity. Tumors can co-opt this inhibitory function by upregulating PD-L1 expression and evading anti-cancer immune surveillance. Inhibitors of the PD-L1 pathway have therefore been designed and developed that restore anti-cancer immune surveillance and such inhibitors have demonstrated anti-cancer activity in a wide variety of cancer types. Regulatory approval has been

granted for PD-L1 inhibitors and/or programmed cell death 1 (“PD-1”) inhibitors in a wide range of cancers, including advanced melanoma, renal cell cancers, non-small cell lung cancer, and bladder cancers.

While PD-L1 inhibitors have been shown to enhance anti-cancer immunity, systemic administration of inhibitors of the PD-L1 pathway can result in impairment of normal immune tolerance of healthy tissues, and severe immune-related toxicities can emerge. These toxicities can be particularly serious when PD-L1 inhibitors are combined with other anti-cancer agents. Our PD-L1 Probody therapeutic, CX-072, is designed to uncouple the anti-cancer activity of PD-L1 inhibitors from the associated autoimmune toxicities by inhibiting PD-L1 in the tumor microenvironment with minimal engagement in healthy tissue. We are currently evaluating CX-072 in a Phase 1/2 study that we call PROCLAIM-CX-072. This study is designed to assess the safety, activity, and translational biology of CX-072 as a single agent and in combination with other anticancer therapies. We disclosed initial clinical proof of concept data on CX-072 at various oncology conferences in 2018. In February 2019, we disclosed additional clinical safety and efficacy data on CX-072 at a Research and Development Day hosted by CytomX management ("CytomX R&D Day").

Our second most advanced product candidate is CX-2009, a wholly owned Probody Drug Conjugate ("PDC") directed against CD166, a novel drug target. Probody Drug Conjugates are CytomX-designed Probody therapeutic versions of a class of drugs called Antibody ADCs, which are antibodies that have been conjugated to a small molecule cytotoxic agent via a labile chemical linker. Several ADCs have been approved for the treatment of cancer in the United States and elsewhere, including Kadcyla™, which targets HER2 positive metastatic breast cancer, and Adcetris™, which targets CD30 in Classical Hodgkin Lymphoma. To avoid target-related toxicity, traditional ADCs have historically been limited to targeting proteins that are expressed highly in tumors, but that are also absent or poorly expressed in healthy tissues. Very few cancer-associated proteins have this desired profile. Because our Probody therapeutics are designed to minimize binding of potent anti-cancer therapy to normal tissues, we believe we can address a new class of targets with attractive molecular features that were previously unsuitable because of high expression on normal tissues. CD166 is an example of this kind of target. CD166 is highly and homogenously expressed in multiple different tumors types, which makes it an attractive target for a Probody drug conjugate therapeutic; however, the high expression of CD166 on normal tissues makes this a difficult target to drug with a traditional ADC. CX-2009 is our Probody therapeutic directed to CD166 and conjugated to a cytotoxic agent. CX-2009 is currently in the dose escalation portion of a Phase 1/2 study that we call PROCLAIM-CX-2009. In February 2019, we disclosed initial clinical data on CX-2009 at the CytomX R&D Day.

In addition to our wholly owned programs, we have entered into several strategic collaborations with leading oncology-focused pharmaceutical companies, such as AbbVie Inc., through its subsidiary AbbVie Ireland Unlimited Company ("AbbVie"), Amgen, Inc. ("Amgen") and Bristol-Myers Squibb Company ("BMS"). The most advanced program from our partnerships is a CTLA-4 Probody therapeutic which BMS is currently advancing through the dose escalation phase of a Phase 1/2 clinical trial. We are also treating patients in PROCLAIM-CX-2029, a Phase 1/2 clinical study for CX-2029, a PDC targeting the highly expressed target, CD71 that we have partnered with AbbVie.

In October 2018, we filed an investigational new drug application ("IND") on CX-188, a wholly owned Probody therapeutic targeting PD-1, a clinically and commercially validated anti-cancer target. The CX-188 IND was cleared by the FDA in November 2018. Due to a recent program and portfolio prioritization, we have decided to indefinitely postpone clinical trials for CX-188. We may elect to initiate clinical trials for CX-188 in the future.

We have also extended our Probody platform to the new and promising modality of T-cell engaging bispecific antibodies ("TCBs"). TCBs are a highly potent therapeutic modality, designed to direct the activity of cytotoxic T-cells to tumors. TCBs such as Blincyto®, a CD19-directed TCB commercialized by Amgen, have shown clinical activity in hematologic malignancies, but development of TCBs for solid tumor indications is proving challenging. Due to their high potency, TCBs can target normal tissues with low antigen expression, resulting in significant on-target, off-tumor toxicity that can limit dosing to low levels. As a result, it has been difficult to reach the level of drug exposure required for efficacy without excessive toxicity. We believe that the Probody platform is potentially capable of localizing the activity of TCBs to the tumor microenvironment and avoid on-target, off-tumor toxicity. Our most

advanced program in the TCB modality is an Epidermal Growth Factor Receptor-CD3 (“EGFR-CD3”) T-cell bispecific, which is currently in lead optimization stage, and partnered with Amgen.

Our broad Probody therapeutic technology platform and lead product candidates are supported by more than a decade of thorough scientific research and strong intellectual property. We are a leader in the emerging field of localizing antibody therapeutics to the tumor microenvironment, as evidenced by our patent estate of approximately 100 issued patents (some of which are co-owned with a third party) and 250 pending patent applications (some of which are co-owned with a third party). We also have an exclusive license from University of California, Santa Barbara (“UCSB”) to three patent families covering screening tools to identify masks and substrates.

The successful development of our product candidates 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. This is due to the numerous risks and uncertainties associated with the development of product candidates. If our Probody therapeutic technology and product candidates generally prove to be ineffective, unsafe or commercially unviable, it would have a material and adverse effect on our business, financial condition, results of operations and prospects. See "Risk Factors" for a discussion of the risks and uncertainties associated with our product candidates and our research and development projects.

Our Corporate Strategy

We are utilizing our proprietary and differentiated Probody platform to develop a leading pipeline of novel, innovative anti-cancer therapies to improve the lives of people with cancer and to build a long-term, multi-product, commercial stage biotechnology company. We aim to achieve this goal by:

- Applying the Probody platform to discover and develop potentially differentiated, best-in-class monoclonal antibody-based cancer immunotherapies for which we believe we can make meaningful enhancements to the therapeutic window. Our wholly owned PD-L1 Probody therapeutic (CX-072) and partnered CTLA-4 Probody therapeutic (BMS 986249) are our most advanced programs in this class of targets.

- Applying the Probody platform to discover and develop potentially first-in-class therapies against targets we believe could have therapeutic benefits within oncology but have not yet been drugged because of broad expression in healthy tissue. Our wholly owned CD-166 Probody Drug Conjugate (CX-2009) and partnered CD-71 Probody Drug Conjugate (CX-2029) are our most advanced programs in this class of targets.

- Applying our Probody platform to develop novel and improved combination therapies with the potential to improve outcomes for cancer patients. For example, we are studying CX-072, our PD-L1 Probody therapeutic, in combination with the CTLA-4 inhibitor, Yervoy® in our ongoing Phase 1/2 clinical trial.

- Applying our Probody platform to enable new potent therapeutic antibody and cell therapy formats, thereby positioning ourselves at the cutting edge of anti-cancer therapeutic research and development. For example, we are collaborating on a Probody therapeutic version of an EGFR-CD3 T-cell engaging Probody bispecific with Amgen.

- Partnering with leading biopharmaceutical companies to access capital, additional resources and expertise, as well as increase the number of Probody therapeutic candidates being advanced into clinical trials. To date, we have formed several strategic collaborations, including with AbbVie, Amgen, BMS, ImmunoGen Inc. ("ImmunoGen") and others.

- Accessing technologies or programs that can complement our Probody platform and our pipeline through licenses or acquisitions. For example, in early 2019 we acquired certain linker-toxin and bispecific technologies from an affiliate of Astellas Pharma, Inc. to complement our Probody platform.

- Fostering a unique culture of execution, alignment and accountability centered around our vision, mission and values.

5

Our Probody Platform

Localization of therapeutic antibody activity within disease tissue is of increasing interest in the biopharmaceutical industry due to the desire to maximize the activity of antibody-based drugs whilst reducing their toxicities. At CytomX, we call our approach to therapeutic antibody localization our Probody platform. A Probody therapeutic consists of three components: an active anti-cancer antibody, a mask for the antibody, and a protease-cleavable linker which connects the mask to the antibody. The mask is a peptide designed to disguise the active binding site of the antibody to prevent the therapeutic from binding to the target present on healthy tissue. Probody therapeutics are produced as a single protein by standard antibody production methodology. The following graphic depicts the three components of a Probody therapeutic:

Depiction of the structure of a Probody therapeutic and a protease interacting with the Probody to cleave the linker and activate the molecule

When a Probody therapeutic enters a tumor, it encounters proteases, which are enzymes that cleave proteins and have increased activity in the tumor microenvironment. The proteases in the tumor cleave the linker, releasing the mask and allowing the antibody to bind to the target on the tumor. The following graphic depicts the activation of a Probody therapeutic by proteases:

Depiction of how a Probody therapeutic is designed to enter the tumor microenvironment (left), be activated by protease cleavage to remove the mask (middle), thereby enabling the released antibody to bind to the tumor target (right)

Proteases play an essential role in many aspects of normal physiology, such as digestion of food in the gastrointestinal tract, wound healing and metabolic function. However, uncontrolled protease activity can lead to destruction of essential proteins and tissues. Therefore, proteases are normally very tightly regulated by multiple mechanisms, with only small amounts of extracellular protease activity being detectable in healthy tissues. In contrast, it has been well documented that proteases are not only present, but also activated, in virtually all types of tumors, playing a key role in tumor growth, invasion and metastasis. Probody therapeutics are designed to be activated in this protease-rich tumor microenvironment, but not in healthy tissue where proteases are under tight control as depicted in the figure below:

Probody therapeutics are designed to remain masked and inactive in healthy tissue (right) but be unmasked and activated in diseased tissue, such as in tumors (left)

Probody therapeutics are designed to limit toxicity that can arise from the binding of an antibody to a target in healthy tissues while preserving biological activity in the tumor where it is desired. We and our partners have demonstrated the applicability of our Probody platform across multiple monoclonal antibody modalities, including cancer immunotherapy, ADCs, and T-cell-recruiting bispecifics.

We have designed protease-cleavable linkers so that several activated proteases within the tumor microenvironment can cleave them. Using this approach, we believe Probody therapeutics can be cleaved and activated by at least one protease across a large number of tumor types. This concept has been validated by the translational data that we have generated from clinical studies for our CX-072 and CX-2009 programs, which suggests that Probody therapeutics are sufficiently activated in the tumor microenvironment, and once activated, behave like the underlying parenteral antibody. We have also presented initial clinical data for our CX-072 and CX-2009 programs that indicate that the Probody therapeutic remains sufficiently masked, and therefore inert, in systemic circulation. These features of the Probody platform, now validated with clinical data, suggest that we can potentially develop differentiated therapies which can widen therapeutic window for validated targets such as PD-L1 and enable a therapeutic window for broadly expressed targets such as CD166.

Key Advantages of Our Probody Platform

We believe that our Probody Platform provides the following key advantages:

- A novel therapeutic antibody class enabled by our proprietary platform. We believe we have a differentiated technology platform that gives us a substantial competitive advantage supported by more than a decade of research and strong intellectual property.
- Potential to improve the therapeutic window of antibody-based therapeutics. By engineering our therapeutics to selectively activate in the tumor microenvironment, our Probody product candidates have the potential to improve safety and tolerability.
- Ability to combine more effectively with other therapies. We believe the therapeutic window and tumor specificity of our candidates have potential to reduce the dose-limiting toxicities observed in combination therapies and thus enable new combinations with other cancer therapies that are difficult or impossible to use.

- Applicability across many molecular targets. We believe that our technology addresses many different molecular targets expressed by many different kinds of tumors—including targets that are difficult to address because they are also expressed on healthy tissue—because Probody therapeutics are designed to have limited interaction with non-cancerous tissues.
- Versatility across antibody modalities. We believe that our technology can be applied to most antibody-based therapies, including novel potent modalities like ADCs, T-cell-recruiting bispecific antibodies.

Our Lead Product Candidates

We are leveraging our Probody platform to build a leading pipeline of innovative and differentiated anti-cancer therapies. We currently retain worldwide development and commercialization rights to our two most advanced Probody therapeutics in the clinic, CX-072 and CX-2009. In addition, we have multiple partnered development programs including BMS 986249, an anti-CTLA-4 Probody program with BMS, and CX-2029, an anti-CD71 PDC program in collaboration with AbbVie.

CX-072 (PD-L1 Probody therapeutic)

Overview and Limitations of Existing Therapies

Our most advanced product candidate is CX-072, a wholly owned Probody therapeutic targeting PD-L1, a clinically and commercially validated cancer target. The PD pathway consists principally of two targets: PD-1, which is typically expressed on T-cells, and PD-L1, which is typically expressed on the tumor cells as well as on healthy tissue. In healthy tissue, PD-1 and PD-L1 work together to negatively regulate immune response and maintain tolerance between the immune system and healthy tissue. Tumors, however, upregulate PD-L1 to evade immune surveillance by the host's immune system. Therefore, development of antibodies against PD-1 and PD-L1 have become a key focal point in cancer drug development, with three PD-1 antibodies nivolumab (Opdivo™), pembrolizumab (Keytruda™), and cemiplimab (Libtayo™) and three PD-L1 antibodies atezolizumab (Tecentriq™), durvalumab (Imfinzi™), and avelumab (Bavencio™) approved as of February 2018, with many other PD pathway inhibitors in clinical development. In addition to assessment as single agents, PD-1 and PD-L1 antibodies have been studied extensively as the centerpiece of oncology combination therapies. According to the Cancer Research Institute, as of November 2017, there were in excess of 1,000 combination studies ongoing with a PD-1 or PD-L1 therapeutic.

While inhibitors of the PD-L1 and/or PD-1 pathway offer the potential for clinical benefit in patients with a wide-variety of cancer types, there are a number of risks imposed by administration of these agents. According to U.S. Labels for Opdivo, Keytruda, Tecentriq, Bavencio, and Imfinzi, the most common side effects (defined as either >15% or >20%, depending upon the agent) that were observed with commercially available anti-PD-L1 and anti-PD-1 agents include: fatigue, decreased appetite, nausea, vomiting, diarrhea, dyspnea, constipation, cough, musculoskeletal pain, back pain, abdominal pain, arthralgia, urinary tract infection, upper respiratory tract infection, peripheral edema, infusion-related reaction, rash, asthenia, pruritus, headache, and pyrexia.

Based on our analysis of publicly available data, we believe that while in general, the addition of second or third combination partners to PD-L1 or PD-1 inhibitors can result in increased anti-cancer activity, there is often a corresponding increase in the toxicity of these combinations. For example, according to the New England Journal of Medicine, the most common adverse reactions (greater than or equal to 20%) in patients with melanoma receiving nivolumab with ipilimumab were fatigue, rash, diarrhea, nausea, and pruritus. In some cases, administration of an inhibitor of the PD-L1 pathway with another type of anti-cancer agent in combination have resulted in severe toxicities that have prevented further development of the combination. In these cases, the toxicity levels caused by the multiple agents in the periphery creates an unacceptable risk to patients, despite the potential for synergy of efficacy in the tumor.

We believe that a locally activated Probody therapeutic targeting PD-L1 has the potential to maintain the anti-tumor activity of the PD pathway blockade whilst reducing the autoimmunity that results from blocking such pathway systemically. As such, we believe that CX-072 has the potential to enable combination therapies that cannot be appropriately dosed because of synergistic toxicity, and ultimately that CX-072 may have the potential to play an important role in combination PD therapy. CX-072 may also ultimately prove to be a safer monotherapy than existing PD inhibitors which could have specific applications in certain clinical settings.

CX-072 Pre-Clinical Data

CX-072 is derived from a CytomX discovered, phage-derived, fully human PD-L1 antibody that has high affinity binding to PD-L1 according to a standard binding assay. Using our proprietary technology, we have developed a Probody therapeutic that is effectively masked when active proteases are absent but can be specifically activated by one of several tumor-associated proteases.

We completed extensive preclinical testing comparing either CX-072 or a surrogate PD-L1 Probody therapeutic to its antibody parent, the results of which are reflected in in the figure below:

4.

Comparison of PD-L1 Probody therapeutic versus antibody parent

In this experiment, CX-072 (shown in blue) demonstrated similar anti-tumor activity as its underlying antibody parent in traditional mouse syngeneic tumor models (as illustrated in Figure A). In addition, CX-072 concentrated in the tumor similarly to the parental antibody (as illustrated in Figure B). Figure C demonstrates the potential for CX-072 to avoid the activation of systemic autoimmunity using the non-obese diabetic ("NOD") mouse model as an experimental system. NOD mice are bred to develop spontaneous autoimmune diabetes, which is exacerbated by systemic inhibition of the PD-1 pathway. As expected, a single dose of the PD-L1 antibody (shown in green) resulted in more than half of the treated mice developing diabetes, while mice treated with the same dose of the Probody therapeutic (shown in blue) remained diabetes free. As Figure D shows, the antibody saturated circulating, peripheral T-cells at a low concentration, while binding of the Probody therapeutic was significantly reduced. The differentiated profile that we observed in these preclinical data, along with the results of our GLP toxicity study, supported our decision to advance CX-072 into clinical trials following the clearance of an IND application by the FDA.

Our PROCLAIM Clinical Trial Design and Umbrella Protocol

PROCLAIM (Probody Clinical Assessment In Man) is an international umbrella clinical program for Phase 1/2 evaluation of all Probody therapeutics whose development is sponsored by CytomX. PROCLAIM centers around a core protocol that includes all of the common elements of a typical Phase 1/2 design without reference to an experimental drug. Each PROCLAIM module supplements the core and focuses exclusively on Probody-specific elements (e.g. background, guidance on patient selection and care). We refer to the CX-072 module as PROCLAIM-CX-072.

PROCLAIM-CX-072 Clinical Program

PROCLAIM-CX-072 is evaluating tolerability and preliminary antitumor activity of multiple doses of CX-072 as a monotherapy or as a combination therapy with ipilimumab (BMS' Yervoy) or vemurafenib (Roche's Zelboraf) in patients with advanced, unresectable solid tumors or lymphoma. The figure below describes the design and status, as of February 2019, for PROCLAIM-CX-072.

Design of the PROCLAIM-CX-072 Phase 1/2 clinical trial

Monotherapy and Ipilumumab Combination Dose Escalation Clinical Data

Enrollment of Part A1, A2, and Part B of the PROCLAIM-CX-072 clinical study began in 2017. The primary goals of Part A, A2, and B were to explore and validate the clinical performance and potential of the Probody as described in the figure below, namely, to demonstrate that the Probody therapeutic:

1. Demonstrates anti-cancer activity in a range of tumor types
2. Results in an improved safety profile, particularly in combination with other anticancer agents
3. Is activated in the tumor tissue
4. Is masked in systemic circulation

Key elements of the Probody platform validated to date in PROCLAIM-CX-072

Initial clinical data from PROCLAIM-CX-072 were presented at the American Society of Clinical Oncology ("ASCO"), the European Society of Medical Oncology ("ESMO") and the Society for Immunotherapy of Cancer ("SITC") in 2018 and at the CytomX R&D Day in 2019. Part A enrolled patients who were PD agent naïve and were either ineligible to receive or did not have access to PD-1 or PD-L1 agents for their disease. We did not pre-select patients based on their PD-L1 status in this arm. As such, we enrolled a broad range of tumor types in Part A, including patients with tumors that were not necessarily expected to respond to PD-L1 therapy. Part A2 of the clinical trial also enrolled patients with a broad range of cancer types, with enrollment restricted to those patients whose tumors are PD-L1 positive based on the commercially available DAKO assay. As with Part A, the tumor types enrolled into Part A2 were not necessarily expected to respond to CX-072. Part A2 also required mandatory collection of tumor biopsies from patients which were analyzed as part of our translational program. Part B was designed to evaluate CX-072 in combination with ipilumumab, a CTLA-4 antibody commercialized by BMS. Part C was designed to evaluate CX-072 in combination vemurafenib, a BRAF inhibitor commercialized by Roche. We aim to present preliminary data from Part C in 2019.

Anti-Cancer Activity – Results of Dose Escalation

Preliminary monotherapy dose escalation data, shown in the figure below, describes the activity of CX-072 as a single agent. This waterfall plot, presented at ESMO and developed with an August 3, 2018 data cut, shows that among 38 evaluable patients who received CX-072, objective responses by Response Evaluation Criteria in Solid Tumors ("RECIST") version 1.1 were observed in 3 (8%) patients, all treated at doses greater than or equal to 3 mg/kg: PD-L1 negative triple negative breast cancer (confirmed partial response (cPR); 10 mg/kg), thymic cancer (unconfirmed partial response ("uPR"); 3 mg/kg), and cervical cancer (uPR; 10 mg/kg). Stable disease was observed in 15 (39%) patients for an overall disease control rate of 47%. For the 18 patients who received CX-072 doses greater than or equal to 3 mg/kg, objective responses were observed in 3 of 18 patients (17%) and the disease control rate was 61%. Decreased target lesions were observed in 14 of 37 patients (38%) of all evaluable patients with measurable disease at baseline and in 10 of 17 patients (59%) of the subset of patients who received doses greater than or equal to 3 mg/kg of CX-072.

Waterfall Plot from PROCLAIM-CX-072 (Data Cut-off August 3rd 2018)

At the CytomX R&D Day in February 2019, we presented follow-up data from the dose escalation, focusing on doses greater than or equal to 3 mg/kg in the dose escalation study as of a February 6, 2019 data cut, as shown below. Of 24 efficacy evaluable patients treated with doses greater than or equal to 3mg/kg of CX-072, 4/24 (17%) objective responses were observed, including 1 confirmed partial response, 2 unconfirmed partial responses in patients who are no longer on study and 1 unconfirmed partial response in a patient whose confirmation scan is pending. Additionally, 12 (50%) patients demonstrated tumor shrinkage or no change. From these results, we can conclude that CX-072 has anti-cancer activity.

Waterfall Plot from PROCLAIM-CX-072 at doses ≥ 3 mg/kg (Data Cut-off February 6, 2019)

Following thorough analysis of data from Parts A and A2, we selected 10 mg/kg as the dose for initial Part D cohort expansion studies, which we initiated in 2018. This dose was chosen because:

- We observed anti-cancer activity at and below 10 mg/kg in our dose escalation studies
- The 10 mg/kg dose of CX-072 has a favorable safety profile (described below)

- Translational data suggests that, at this dose, more than 98% of PD-L1 receptor in the tumor is occupied by CX-072
- All patients treated at the 10 mg/kg dose achieved and maintained targeted drug exposure. Moreover, satisfactory drug exposure was achieved regardless of whether patients showed evidence of anti-drug antibodies (observed in 8 of 13 patients as of December 2018)

Part B of PROCLAIM-CX-072 was designed to assess the combination of CX-072 with ipilimumab dosed at its full labeled dose (3 mg/kg every 3 weeks for four cycles). We have also explored higher doses of ipilimumab in Part B.

Preliminary clinical data from Part B of PROCLAIM-CX-072 is shown in the figure below. As of the February 6, 2019 data cutoff for CytomX R&D Day, of 19 patients evaluable for efficacy, four (21%) patients experienced confirmed objective responses. Three of the four confirmed responses remained on drug as of the data cutoff, including 1 confirmed complete response (82 weeks) and 2 confirmed partial responses (59 and 64 weeks).

Duration of Response in Patients Treated with CX-072 + ipilimumab

Anticancer Activity – Preliminary Results of Monotherapy Cohort Expansions

In 2018, we initiated monotherapy cohort expansions studies (Part D of PROCLAIM-CX-072) in eight distinct cancer types: undifferentiated pleiomorphic sarcoma, thymic epithelial cancer, triple negative breast cancer (TNBC), anal squamous cell cancer (SCC), cutaneous squamous cell cancer (cSCC), Merkel cell tumor, small bowel carcinoma and cancers with high tumor mutational burden. At the CytomX R&D Day in February 2019, we presented initial clinical data in the four of those eight indications: cSCC, TNBC, SCC and UPS. As the waterfall below shows, preliminary data from 34 efficacy evaluable patients showed a preliminary pattern of anti-cancer activity generally consistent with historical data for other PD inhibitors.

Percent Change from Baseline in Sum of Target Lesion Measurements, by Cancer Classification in Part D. + denotes PD-L1 positive, defined as tumor proportion score ≥1% of membranous staining based on DAKO PD-L1 IHC 22C3 pharmDx

Improved Safety Profile

Of 50 patients evaluable for safety in the four cancers (TNBC, UPS, Anal SCC, cSCC) tested as of the data cutoff date for Part D, CX-072 as monotherapy was generally well tolerated, with 21 (42.0%) patients experiencing a Grade 3/4 treatment-emergent adverse event (TEAE), 2 (4%) patients experiencing a Grade 3/4 treatment-related adverse events (TRAE), 2 (4%) patients experiencing a Grade 3/4 immune-related adverse events (irAE) and no discontinuation for treatment-related toxicity. These data compare favorably to historical controls where the rate of Grade 3/4 TRAEs in patients receiving PD-pathway inhibitors and TRAEs leading to discontinuation are 15% and 8%, respectively.

Combining a PD pathway inhibitor with another anti-cancer agent often results in significantly greater toxicity than monotherapy alone. One example of such synergistic toxicity is the combination of nivolumab (a PD-1 inhibitor marketed by Bristol Myers Squibb as Opdivo) and ipilimumab. According to data reported in the New England Journal of Medicine (Larkin et al., NEJM, July 2015), combination of nivolumab at 1 mg/kg and ipilimumab at 3mg/kg resulted in Grade 3/4 TRAEs in 55% of the patients treated and drug discontinuations in 36% of the patients treated.

In Part B of PROCLAIM-CX-072, we tested doses of CX-072 from 0.3 mg/kg to 10 mg/kg with a combination of ipilimumab at 3 mg/kg. The maximum tolerated dose (MTD) was defined as the combination of 3 mg/kg of ipilimumab and 10 mg/kg of CX-072. Of the 27 patients treated with CX-072 in combination with ipilimumab, all with the full ipilimumab dose of 3 mg/kg or above, the combination was generally well tolerated. As of the February

6, 2019 data cutoff, 14 (51.9%) patients reported a Grade 3/4 TEAE and 7 (26%) patients reported a Grade 3/4 TRAE. No patients experienced a Grade 3/4 irAE in the 3 mg/kg ipilimumab plus 10 mg/kg of CX-072 arm. These data generally compare favorably with historical controls described above.

Activation of CX-072 in Tumor Tissue

The efficacy of CX-072 described above suggests that the molecule is active in the tumor microenvironment. To further explore the activation of CX-072 in patient tumors, we developed several proprietary assays to measure Probody mask removal in the tumor. Biopsies were obtained from a subset of PROCLAIM-CX-072 patients during screening at either 3-5 days after the first dose or after 4-6 weeks of CX-072 therapy. The presence of protease activity, CX-072 cleavage and activation, and measures of biological activity were assessed within tumors.

Results showed that protease activity was detected in the majority of patient biopsy samples (15 of 18 (83%)). Further, CX-072 was cleaved and activated within tumors, with the total amount of activated CX-072 increasing with dose. Doses of ≥ 3 mg/kg of CX-072 were estimated to achieve ≥ 98% PD-L1 target occupancy in patient tumors and attained concentrations that are associated with efficacy in a preclinical model. 7 of 12 evaluable patient biopsies showed an increase in tumor infiltration of CD8+ T cells, consistent with the inhibition of the PD-1/PD-L1 signaling pathway.

Stability of CX-072 in Systemic Circulation

Probody therapeutics are designed to be masked and therefore inert outside of the tumor microenvironment. Through proprietary assays that CytomX have developed, we are able to measure the proportion of Probody that is intact and therefore masked in systemic circulation. Results from a preliminary single-dose pharmacokinetic analysis of single-agent CX-072 suggest that, as designed, CX-072 circulates predominantly as the intact masked prodrug across all dose levels (for example, 96% intact at 30 mg/kg). Further, CX-072 is only minimally influenced by target mediated drug disposition at low doses, suggesting that masking is effective in blocking interaction with PD-L1 in the periphery.

Taken together, the clinical data for CX-072 available as of February 6, 2019 support the Probody therapeutic hypothesis and underscore that Probody therapeutics may have a unique molecular and clinical pharmacology that has the potential to translate into significant benefits for cancer patients.

CX-2009 (CD166 Probody Drug Conjugate) Program

Our second most advanced product candidate is CX-2009, a wholly owned Probody Drug Conjugate directed against CD166, a novel and difficult to drug target. Probody Drug Conjugates are unique, CytomX-designed Probody therapeutic versions of a class of drugs called Antibody Drug Conjugates (ADCs), which are antibodies that have been conjugated to a small molecule cytotoxic agent via a labile chemical linker. Several ADCs have been approved for the treatment of cancer in the United States and elsewhere, including Kadcyla™, which targets HER2 positive metastatic breast cancer, and Adcetris™, which targets CD30 in Classical Hodgkin Lymphoma. To avoid target-related toxicity, traditional ADCs have historically been limited to targeting proteins that are expressed highly in tumors, but that are

also absent or poorly expressed in healthy tissues. Very few cancer-associated proteins have this desired profile. Because our Probody therapeutics are designed to minimize binding of potent anti-cancer therapy to normal tissues, we believe we can address a new class of targets with attractive features that were previously unsuitable because of expression on normal tissues. We have a broad research program at CytomX aimed at discovering and validating this new class of targets and CD166 is the first such target for which we advanced a PDC product candidate into clinical trials. CD166 is highly and homogenously expressed in multiple different tumors types, which makes it an attractive target for a Probody drug conjugate therapeutic; however, the high expression of CD166 on normal tissues makes this a difficult target to drug with a traditional ADC. CX-2009 is our Probody therapeutic directed to CD166 and conjugated to a cytotoxic agent. CX-2009 is currently in the dose escalation portion of a Phase 1/2 study that we call PROCLAIM-CX-2009.

CX-2009 Pre-Clinical Data

CX-2009 is derived from a CytomX discovered and humanized CD166 antibody that exhibits high affinity binding to CD166. Using our proprietary technology, we used this antibody to engineer a Probody therapeutic targeting CD166 that is designed to be masked when active proteases are absent but can be specifically activated by any one of several different tumor-associated proteases. Furthermore, through our license with ImmunoGen, we have gained access to the potent microtubule inhibiting payload DM4 which we conjugated to the anti-CD166 Probody, resulting in CX-2009; a Probody Drug Conjugate designed to bind to CD166 specifically in the tumor microenvironment.

We have completed multiple preclinical efficacy studies for CX-2009 and demonstrated tumor regressions at doses that we believed may be achievable in clinical trials. Preclinical efficacy data along with immunohistochemical staining (IHC) that demonstrates high expression of CD166 in these tumors, is shown in the figures below. In these figures, tumor growth curves are shown in mice-bearing HCC1806 xenograft tumors (triple negative breast cancer), H292 xenograft tumors (lung cancer), or an Ovarian patient-derived tumor model. Mice treated with CX-2009 (squares) are compared to either a control without treatment (circles) or an ADC to CD166 (triangles). The figures indicate that CX-2009 led to greater tumor growth regression than control, and similar tumor growth regression as the ADC.

Examples of pre-clinical anti-tumor activity of a CD166-directed ADC (red) and CX-2009 (blue) in mouse models

Doses of CX-2009 up to 15 mg/kg were tested in non-human primate toxicology studies. The findings were consistent with the off-target, non-specific toxicity typically seen with other DM4-based ADCs that target other proteins. CX-2009 was advanced into human clinical trials on the basis of the anti-tumor activity and safety and tolerability observed in these preclinical studies and the clearance of an IND application by the FDA.

PROCLAIM-CX-2009 Clinical Program

PROCLAIM CX-2009 is an ongoing Phase 1/2 clinical trial evaluating the tolerability and preliminary antitumor activity of CX-2009 as a monotherapy, which we initiated in June 2017. We are focusing this study in seven tumor types that have high CD166 expression: breast carcinoma, castration-resistant prostate carcinoma, cholangiocarcinoma, endometrial carcinoma, epithelial ovarian carcinoma, head and neck squamous cell carcinoma and non-small cell lung carcinoma. The figure below describes the design and status of PROCLAIM-CX-2009.

Design and status of PROCLAIM-CX-2009 Phase 1/2 clinical trial

CX-2009 Target Levels in Cancer Patients

As part of our patient screening in PROCLAIM-CX-2009, we are evaluating the expression of CX-2009 across cancer patients. Of the 250 patients screened as of January 28, 2019, 167 had tumor biopsies where at least 50% of the biopsied cells expressed 3+ membrane expression of CD166, validating the high and homogenous expression of the target in cancer patients.

15

Initial Clinical Results

As of the February 6th, 2019 data cutoff for the CytomX R&D day, 76 patients were treated at doses ranging from 0.25 to 10 mg/kg of CX-2009 every 3 weeks. Preliminary data from 46 efficacy evaluable patients demonstrated evidence of anti-cancer activity observed at doses of greater than or equal to 4 mg/kg. Tumor shrinkage was observed in 16 (34.8%) patients in multiple tumor types with 5 unconfirmed partial responses (2 each in ovarian and breast cancers and one in head and neck cancer). Of note, comparable levels of anti-cancer activity was observed in patients who were PD-pathway inhibitor naive or resistant, respectively. The graph below shows the activity of CX-2009 at doses of 4 mg/kg and higher.

CX-2009 was generally well tolerated and the MTD was not reached. As of the February 6, 2019 data cut off, with 47 (61.8%) patients experiencing a Grade 3/4 TEAEs and 23 (30.3%) patients experienced a Grade 3/4 TRAE. The most common adverse event observed was ocular toxicity, an anticipated toxicity associated with the DM4 payload. Other Grade 3/4 TRAEs included liver function test abnormalities, gastrointestinal disorders and nervous system disorders. Dose optimization is underway to further to inform dose selection. Ocular toxicity prophylaxis has been introduced to this dose optimization phase.

Collaboration Product Candidates in the Clinic

We are actively developing additional Probody therapeutics in the clinic in collaboration with other companies.

BMS-986249, a CTLA-4 Probody Therapeutic in Collaboration with BMS

As part of our strategic oncology collaboration, BMS has advanced BMS-986249, a CTLA-4 Probody therapeutic, into a Phase 1/2 clinical trial. CTLA-4 is an immune checkpoint protein involved in regulating T-cell activation. BMS is currently marketing a CTLA-4 monoclonal antibody, Yervoy®, that has been approved for the treatment of unresectable or metastatic melanoma. CTLA-4 antibodies have been shown to lead to T-cell activation towards tumor antigens, which is the basis for its anti-tumor effect, and towards self-antigens, which may be the basis for the autoimmune toxicities associated with CTLA-4 antibodies therapies. The FDA approval for ipilimumab has a black box warning about potential severe and fatal immune-related adverse events. We believe that our CTLA-4 Probody therapeutic may be able to effectively localize the CTLA-4 antibody activity to the tumor microenvironment, thereby limiting systemic toxicities normally seen with Yervoy. We believe that BMS is the optimal strategic partner for our CTLA-4 Probody therapeutic given their expertise in cancer immunotherapy and their success with Yervoy.

At various scientific congresses in 2017 and 2018, BMS presented pre-clinical efficacy and safety data on BMS-986249. For example, at the 2018 Keystone Drugs as Antibodies Conference, BMS scientists presented preclinical efficacy data that showed that BMS-986249 demonstrates comparable anti-tumor activity to ipilumumab in preclinical models. At the Society of Immunotherapy of Cancer meeting in 2017, BMS scientists presented preclinical data that showed that cynomologous monkeys treated with BMS-986249 demonstrated reduced peripheral T-cell activation compared to ipilumumab.

In addition, BMS scientists presented data on the toxicity profile BMS-986249 and ipilumumab at the AACR-EORTC-NCI meeting in 2017. BMS scientists concluded that the highest non-severely toxic dose ("HNSTD") of BMS-986249 was 50 mg/kg, while the HNSTD of ipilumumab was determined to be 10 mg/kg. The efficacy data, along with the peripheral T-cell activation data and the widened safety window suggests that BMS-986249 has the potential to widen the therapeutic window of ipilumumab. BMS-986249 is currently in a Phase 1/2 clinical study that is being conducted by BMS.

CX-2029, a CD71 Probody Drug Conjugate in Collaboration with AbbVie

We are collaborating with AbbVie on the development of CX-2029, a CD71 Probody Drug Conjugate ("CD71-PDC"). CD71, also known as transferrin receptor 1 ("TfR1"), is a protein that is essential for iron uptake in dividing cells, is highly expressed in a number of solid and hematologic cancers and has attractive molecular properties for efficient delivery of cytotoxic payloads to tumor cells. The combination of high expression in tumors and ubiquitous expression in normal tissues makes CD71 a difficult target for conventional ADCs, but potentially a good candidate for development of PDCs.

In preclinical efficacy models, we have demonstrated that CX-2029 is highly efficacious in many cell line and patient-derived xenograft models that represent many different cancer types. In our pre-clinical assessment of CD71-PDCs, we assessed activity in 42 pre-clinical models. We observed tumor regression or stasis in 30 of 42 models (71%) and tumor growth inhibition in 10 of 42 models (24%), demonstrating a wide-ranging pre-clinical anti-tumor activity profile for CD71-PDCs

We have also compared the toxicity profile of a CD71 Antibody Drug Conjugate ("CD71-ADC") to a CD71-PDC. As the figure below shows, a single dose of the CD71-ADC resulted in a significant decrease in the number of neutrophils, a type of infection-fighting cell, in the blood in cynomologus monkeys (squares), while the CD71-PDC at the same dose did not (triangles).

Neutrophil counts in monkeys treated with CD71 ADC or PDC

Taken together, we believe that CX-2029 has the potential to create a therapeutic window for a CD71 targeting therapeutic. CX-2029 is currently being studied in a Phase 1/2 clinical trial (PROCLAIM-CX-2029) that is being conducted by CytomX.

Preclinical Product Candidates

We are actively pursuing the application of our Probody platform technology to multiple other product candidates. These include other product candidates directed against other immunotherapy targets, additional first-in-class PDC product candidates, and T-Cell Engaging bispecific product candidates. Below are selected examples of product candidates that we are pursuing.

CX-188, PD-1 Probody Therapeutic

We have advanced CX-188, our wholly-owned PD-1 Probody therapeutic to the clinical stage. PD-1 is the receptor for the PD-L1 ligand responsible for inhibiting T-cell activation. It is the target for various immuno-oncology products, including nivolumab (Opdivo) and pembrolizumab (Keytruda). As with PD-L1, inhibiting PD-1 elicits T-cell anti-tumor responses in a variety of different cancers, and also induces systemic autoimmunity and toxicity. In 2018 we filed an IND for CX-188 and the IND was cleared by the FDA in November 2018. We have decided to indefinitely postpone clinical trials for CX-188 due to program and portfolio prioritization. We may elect in the future to initiate clinical trials for CX-188.

Probody T-Cell Engaging Bispecific Platform

We believe that our Probody platform can be applied to T-cell engaging bispecific antibodies ("TCBs"). TCBs are a highly potent therapeutic modality, designed to direct the activity of cytotoxic T-cells to tumors. TCBs such as Blincyto, a CD19-directed TCB commercialized by Amgen, have shown clinical activity in hematologic malignancies, but development of TCBs for solid tumor indications is proving challenging. Due to their high potency, TCBs can target normal tissues with low antigen expression, resulting in significant on-target, off-tumor toxicity that can limit dosing to low levels. As a result, it has been difficult to reach the level of drug exposure required for efficacy without excessive toxicity. Therefore, novel methods are needed to enable the potent anti-tumor activity of TCBs while limiting toxicity due to cytokine release and the resulting damage to healthy tissues.

Our most advanced asset in this modality is a T cell-engaging Bispecific Probody therapeutic ("Pb-TCB") targeting EGFR and CD3. In in vitro preclinical studies, we have demonstrated that the unmasked EGFR-CD3 TCB (diamonds) can exhibit potent dose-dependent tumor cell killing, while the masked EGFR-CD3 Pb-TCB (filled squares) reduced cytotoxicity by more than 100,000-fold, as shown in the figure below. A TCB which does not bind EGFR (open squares) does not kill tumor cells, demonstrating that the activity of the TCB is target dependent.

Cytotoxicity of HT-29 tumor cells induced by unmasked, active EGFR-CD3 bispecific antibody (red) and by masked EGFR-CD3 bispecific Probody therapeutic (blue). An inactive control is shown in blue squares

However, in established tumor models, we have demonstrated that Pb-TCBs can induce tumor regressions. As the figure below shows, in the HT29 xenograft model, the Pb-TCB at 0.5 mg/kg (open squares) demonstrated significant anti-tumor activity, and at 1.5 mg/kg (closed squares) was able to induce complete tumor regression. A control treated with inactive PBS buffer ("PBS") is also shown (circles).

Example of pre-clinical anti-tumor activity of a Probody TCB at 2 different doses (microgram/kg) in a mouse model, compared to vehicle control (PBS, black). Asterisks indicate statistical significance compared to control.

In nonhuman primates, the EGFR-CD3 Pb-TCB has a significantly higher maximum tolerated dose than the unmasked TCB. Cynomologus monkeys were able to tolerate a dose of 4,000 microgram/kg of the Pb-TCB, while the maximum tolerated dose of the unmasked TCB was 60 microgram/kg. Furthermore, as shown in the figure below, the tolerated exposure of the Pb-TCB (blue symbols) was greater than 10,000-fold higher than that of the unmasked TCB (red symbols).

Concentration in plasma over time of 60 or 180 micrograms/kg single dose of an unmasked, active EGFR-CD3 TCB (red) and of 2000 micrograms/kg as a single dose of a masked EGFR-CD3 Probody therapeutic TCB (blue).

Taken together, we believe our Probody Platform has the potential to enable the development of T-cell engaging bispecific therapeutics against broadly expressed targets such as EGFR. Our EGFR-CD3 Pb-TCB program is partnered with Amgen, and as of February 2019, is in the pre-clinical lead optimization stage.

Our Collaborations

We believe that the Probody platform has broad applicability across a number of targets and antibody formats. We have leveraged strategic partnering to (a) extend the reach of our therapeutic opportunity and (b) bring in significant non-dilutive capital into the Company. Since 2013, we have entered into collaborations with AbbVie, Amgen, BMS and ImmunoGen, among others, to enable development of certain Probody therapeutics. In constructing each of these collaborations, our primary objectives were to collaborate with leading biopharmaceutical players to validate the potential of Probody therapeutics, to gain meaningful near-term funding and/or technology access to enable advancement of CytomX's wholly owned Probody therapeutics pipeline, broaden the number of Probody therapeutics that ultimately reach the clinic, and to retain significant milestones, royalties, and in some cases product rights, for long term upside.

AbbVie Ireland Unlimited Company

In April 2016, we entered into two agreements with AbbVie, a CD71 Co-Development and Licensing Agreement (the "CD71 Agreement") and a Discovery Collaboration and Licensing Agreement (the "Discovery Agreement" and together with the CD71 Agreement the "AbbVie Agreements"). Under the terms of the CD71 Agreement, we and AbbVie are co-developing CX-2029, a Probody Drug Conjugate ("PDC") against CD71, and we are responsible for pre-clinical and early clinical development. AbbVie will be responsible for later development and commercialization, with global late-stage development costs shared between the two companies. We will assume 35% of the net profits or net losses related to later development unless we opt-out. If we opt-out from participation of co-development of CX-2029, AbbVie will have sole right and responsibility for the further development, manufacturing and commercialization of such CX-2029.

Under the CD71 Agreement, we received an upfront payment of $20.0 million in April 2016, and we are eligible to receive up to $470.0 million in development, regulatory and commercial milestone payments and royalties on ex-US sales in the high teens to low twenties if we participate in the co-development of the CX-2029 subject to a reduction in such royalties if we opt-out from the co-development of the CD71 PDC. Our share of later stage co-development costs for CX-2029 is capped, provided that AbbVie may offset our co-development cost above the capped amounts from future payments such as milestone payments and royalties.

Under the terms of the Discovery Agreement, AbbVie receives exclusive worldwide rights to develop and commercialize PDC against up to two targets, one of which was selected in March 2017. We shall perform research services to discover the Probody therapeutics and create PDCs for the nominated collaboration targets. From that point, AbbVie shall have sole right and responsibility for development and commercialization of products comprising

or containing such PDCs (“Discovery Licensed Products”).

Under the Discovery Agreement, we received an upfront payment of $10.0 million in April 2016 and may receive an additional payment upon the selection by AbbVie of the second target and the satisfaction of certain performance conditions under the CD71 Agreement. AbbVie has not selected the second target, but the performance conditions under the CD71 Agreement were met in September 2016. We are also eligible to receive up to $275.0 million in target nomination, development, regulatory and commercial milestone payments and royalties in the high single to low teens from commercial sales of any resulting PDCs.

Amgen, Inc.

In September 2017, we entered into a Collaboration and License Agreement (the "Amgen Agreement") with Amgen. Pursuant to the Amgen Agreement, we received an upfront payment of $40.0 million in October 2017. Concurrent with the entry into the Amgen Agreement, Amgen purchased 1,156,069 shares of our common stock for $20.0 million.

Under the terms of the Amgen Agreement, we and Amgen are co-developing a Probody T-cell engaging bi-specific therapeutic targeting EGFR ("EGFR Products"). We are responsible for early-stage development of EGFR Products and all related costs (up to certain pre-set costs and certain limits based on clinical study size). Amgen will be responsible for late-stage development, commercialization, and all related costs of EGFR Products. Following early-stage development, we will have the right to elect to participate financially in the global co-development of EGFR Products with Amgen, during which we would bear certain of the worldwide development costs for EGFR Products and Amgen would bear the rest of such costs (the "EGFR Co-Development Option"). If we exercise our EGFR Co-Development Option, we will share in somewhat less than 50% of the profit and losses from sales of such EGFR Products in the U.S., subject to certain caps, offsets, and deferrals. If we choose not to exercise our EGFR Co-Development Option, we will not bear any costs of later stage development. We are eligible to receive up to $455.0 million in development, regulatory, and commercial milestone payments for EGFR Products, and royalties in the low-double digit to mid-teen percentage of worldwide commercial sales, provided that if we exercise our EGFR Co-Development option, we shall only receive royalties in the low-double digit to mid-teen percentage of commercial sales outside of the United States.

Amgen also has the right to select a total of up to three targets, including the two additional targets discussed below. We and Amgen will collaborate in the research and development of Probody T-cell engaging bi-specifics products directed against such targets. Amgen has selected one such target (the "Amgen Other Product"). If Amgen exercises its option within a specified period of time, it can select two such additional targets (the "Amgen Option Products" and, together with the Amgen Other Product, the "Amgen Products"). Except with respect to preclinical activities to be conducted by us, Amgen will be responsible, at its expense, for the development, manufacture, and commercialization of all Amgen Products. If Amgen exercises all of its options and advances all three of the Amgen Products, we are eligible to receive up to $950.0 million in upfront, development, regulatory, and commercial milestones and tiered high single-digit to low-teen percentage royalties.

We have the option to select, from programs specified in the Amgen Agreement, an existing pre-clinical stage T-cell engaging bispecific product from the Amgen pre-clinical pipeline. We will be responsible, at our expense, for converting this program to a Probody T-cell engaging bispecific product, and thereafter, be responsible for development, manufacturing, and commercialization of the product ("CytomX Product"). Amgen is eligible to receive up to $203.0 million in development, regulatory, and commercial milestone payments for the CytomX Product, and tiered mid-single digit to low double-digit percentage royalties.

Bristol-Myers Squibb Company

In May 2014, we and BMS entered into a Collaboration and License Agreement (the "BMS Agreement") to discover and develop compounds for use in human therapeutics aimed at multiple immuno-oncology targets using our Probody

therapeutic technology.

Under the terms of the BMS Agreement, we granted BMS exclusive worldwide rights to develop and commercialize Probody therapeutics for up to four oncology targets, two of which were selected upon the execution of the BMS Agreement. Pursuant to the BMS Agreement, we received an upfront payment of $50.0 million and were initially entitled to receive contingent payments of up to an aggregate of $1,217.0 million in development, regulatory and commercial milestone payments, which can be reduced by any such payments received or by any termination of targets being pursued. We are entitled to royalty payments in the mid-single digit to low double digits percentage from potential future sales. We also receive research and development service fees. BMS has terminated certain targets from the BMS Agreement, as described below.

In January 2016, BMS selected the third target pursuant to the BMS Agreement and paid us $10.0 million. In December 2016, BMS selected the fourth and its final target pursuant to the BMS Agreement and paid us $15.0 million. In December 2016, BMS selected BMS-986249, a CTLA-4 Probody therapeutic, as a clinical candidate pursuant to the BMS Agreement, which triggered a $2.0 million pre-clinical milestone payment to us. In November 2017, BMS received acceptance of the IND for BMS-986249 from the FDA, which triggered a $10.0 million milestone payment to us.

In March 2017, we and BMS entered into Amendment Number 1 to Extend Collaboration and License Agreement (the "Amendment"). The Amendment grants BMS exclusive worldwide rights to develop and commercialize Probody therapeutics for up to six additional oncology targets and two non-oncology targets.

Under the terms of the Amendment, we will continue to collaborate with BMS to discover and conduct preclinical development of Probody therapeutics against targets selected by BMS.

Pursuant to the Amendment, we received an upfront payment of $200.0 million and we will be eligible to receive up to an aggregate of $3,586.0 million as follows: (i) up to $116.0 million in development milestone payments per target or up to $928.0 million if the maximum of eight targets are selected for the first product modality; (ii) up to $124.0 million in milestone payments for the first commercial sale in various territories for up to three indications per target program or up to $992.0 million if the maximum of eight targets are selected for the first product modality; (iii) up to $60.0 million in sales milestone payments per target or up to $480.0 million if maximum of eight targets are selected for the first product modality; and (iv) up to $56.3 million in development milestone payments or up to $450.0 million if the maximum of eight targets are selected for the second product modality; (v) up to $62.0 million in milestone payments for the first commercial sale in various territories for up to three indications per target program or up to $496.0 million if the maximum of eight targets are selected for the second product modality; (iii) up to $30.0 million in sales milestone payments per target or up to $240.0 million if maximum of eight targets are selected for the second product modality. We are also entitled to tiered mid-single to low double-digit percentage royalties from potential future sales.

In January 2019, BMS provided us notification of termination of three of the targets in the BMS Agreement. We are still in the process of evaluating the related financial impact. The termination of these targets does not affect BMS-986249, which, as of February 2019, continues to be explored in a Phase 1/2 clinical study that is being conducted by BMS. The termination of these targets also does not affect the Amendment, which remains in full force and effect.

ImmunoGen, Inc.

In January 2014, CytomX and ImmunoGen entered into the Research Collaboration Agreement (the "ImmunoGen Research Agreement"). The ImmunoGen Research Agreement provides us with the right to use ImmunoGen's ADC technology in combination with our Probody therapeutic technology to create a PDC directed at one specified target under a research license, and to subsequently obtain an exclusive, worldwide development and commercialization license to use ImmunoGen's ADC technology to develop and commercialize such PDCs. Under the agreement, we provided ImmunoGen with the rights to CytomX's Probody therapeutic technology to create PDCs directed at two targets under the research license and to subsequently obtain exclusive, worldwide development and commercialization licenses to develop and commercialize such PDCs. In February 2016, we exercised our option to obtain a development and commercialization license for CX-2009 pursuant to the terms of the ImmunoGen Research Agreement (the "CX-2009 License"). In February 2017, ImmunoGen exercised its option to obtain a development and commercialization license for the first of its two targets. ImmunoGen discontinued this program in July 2017 and substitution rights for this program terminated in February 2017. ImmunoGen exercised its second option to obtain a development and commercialization license pursuant to the ImmunoGen Research Agreement (the "ImmunoGen 2017 License") for a target, epithelial cell adhesion molecule (EPCAM), in December 2017 and continues research work on this program.

Under the terms of the ImmunoGen Research Agreement, both we and ImmunoGen were required to perform research activities on behalf of the other party for no monetary consideration. Each party is solely responsible for the development, manufacturing and commercialization of any products resulting from the exclusive development and commercialization license obtained by such party under the agreement. In consideration for the ImmunoGen 2017

License, we are entitled to receive up to $30.0 million in development and regulatory milestone payments per the research program target, up to $50.0 million in sales milestone payments per target and royalties in the mid-single digit percentage on the commercial sales of any resulting product. In consideration for the CX-2009 License, ImmunoGen is entitled to receive up to $60.0 million in development and regulatory milestone payments, up to $100.0 million in sales milestone payments and royalties in the mid to high single digits percentage on the commercial sales of any resulting product. In August 2017, we made a milestone payment of $1.0 million to ImmunoGen for the first patient dosing with CX-2009.

Pfizer PDC Collaboration

In May 2013, we entered into a collaboration with Pfizer for up to four targets which was terminated in March 2018.

Manufacturing

Our Probody therapeutic candidates are designed to be produced as fully recombinant antibody prodrugs. Our Probody therapeutic candidates are also designed to maintain the manufacturability benefits of antibodies and leverage well established technologies used for antibody production. We conduct cell line development and process development both in-house and in collaboration with contract development and manufacturing organizations ("CMO"). CMOs are responsible for manufacturing of drug substance and clinical drug product materials.

Our lead Chinese hamster ovary cell line has been successfully used for manufacturing several antibodies and requires minimal process optimization to establish a process to support early phase manufacturing. We utilize well established production steps typically part of a platform manufacturing process for antibodies. The CMO we have selected has a strong track record in manufacturing therapeutic biologics, including antibodies. All activities from cell line development to formulated drug product are performed at one location to maintain aggressive timelines and minimize delays that can result from engaging multiple parties for manufacturing. Similarly, for our PDC projects we have selected CMOs with strong expertise in clinical/commercial drug conjugate manufacturing and with capabilities for toxin conjugation and fill-finish. Furthermore, our two lead PDC programs incorporate toxin payloads that have an established clinical and regulatory history.

To date, we have been able to successfully manufacture CX-072, CX-2009 and CX-2029 for our ongoing early stage clinical trials. However, in order to conduct later stage clinical trials of our product candidates, including CX-072, CX-2009 and CX-2029, and eventually, if approved, commercial products, we will need to manufacture them in larger quantities. We, or any manufacturing partners, may be unable to successfully increase the manufacturing scale and capacity for any of our product candidates in a timely or cost-effective manner, or at all. For example, we are currently working with our CMOs to change our manufacturing processes and formulations as well as scaling up for large drug manufacturing capability and to increase the term of stability for CX-072 drug product for late stage clinical trials and commercialization. However, we may have to start late stage trials with our early clinical trial drug product and switch to the late stage or commercial drug product mid trial. In such event, the FDA will require us to complete bridging studies to compare the earlier stage material with the late stage or commercial material to assure comparability between the earlier trial material and the late stage or commercial material. Changing the formulation and scale up process is a complicated and difficult task. While we believe we can complete the process successfully, there can be no assurances that the changes we make to the drug product and manufacturing process will be successful or completed in a timely manner or that the FDA will not require additional development steps or studies from those we believe are necessary. If we are unable scale up our manufacturing capabilities with respect to CX-072 or any of our other product candidates, increase the life of drug stability of CX-072 or such other product candidates, or successfully complete the FDA's bridging requirements, we may not be able to successfully obtain FDA approval and commercialize CX-072 or such other product candidates in a timely manner or at all.

The supply chain for the manufacturing of our product candidates is complicated and can involve many parties. We do not own manufacturing facilities for producing such supplies and rely on third-party contract manufacturers to manufacture our clinical trial and preclinical study product supplies. Our clinical trial manufacturing contractors and suppliers are our sole source for their respective manufacturing and supplies. Failure of any of these contractors could affect our ability to have clinical trial material available when needed. This could result in a substantial delay of our clinical trials. For example, for each of CX-072 CX-2009 and CX-2029, our manufacturing supply chain includes several contract manufacturers, and failure by any of these manufacturers could result in interruptions of our clinical studies. We do not have any long-term contracts and we do not currently have an alternative to any of our third-party contract manufacturers. Consequently, there can be no assurance that our preclinical and clinical development product supplies will not be limited, interrupted, or of satisfactory quality or continue to be available at acceptable prices. In particular, any replacement of any of our third-party contract manufacturers could require significant effort and expertise because there may be a limited number of qualified replacements. In addition, we may encounter issues with

transferring technology to a new third-party manufacturer, and we may encounter regulatory delays if we need to move the manufacturing of our products from one third-party manufacturer to another. For example, we were dependent on ImmunoGen under our collaboration for certain steps in the manufacturing of clinical quantities of CX-2009. At the end of 2018, ImmunoGen closed their clinical manufacturing facility in Norwood, MA. This site provided clinical manufacturing support for the CX-2009 program. We have initiated the transfer of the drug substance manufacturing process from ImmunoGen to a contract manufacturer, where we have an existing relationship and with expertise in the manufacture of antibody drug conjugates at a clinical and commercial scale. To date, the manufacturing transfer process is still ongoing and has not yet been completed. However, there can be no assurances that we will not experience a disruption to the supply of CX-2009 in connection with such transfer or that the transfer will be successful.

In-Licenses

License from UCSB

In August 2010, we entered into an agreement with UCSB, that grants us an exclusive license, with the right to sublicense, under the patent rights owned by UCSB covering mask and screening technologies relating to the identification and discovery of pro-protein biologics, including masks and substrates, for the identification of pro-proteins, for use in the fields of therapeutics, in vivo diagnostics, and prophylactics (the "UCSB Agreement"). The UCSB Agreement also grants us an exclusive license, with the right to sublicense, under UCSB's interest in certain patent rights we co-own with UCSB covering Probody antibodies and other pro-proteins in the fields of therapeutics, in vivo diagnostics and prophylactics.

We had no upfront payment obligations under the agreement. We are obligated to pay to UCSB royalties on net sales of licensed products in the low single digit percentages, subject to annual minimum amounts as well as certain reductions. We are required to make milestone payments to UCSB on the accomplishment of certain milestones totaling up to $1,075 million for each of the first two indications for each licensed product consisting of a molecule or compound covered by the licensed patent rights. We were also obligated to make a payment to UCSB upon the first occurrence of an IPO or change of control. If the Company sublicenses its rights under the UCSB Agreement, it must pay UCSB a percentage of our total sublicense revenues ranging from the mid-single to mid-teen percentages, which total amount would be first reduced by the aggregate amount of certain research and development related expenses incurred by the Company and other permitted deductions.

License from ImmunoGen

In February 2016, we exercised our option to obtain a worldwide, exclusive, sublicensable license from ImmunoGen for development and commercialization of products directed against the target selected by us under our research collaboration agreement with ImmunoGen. See the description of the license agreement set forth under the caption "Our Collaborations—ImmunoGen, Inc." in this Item 1 of this Annual Report on Form 10-K.

Competition

The biotechnology and biopharmaceutical industries, and the immuno-oncology subsector, are characterized by rapid evolution of technologies, fierce competition and strong defense of intellectual property. Any product candidates that we successfully develop and commercialize will have to compete with existing therapies and new therapies that may become available in the future. While we believe that our proprietary Probody platform and scientific expertise in the field of biologics and immuno-oncology provide us with competitive advantages, a wide variety of institutions, including large biopharmaceutical companies, specialty biotechnology companies, academic research departments and public and private research institutions, are actively developing potentially competitive products and technologies. We face substantial competition from biotechnology and biopharmaceutical companies developing biopharmaceutical products, particularly with respect to in immuno-oncology therapeutics, where competition is intense and rapidly evolving. These competitors generally fall within the following categories:

Masking and conditional activation: Several companies, including Akriveia, Amgen, Amunix, BioAtla, Halozyme, Harpoon, Maverick Therapeutics, Pandion Therapeutics, Revitope, and Roche are exploring antibody masking and/or conditional activation strategies, which could compete with our Probody Platform.

Cancer immunotherapies: Cancer immunotherapy is one of the most competitive and fastest growing segments of the pharmaceutical industry. Almost every large pharmaceutical company is developing cancer immunotherapies, including Amgen, AstraZeneca PLC, BMS, Celgene, GlaxoSmithKline plc, Merck & Co., Inc., Novartis AG, Pfizer, Roche Holding Ltd and Sanofi SA. In addition, many large and mid-sized biotech companies such as BeiGene Incyte, TESARO, Inc., Nektar, and Alkermes have ongoing efforts in cancer immunotherapy. Finally, numerous small companies are also working in the space.

Antibody drug conjugates: Several large pharmaceutical companies, such as AbbVie, Daiichi Sankyo, Pfizer, Roche, and Takeda are developing ADCs. Three mid-sized companies, ImmunoGen, Seattle Genetics, and Immunomedics are also leaders in this space. Finally, numerous small companies have ongoing efforts in the space.

T-cell engaging bispecifics: Several large pharmaceutics companies, such as Amgen, Novartis, and Roche, have on-going efforts in the space of TCBs. In additional, several mid-sized biotech companies such as Macrogenics and Xencor have ongoing efforts in TCBs. Finally, numerous small companies have ongoing efforts in the space.

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 than us 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 being 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 and 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, less toxic, 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 product candidates.

Intellectual Property

We strive to protect and enhance the proprietary technology, inventions, and improvements that are commercially important to our business, including seeking, maintaining, and defending patent rights, whether developed internally or licensed from third parties. Our policy is to seek to protect our proprietary position by, among other methods, pursuing and obtaining patent protection in the United States and in jurisdictions outside of the United States related to our proprietary technology, inventions, improvements, platforms and product candidates that are important to the development and implementation of our business. Our patent portfolio is intended to cover, but is not limited to, our technology platforms, our product candidates and components thereof, their methods of use and processes for their manufacture, our proprietary reagents and assays, and any other inventions that are commercially important to our business. We also rely on trade secret protection of our confidential information and know-how relating to our proprietary technology, platforms and product candidates, continuing innovation, and in-licensing opportunities to develop, strengthen, and maintain our proprietary position in our Probody platform and product candidates. We expect to rely on data exclusivity, market exclusivity, patent term adjustment and patent term extensions when available. Our commercial success may depend in part on our ability to obtain and maintain patent and other proprietary protection for our technology, inventions, and improvements; to preserve the confidentiality of our trade secrets; to maintain our licenses to use intellectual property owned or controlled by third parties; to defend and enforce our proprietary rights, including our patents; to defend against and challenge the assertion by third parties of their purported intellectual property rights; and to operate without the unauthorized infringement of valid and enforceable patents and other proprietary rights of third parties.

We believe that we have a strong global intellectual property position and substantial know-how and trade secrets relating to our Probody therapeutic technology, platform and product candidates. Our patent portfolio as of February 15, 2019 contains at least 100 issued patents (some of which are co-owned with a third party) and 250 pending patent applications (some of which are co-owned with a third party). We have exclusively licensed UCSB's interest in the co-owned patent family covering Probody and other pro-protein technology in the fields of therapeutics, in vivo diagnostics and prophylactics.

These patents and patent applications include claims directed to:

- Probody platform and PDC platform;
- Other pro-protein platforms;
- Probody conjugates and conjugation methods to produce PDCs;
- Bispecific and other multispecific Probody therapeutics, including T-cell-recruiting bispecific Probody therapeutics;

- Protease-cleavable linkers, e.g., serine protease- and/or MMP-cleavable linkers;
- Improved display systems for peptide display, e.g., to identify masks, substrates, and other proteins;
- Cancer immunotherapy Probody therapeutics, e.g., PD-L1, PD-1, and CTLA-4 Probody therapeutics, as well as related novel antibodies and combination therapies;
- Probody drug conjugates, e.g., CD-166, CD-71 (transferrin receptor), CD49c (integrin alpha 3), and CD147 PDCs, as well as related Probody therapeutics, novel antibodies and ADCs;
- Probody therapeutics to other targets, e.g., EGFR, Jagged, and IL6R Probody therapeutics, as well as related PDCs, novel antibodies and ADCs;
- Antibodies that bind Probody therapeutics, e.g., anti-mask and anti-Probody antibodies;

- Antibodies that bind key targets;
- Antibodies that bind the active site of uPA protease;
- Compositions and methods to discriminate between intact Probody therapeutics and activated versions thereof, as well as other translation assays;
- Methods to produce intact Probody therapeutics; and
- Methods to use any of the above-referenced compounds and compositions.

In addition, we have exclusively licensed a patent portfolio of patent families from UCSB patents and patent applications that cover compositions and methods related to screening for and identification of masks and protease-cleavable linkers that we incorporate into our Probody therapeutics.

As for the Probody platform, product candidates and processes we develop and commercialize, in the normal course of business, we intend to pursue, where appropriate, patent protection or trade secret protection relating to compositions, methods of manufacture, assay methods, methods of use, treatment of indications, dosing and formulations. We may also pursue patent protection with respect to product development processes and technology.

We continually assess and refine our intellectual property strategy as we develop new platform technologies and product candidates. To that end, we are prepared to file additional patent applications if our intellectual property strategy requires such filings, or where we seek to adapt to competition or seize business opportunities. Further, we are prepared to file patent applications, as we consider appropriate under the circumstances, relating to the new technologies that we develop. In addition to filing and prosecuting patent applications in the United States, we often file counterpart patent applications in the European Union and in additional countries where we believe such foreign filing is likely to be beneficial, including but not limited to any or all of Australia, Brazil, Canada, China, Europe, Hong Kong, India, Indonesia, Israel, Japan, Malaysia, Mexico, New Zealand, Russia or Eurasian Patent Organization, Singapore, South Africa and South Korea.

Our currently issued patents will likely expire on dates ranging from 2028 to 2035, unless we receive patent term extension or adjustment as might be available under applicable law. If patents are issued on our pending patent applications, the resulting patents are projected to expire on dates ranging from 2028 to 2039, unless we receive patent term extension or adjustment. However, the actual protection afforded by a patent varies on a product-by-product basis, from country-to-country, and depends upon many factors, including the type of patent, the scope of its coverage, the availability of regulatory-related extensions, the availability of legal remedies in a particular country, and the validity and enforceability of the patent.

All of our patents and patent applications are subject to risks and uncertainties under U.S. and foreign law. For a more comprehensive discussion of risks related to our proprietary technology, inventions, improvements, platforms and product candidates, please see the section entitled “Risk Factors—Risks Related to Intellectual Property.”

We intend to file applications for trademark registrations in connection with our product candidates in various jurisdictions, including the U.S. The USPTO previously accepted the PROBODY mark under an intent-to-use trademark application. Because we were unable to show use for that mark within three years of acceptance, the mark became abandoned. We have re-filed for trademark protection of the PROBODY mark with the USPTO. We also have filed for trademark protection of the CYTOMX and IHZ marks as well as the CytomX Logo with the USPTO. Both the PROBODY and IHZ marks were allowed by the USPTO in 2016. The PROBODY mark was registered in class 5 by the USPTO in 2017.

We also rely on trade secret protection for our confidential and proprietary information. It is our policy to require our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors to execute confidentiality agreements upon the commencement of employment or consulting relationships with us. In the case of employees, the agreements provide that all inventions conceived by the individual, and which are related to our current or planned business or research and development or made during normal working hours, on our premises or using our equipment or proprietary information, are our exclusive property. In many cases our confidentiality and other agreements with consultants, outside scientific collaborators, sponsored researchers and other advisors require them to assign or grant us licenses to inventions they invent as a result of the work or services they render under such agreements or grant us an option to negotiate a license to use such inventions.

Government Regulation and Product Approval

Governmental authorities in the U.S., at the federal, state and local level, and other countries extensively regulate, among other things, the research, development, testing, manufacture, labeling, packaging, promotion, storage, advertising, distribution, marketing and export and import of products such as those we are developing. Our therapeutic candidates must be approved by the FDA through the NDA or BLA process before they may be legally marketed in the U.S. and will be subject to similar requirements in other countries prior to marketing in those countries. The process of obtaining regulatory approvals and the subsequent compliance with applicable federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources.

U.S. Government Regulation

In the U.S., the FDA regulates drugs under the Federal Food, Drug, and Cosmetic Act ("FDCA") and, in the case of therapeutic biologics, the Public Health Services Act ("PHSA"), and implementing regulations. Failure to comply with the applicable U.S. requirements at any time during the product development or approval process, or after approval, may subject an applicant to administrative or judicial sanctions, any of which could have a material adverse effect on us. These sanctions could include:

- refusal to approve pending applications;
- withdrawal of an approval;
- imposition of a clinical hold;
- warning or untitled letters;
- seizures or administrative detention of product;
- total or partial suspension of production or distribution; or
- injunctions, fines, disgorgement, or civil or criminal penalties.

NDA and BLA approval processes

The process required by the FDA before a therapeutic may be marketed in the U.S. generally involves the following:

- completion of nonclinical laboratory tests, animal studies and formulation studies conducted according to good laboratory practices ("GLPs"), and other applicable regulations;
- submission to the FDA of an IND, which must become effective before human clinical trials may begin;
- performance of adequate and well-controlled human clinical trials according to good clinical practices ("GCPs"), to establish the safety and efficacy of the product candidate for its intended use;
- submission to the FDA of an NDA or BLA;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the product candidate is produced to assess readiness for commercial manufacturing and conformance to the manufacturing-related elements of the application, to conduct a data integrity audit, and to assess compliance with current good manufacturing practices ("cGMPs") to assure that the facilities, methods and controls are adequate to preserve the product candidate's identity, strength, quality and purity; and
- FDA review and approval of the NDA or BLA.

Once a biopharmaceutical candidate is identified for development, it enters the preclinical or nonclinical testing stage. Nonclinical tests include laboratory evaluations of product chemistry, toxicity and formulation, as well as animal studies. An IND sponsor must submit the results of the nonclinical tests, together with manufacturing information and analytical data, to the FDA as part of the IND. Some nonclinical testing may continue even after the IND is submitted. In addition to including the results of the nonclinical studies, the IND will also include a protocol detailing, among other things, the objectives of the clinical trial, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated if the first phase lends itself to an efficacy determination. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, places the IND on clinical

hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before clinical trials can begin. A clinical hold may occur at any time during the life of an IND and may affect one or more specific studies or all studies conducted under the IND.

All clinical trials must be conducted under the supervision of one or more qualified investigators in accordance with GCPs. They must be conducted under protocols detailing the objectives of the trial, dosing procedures, research subject selection and exclusion criteria and the safety and effectiveness criteria to be evaluated. Each protocol, and any subsequent material amendment to the protocol, must be submitted to the FDA as part of the IND, and progress reports detailing the status of the clinical trials must be submitted to the FDA annually. Sponsors also must report to the FDA serious and unexpected adverse reactions in a timely manner, any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigation brochure or any findings from other studies or animal or in vitro testing that suggest a significant risk in humans exposed to the product candidate. An institutional review board ("IRB") at each institution participating in the clinical trial must review and approve the protocol before a clinical trial commences at that institution and must also approve the information regarding the trial and the consent form that must be provided to each research subject or the subject's legal representative, monitor the study until completed and otherwise comply with IRB regulations. There are also requirements governing the reporting of ongoing clinical trials and completed clinical trial results to public registries.

Human clinical trials are typically conducted in three sequential phases that may overlap or be combined.

- Phase 1—The product candidate is initially introduced into healthy human subjects and tested for safety, dosage tolerance, absorption, metabolism, distribution and elimination. In the case of some therapeutic candidates for severe or life-threatening diseases, such as cancer, especially when the product candidate may be inherently too toxic to ethically administer to healthy volunteers, the initial human testing is often conducted in patients.
- Phase 2—Clinical trials are performed on a limited patient population intended to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance and optimal dosage.
- Phase 3—Clinical trials are undertaken to further evaluate dosage, clinical efficacy and safety in an expanded patient population at geographically dispersed clinical study sites. These studies are intended to establish the overall risk-benefit ratio of the product and provide an adequate basis for product labeling.

A pivotal study is a clinical study that adequately meets regulatory agency requirements for the evaluation of a product candidate's efficacy and safety such that it can be used to justify the approval of the product. Generally, pivotal studies are also Phase 3 studies but may be Phase 2 studies if the trial design provides a reliable assessment of clinical benefit, particularly in situations where there is an unmet medical need. Human clinical trials are inherently uncertain, and Phase 1, Phase 2 and Phase 3 testing may not be successfully completed. The FDA or the sponsor may suspend a clinical trial at any time for a variety of reasons, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the product candidate has been associated with unexpected serious harm to patients.

During the development of a new product candidate, sponsors are given opportunities to meet with the FDA at certain points; specifically, prior to the submission of an IND, at the end of Phase 2 and before a BLA or NDA is submitted. Meetings at other times may be requested. These meetings can provide an opportunity for the sponsor to share information about the data gathered to date and for the FDA to provide advice on the next phase of development. Sponsors typically use the meeting at the end of Phase 2 to discuss their Phase 2 clinical results and present their plans for the pivotal Phase 3 clinical trial that they believe will support the approval of the new therapeutic. If a Phase 3 clinical trial is the subject of discussion at the end of Phase 2 meeting with the FDA, a sponsor may be able to request a Special Protocol Assessment ("SPA"), the purpose of which is to reach agreement with the FDA on the Phase 3 clinical trial protocol design and analysis that will form the primary basis of an efficacy claim.

Post-approval trials, sometimes referred to as "Phase 4" clinical trials, may be conducted after initial marketing approval. These trials are used to gain additional experience from the treatment of patients in the intended therapeutic indication. In certain instances, FDA may mandate the performance of such "Phase 4" clinical trials.

According to published guidance on the SPA process, a sponsor that meets the prerequisites may make a specific request for a SPA and provide information regarding the design and size of the proposed clinical trial. The FDA is supposed to evaluate the protocol within 45 days of the request to assess whether the proposed trial is adequate, which evaluation may result in discussions and a request for additional information. A SPA request must be made before the proposed trial begins, and all open issues must be resolved before the trial begins. Although the FDA will assess protocols that have already begun, these assessments will not be subject to the 45-day review applicable to SPAs. If a written agreement is reached, it will be documented and made part of the record. The agreement will be binding on the FDA and may not be changed by the sponsor or the FDA after the trial begins except with the written agreement of the sponsor and the FDA or if the FDA determines that a substantial scientific issue essential to determining the safety or efficacy of the product candidate was identified after the testing began.

Concurrent with clinical trials, sponsors usually complete additional animal safety studies, develop additional information about the chemistry and physical characteristics of the product candidate and finalize a process for manufacturing commercial quantities of the product candidate in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and the manufacturer must develop methods for testing the quality, purity and potency of the product candidate. To help reduce the risk of the introduction of adventitious agents with use of biological products, the PHSA emphasizes the importance of manufacturing control for products whose attributes cannot be precisely defined. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other criteria, the sponsor must develop methods for testing the identity, strength, quality, potency and purity of the final biological product. Additionally, appropriate packaging must be selected and tested, and stability studies must be conducted to demonstrate that the biological product candidate does not undergo unacceptable deterioration over its shelf life. Additionally, for both NDA and BLA products, appropriate packaging must be selected and tested, and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its proposed shelf-life.

The results of product development, nonclinical studies and clinical trials, along with descriptions of the manufacturing process, analytical tests and other control mechanisms, proposed labeling and other relevant information are submitted to the FDA as part of an NDA or BLA requesting approval to market the product.

Under the Prescription Drug User Fee Act ("PDUFA") as amended, each BLA or NDA must be accompanied by a significant user fee. The FDA adjusts the PDUFA user fees on an annual basis. PDUFA also imposes an annual product fee for products and an annual establishment fee on facilities used to manufacture prescription biological or drug products. Fee waivers or reductions are available in certain circumstances, such as where a waiver is necessary to protect the public health, where the fee would present a significant barrier to innovation, or where the applicant is a small business submitting its first human therapeutic application for review.

Within 60 days following submission of the application, the FDA reviews a BLA or NDA submitted to determine if it is substantially complete before the agency accepts it for filing. The FDA may refuse to file any BLA or NDA that it deems incomplete or not properly reviewable at the time of submission and may request additional information. In this event, the BLA or NDA must be resubmitted with the additional information. The resubmitted application also is subject to review before the FDA accepts it for filing. Once the submission is accepted for filing, the FDA begins an in-depth substantive review of the BLA or NDA. The FDA reviews the BLA to determine, among other things, whether the proposed product is safe, potent, and/or effective for its intended use, and has an acceptable purity profile, and in the case of an NDA, whether the product is safe and effective for its intended use, and in each case, whether the product is being manufactured in accordance with cGMP. The FDA may refer applications for novel products or products that present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

During the product approval process, the FDA also will determine whether a risk evaluation and mitigation strategies ("REMS") plan is necessary to assure the safe use of the product. If the FDA concludes a REMS plan is needed, the sponsor of the BLA or NDA must submit a proposed REMS plan. The FDA will not approve a BLA or NDA without a REMS plan, if required. The FDA has authority to require a REMS plan under the Food and Drug Administration Amendments Act of 2007 (the "FDAAA") when necessary to ensure that the benefits of a drug or therapeutic biologic outweigh the risks. In determining whether a REMS plan is necessary, the FDA must consider the size of the population likely to use the drug or therapeutic biologic, the seriousness of the disease or condition to be treated, the expected benefit of the drug or therapeutic biologic, the duration of treatment, the seriousness of known or potential adverse events, and whether the drug or therapeutic biologic is a new molecular entity. A REMS plan may be required

to include various elements, such as a medication guide or patient package insert, a communication plan to educate health care providers of the risks, limitations on who may prescribe or dispense the drug or therapeutic biologic, or other measures that the FDA deems necessary to assure the safe use of the drug or therapeutic biologic. In addition, the REMS plan must include a timetable to assess the strategy at 18 months, three years, and seven years after the strategy's approval.

The FDA may also require a REMS plan for a drug or therapeutic biologic that is already on the market if it determines, based on new safety information, that a REMS plan is necessary to ensure that the product's benefits outweigh its risks.

Before approving a BLA or NDA, the FDA will inspect the facilities at which the product is manufactured. The FDA will not approve the product unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving a BLA or NDA, the FDA will typically inspect one or more clinical sites to assure that the clinical trials were conducted in compliance with IND trial requirements and GCP requirements. To assure cGMP and GCP compliance, an applicant must incur significant expenditure of time, money and effort in the areas of training, record keeping, production and quality control.

Notwithstanding the submission of relevant data and information, the FDA may ultimately decide that the BLA or NDA does not satisfy its regulatory criteria for approval and deny approval. Data obtained from clinical trials are not always conclusive and the FDA may interpret data differently than we interpret the same data. If the agency decides not to approve the BLA or NDA in its present form, the FDA will issue a complete response letter that describes all of the specific deficiencies in the BLA or NDA identified by the FDA. The deficiencies identified may be minor, for example, requiring labeling changes, or major, for example, requiring additional clinical trials. Additionally, the complete response letter may include recommended actions that the applicant might take to place the application in a condition for approval. If a complete response letter is issued, the applicant may either resubmit the BLA or NDA, addressing all of the deficiencies identified in the letter, or withdraw the application.

Even if a product receives regulatory approval, the approval may be significantly limited to specific indications and dosages or the indications for use may otherwise be limited, which could restrict the commercial value of the product. Further, the FDA may require that certain contraindications, warnings or precautions be included in the product labeling. The FDA may impose restrictions and conditions on product distribution, prescribing, or dispensing in the form of a risk management plan, or otherwise limit the scope of any approval. In addition, the FDA may require post marketing clinical trials, sometimes referred to as “Phase 4” clinical trials, designed to further assess a biological product’s safety and effectiveness, and testing and surveillance programs to monitor the safety of approved products that have been commercialized.

Companion Diagnostics

The FDA issued a final guidance document in July 2014 addressing agency policy in relation to in vitro companion diagnostic tests. The guidance explains that for some drugs and therapeutic biologics, the use of a companion diagnostic test is essential for the safe and effective use of the product, such as when the use of a product is limited to a specific patient subpopulation that can be identified by using the test. According to the guidance, the FDA generally will not approve such a product if the companion diagnostic is not also approved or cleared for the appropriate indication, and accordingly the therapeutic product and the companion diagnostic should be developed and approved or cleared contemporaneously. However, the FDA may decide that it is appropriate to approve such a product without an approved or cleared in vitro companion diagnostic device when the drug or therapeutic biologic is intended to treat a serious or life-threatening condition for which no satisfactory alternative treatment exists and the FDA determines that the benefits from the use of a product with an unapproved or uncleared in vitro companion diagnostic device are so pronounced as to outweigh the risks from the lack of an approved or cleared in vitro companion diagnostic device. The FDA encourages sponsors considering developing a therapeutic product that requires a companion diagnostic to request a meeting with both relevant device and therapeutic product review divisions to ensure that the product development plan will product sufficient data to establish the safety and effectiveness of both the therapeutic product and the companion diagnostic. Because the FDA’s policy on companion diagnostics is set forth only in guidance, this policy is subject to change and is not legally binding.

Expedited Review and Approval

The FDA has various programs, including Fast Track, priority review, accelerated approval and breakthrough therapy designation, which are intended to expedite or simplify the process for reviewing therapeutic candidates, or provide for the approval of a product candidate on the basis of a surrogate endpoint. Even if a product candidate qualifies for one or more of these programs, the FDA may later decide that the product candidate no longer meets the conditions for qualification or that the time period for FDA review or approval will be lengthened. Generally, therapeutic candidates that are eligible for these programs are those for serious or life-threatening conditions, those with the potential to address unmet medical needs and those that offer meaningful benefits over existing treatments. For example, Fast Track is a process designed to facilitate the development and expedite the review of therapeutic candidates to treat serious or life-threatening diseases or conditions and fill unmet medical needs. Priority review is

designed to give therapeutic candidates that offer major advances in treatment or provide a treatment where no adequate therapy exists an initial review within eight months as compared to a standard review time of twelve months.

Although Fast Track and priority review do not affect the standards for approval, the FDA will attempt to facilitate early and frequent meetings with a sponsor of a Fast Track designated product candidate and expedite review of the application for a product candidate designated for priority review. Accelerated approval, which is described in Subpart H of 21 CFR Part 314, provides for an earlier approval for a new product candidate that is (1) intended to treat a serious or life-threatening disease or condition; (2) generally provides a meaningful advantage over available therapies; and (3) demonstrates an effect on either 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 ("IMM") and is reasonably likely to predict an effect on IMM or other clinical benefit, taking into account the severity, rarity or prevalence of the condition and the availability or lack of alternative treatments. A surrogate endpoint is a laboratory measurement or physical sign used as an indirect or substitute measurement representing a clinically meaningful outcome. As a condition of approval, the FDA may require that a sponsor of a product candidate receiving accelerated approval perform post-marketing studies to verify and describe the predicted effect on irreversible morbidity or mortality or other clinical endpoint, and the product may be subject to accelerated withdrawal procedures.

In the Food and Drug Administration Safety and Innovation Act (the "FDASIA"), which was signed into law in July 2012, the U.S. Congress encouraged the FDA to utilize innovative and flexible approaches to the assessment of therapeutic candidates under accelerated approval. The law required the FDA to issue related guidance and also promulgate confirming regulatory changes. In May 2014, the FDA published a final Guidance for Industry titled "Expedited Programs for Serious Conditions—Drugs and Biologics," which provides guidance on FDA programs that are intended to facilitate and expedite development and review of new therapeutic candidates as well as threshold criteria generally applicable to concluding that a product candidate is a candidate for these expedited development and review programs.

In addition to the Fast Track, accelerated approval and priority review programs discussed above, the FDA's "Expedited Programs" guidance also describes the Breakthrough Therapy designation. The FDA defines a Breakthrough Therapy as a therapeutic that is intended, alone or in combination with one or more other therapeutics, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the therapeutic may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. A therapeutic designated as a Breakthrough Therapy is eligible for accelerated approval. 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. A request for Breakthrough Therapy designation should be submitted concurrently with, or as an amendment to, an IND, but ideally no later than the end of Phase 2 meeting.

Patent Term Restoration and Marketing Exclusivity

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

Market exclusivity provisions under the FDCA also can delay the submission or the approval of certain applications. The FDCA provides a five-year period of non-patent marketing exclusivity within the U.S. to the first applicant to gain approval of an NDA for a new chemical entity. A product candidate is a new chemical entity if the FDA has not previously approved any other new product candidate containing the same active moiety, which is the molecule or ion responsible for the action of the product candidate substance. During the exclusivity period, the FDA may not accept for review an abbreviated new drug application (an "ANDA"), or a 505(b)(2) NDA submitted by another company for another version of such product candidate where the applicant does not own or have a legal right of reference to all the data required for approval. However, an application may be submitted after four years if it contains a certification of patent invalidity or non-infringement of one of the patents listed with the FDA by the innovator NDA holder. The FDCA also provides three years of marketing exclusivity for an NDA, or supplement to an existing NDA, if new

clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application. Examples of such new clinical investigations include those with respect to new indications, dosages or strengths of an existing product candidate. This three-year exclusivity covers only the modification for which the product received approval on the basis of the new clinical investigations and does not prohibit the FDA from approving ANDAs for product candidates containing the active agent for the original indication or condition of use. Five-year exclusivity will not delay the submission or approval of another company's full NDA. However, an applicant submitting a full NDA would be required to conduct or obtain a right of reference to all of the preclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness.

The Biologics Price Competition and Innovation Act (the "BPCIA") amended the PHSA to authorize the FDA to approve similar versions of innovative biologics, commonly known as biosimilars. A competitor seeking approval of a biosimilar must file an application to establish its molecule as highly similar to an approved innovator biologic, among other requirements. The BPCIA, however, bars the FDA from approving biosimilar applications for 12 years after an innovator biological product receives initial marketing approval.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant Orphan Drug Designation to therapeutic candidates intended to treat a rare disease or condition, which is generally a disease or condition that affects either (1) fewer than 200,000 individuals in the U.S., or (2) more than 200,000 individuals in the U.S. and for which there is no reasonable expectation that the cost of developing and making available in the U.S. a product candidate for this type of disease or condition will be recovered from sales in the U.S. for that product candidate. Orphan Drug Designation must be requested before submitting an NDA. After the FDA grants Orphan Drug Designation, the identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. Orphan Drug Designation does not convey any advantage in or shorten the duration of the regulatory review and approval process.

If a product candidate that has Orphan Drug Designation subsequently receives the first FDA approval for the disease for which it has such designation, the product candidate is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications to market the same product candidate for the same indication, except under limited circumstances, for seven years. Orphan drug exclusivity, however, could also block the approval of one of our therapeutic candidates for seven years if a competitor obtains approval of the same product candidate as defined by the FDA or if our product candidate is determined to be contained within the competitor's product candidate for the same indication or disease.

In addition, the orphan drug credit is available for qualifying costs incurred between the date the FDA designates a drug as an orphan drug and the date the FDA approves the drug. The recent tax reform legislation, which was signed into law on December 22, 2017, reduced the amount of the qualified clinical research costs for a designated orphan product that a sponsor may claim as a credit from 50% to 25%.

Pediatric Exclusivity and Pediatric Use

Under the Best Pharmaceuticals for Children Act (the "BPCA"), certain therapeutic candidates may obtain an additional six months of exclusivity if the sponsor submits information requested in writing by the FDA, referred to as a Written Request, relating to the use of the active moiety of the product candidate in children. Although the FDA may issue a Written Request for studies on either approved or unapproved indications, it may only do so where it determines that information relating to that use of a product candidate in a pediatric population, or part of the pediatric population, may produce health benefits in that population.

In addition, the Pediatric Research Equity Act ("PREA"), requires a sponsor to conduct pediatric studies for most therapeutic candidates and biologics, for a new active ingredient, new indication, new dosage form, new dosing regimen or new route of administration. Under PREA, original NDAs, BLAs and supplements thereto must contain a pediatric assessment unless the sponsor has received a deferral or waiver. The required assessment must assess the safety and effectiveness of the product candidate for the claimed indications in all relevant pediatric subpopulations and support dosing and administration for each pediatric subpopulation for which the product candidate is safe and effective. The sponsor or FDA may request a deferral of pediatric studies for some or all of the pediatric subpopulations. A deferral may be granted for several reasons, including a finding that the product candidate or biologic is ready for approval for use in adults before pediatric studies are complete or that additional safety or effectiveness data needs to be collected before the pediatric studies begin. The law requires the FDA to send a PREA Non-Compliance letter to sponsors who have failed to submit their pediatric assessments required under PREA, have failed to seek or obtain a deferral or deferral extension or have failed to request approval for a required pediatric formulation. It further requires the FDA to post the PREA Non- Compliance letter and sponsor's response.

As part of the FDASIA, the U.S. Congress made a few revisions to the BPCA and PREA, which were slated to expire on September 30, 2012, and made both laws permanent.

Post-Approval Requirements

Once an approval is granted, the FDA may withdraw the approval if compliance with regulatory requirements is not maintained or if problems occur after the product candidate reaches the market. Later discovery of previously unknown problems with a product candidate may result in restrictions on the product candidate or even complete withdrawal of the product candidate from the market. After approval, some types of changes to the approved product candidate, such as adding new indications, manufacturing changes and additional labeling claims, are subject to further FDA review and approval. In addition, the FDA may under some circumstances require testing and surveillance programs to monitor the effect of approved therapeutic candidates that have been commercialized, and the FDA under some circumstances has the power to prevent or limit further marketing of a product candidate based on the results of these post-marketing programs.

Any therapeutic candidates manufactured or distributed by us pursuant to FDA approvals are subject to continuing regulation by the FDA, including, among other things:

- record-keeping requirements;
- reporting of adverse experiences with the product candidate;
- providing the FDA with updated safety and efficacy information;
- product sampling and distribution requirements;
- notifying the FDA and gaining its approval of specified manufacturing or labeling changes; and
- complying with FDA promotion and advertising requirements, which include, among other things, standards for direct-to-consumer advertising, restrictions on promoting products for uses or in-patient populations that are not described in the product's approved labeling, limitations on industry-sponsored scientific and educational activities and requirements for promotional activities involving the internet.

Therapeutic manufacturers and other entities involved in the manufacture and distribution of approved therapeutic products are required to register their establishments with the FDA and certain state agencies and are subject to periodic unannounced inspections by the FDA and some state agencies for compliance with cGMPs and other laws. The FDA periodically inspects manufacturing facilities to assess compliance with cGMP, which imposes extensive procedural, substantive and record-keeping requirements. In addition, changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require FDA approval before being implemented. FDA regulations would 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 if our product candidates are approved. 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.

New Legislation and Regulations

From time to time, legislation is drafted, introduced and passed in Congress that could significantly change the statutory provisions governing the testing, approval, manufacturing and marketing of products regulated by the FDA. In addition to new legislation, FDA regulations and policies are often revised or interpreted by the agency in ways that may significantly affect our business and our products. It is impossible to predict whether further legislative changes will be enacted or whether FDA regulations, guidance, policies or interpretations changed or what the effect of such changes, if any, may be.

Regulation Outside of the U.S.

In addition to regulations in the U.S., we will be subject to regulations of other jurisdictions governing any clinical trials and commercial sales and distribution of our therapeutic candidates. Whether or not we obtain FDA approval for a product, we must obtain approval by the comparable regulatory authorities of countries outside of the U.S. before we can commence clinical trials in such countries and approval of the regulators of such countries or economic areas, such as the European Union, before we may market products in those countries or areas. The approval process and requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from place to place, and the time may be longer or shorter than that required for FDA approval.

Under European Union regulatory systems, a company can consider applying for marketing authorization in several European Union member states by submitting its marketing authorization application(s) under a centralized, decentralized or mutual recognition procedure. The centralized procedure provides for the grant of a single marketing authorization that is valid for all European Union member states. The centralized procedure is compulsory for medicines derived from biotechnology, orphan medicinal products, or those medicines with an active substance not authorized in the European Union on or before May 20, 2004 intended to treat acquired immune deficiency syndrome

("AIDS"), cancer, neurodegenerative disorders or diabetes and optional for those medicines containing a new active substance not authorized in the European Union on or before May 20, 2004, medicines which are highly innovative, or medicines to which the granting of a marketing authorization under the centralized procedure would be in the interest of patients at the European Union-level. The decentralized procedure provides for recognition by European Union national authorities of a first assessment performed by one of the member states. Under this procedure, an identical application for marketing authorization is submitted simultaneously to the national authorities of several European Union member states, one of them being chosen as the "Reference Member State", and the remaining being the "Concerned Member States". The Reference Member State must prepare and send drafts of an assessment report, summary of product characteristics and the labelling and package leaflet within 120 days after receipt of a valid marketing authorization application to the Concerned Member States, which must decide within 90 days whether to recognize approval. If any Concerned Member State does not recognize the marketing authorization on the grounds of potential serious risk to public health, the disputed points are eventually referred to the European Commission, whose decision is binding on all member states. The mutual recognition procedure is similar to the decentralized procedure except that a medicine must have already received a marketing authorization in at least one of the member states, and that member state acts as the Reference Member State.

As in the U.S., we may apply for designation of a product candidate as an orphan drug for the treatment of a specific indication in the European Union before the application for marketing authorization is made.

Orphan drugs in the European Union enjoy economic and marketing benefits, including up to ten years of market exclusivity for the approved indication unless another applicant can show that its product is safer, more effective or otherwise clinically superior to the orphan-designated product, the marketing authorization holder is unable to supply sufficient quantity of the medicinal product or the marketing authorization holder has given its consent.

Coverage and Reimbursement

Sales of our products will depend, in part, on the extent to which our products will be covered by third-party payors, such as government health programs, commercial insurance and managed healthcare organizations. These third-party payors are increasingly reducing reimbursements for medical products and services. Additionally, the containment of healthcare costs has become a priority of federal and state governments and the prices of therapeutics have been a focus in this effort. The U.S. government, state legislatures and foreign governments have shown significant interest in implementing cost-containment programs, including price controls, restrictions on 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 our net revenue and results. If these third- party payors do not consider our products to be cost-effective compared to other therapies, they may not cover our products after approval as a benefit under their plans or, if they do, the level of payment may not be sufficient to allow us to sell our products on a profitable basis.

The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act (together, the “ACA”) has had a significant impact on the health care industry. The ACA expanded coverage for the uninsured while at the same time containing overall healthcare costs. With regard to biopharmaceutical products, the ACA, among other things, addressed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected, increased the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program and extended the rebate program to individuals enrolled in Medicaid managed care organizations, established annual fees and taxes on manufacturers of certain branded prescription drugs, and a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts, which, through subsequent legislative amendments, will be increased to 70% starting in 2019, 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.

In addition, other legislative changes have been proposed and adopted in the United States since the ACA was enacted that impact payment methodologies and reimbursement amounts. On August 2, 2011, the Budget Control Act of 2011 among other things, created measures for spending reductions by Congress, which led to aggregate reductions to Medicare payments to providers of 2% per fiscal year starting in April 2013, and, due to subsequent legislative amendments, will stay in effect through 2027 unless additional Congressional action is taken. On January 2, 2013, President Obama signed into law the American Taxpayer Relief Act of 2012 (the “ATRA”) which among other things, also 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. Recently, there has 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. For example, the 21st Century Cures Act changed the reimbursement methodology for infusion drugs and biologics furnished through durable medical equipment in an attempt to remedy over- and underpayment of

certain products. Individual states in the United States have also become increasingly aggressive in passing legislation and 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.

We expect that the current presidential administration and U.S. Congress will continue to seek to modify, repeal, or otherwise invalidate all, or certain provisions of, the ACA. Since taking office, President Trump has continued to support the repeal of all or portions of the ACA. On October 12, 2017, President Trump issued an executive order that expands the use of association health plans and allows anyone to purchase short-term health plans that provided temporary, limited insurance. This executive order also calls for the halt of federal payments to health insurers for cost-sharing reductions previously available to lower-income Americans to afford coverage. There is still uncertainty with respect to the impact this executive order could have on coverage and reimbursement for healthcare items and services covered by plans that were authorized by the ACA. In addition, most recently, the Tax Cuts and Jobs Act was enacted, which, among other things, removes penalties for not complying with the ACA’s individual mandate to carry health insurance. We cannot predict the extent of the impact of any such changes on us.

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

Other Healthcare Laws

We may also be subject to healthcare regulation and enforcement by the federal government and the states and foreign governments where we may market our product candidates, if approved. These laws include, without limitation, state and federal anti-kickback, fraud and abuse, false claims, privacy and security, physician sunshine and drug pricing transparency laws and regulations.

The federal Anti-Kickback Statute prohibits, among other things, any person from knowingly and willfully offering, soliciting, receiving or providing remuneration, directly or indirectly, to induce either the referral of an individual, for an item or service or the purchasing or ordering of a good or service, for which payment may be made under federal healthcare programs such as the Medicare and Medicaid programs. The Anti-Kickback Statute is subject to evolving interpretations. In the past, the government has enforced the Anti-Kickback Statute to reach large settlements with healthcare companies based on sham consulting and other financial arrangements with physicians. 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. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal False Claims Act. The majority of states also have anti-kickback laws, which establish similar prohibitions and, in some cases, may apply to items or services reimbursed by any third-party payor, including commercial insurers.

Additionally, the civil False Claims Act prohibits knowingly presenting or causing the presentation of a false, fictitious or fraudulent claim for payment to the U.S. government, knowingly making, using, or causing to be made or used a false record or statement material to a false or fraudulent claim to the U.S. government, or from knowingly making a false statement to avoid, decrease or conceal an obligation to pay money to the U.S. government. Actions under the False Claims Act may be brought by the Attorney General or as a qui tam action by a private individual in the name of the government. Violations of the False Claims Act can result in very significant monetary penalties and treble damages. The federal government is using the False Claims Act, and the accompanying threat of significant liability, in its investigation and prosecution of pharmaceutical and biotechnology companies throughout the U.S., for example, in connection with the promotion of products for unapproved uses and other sales and marketing practices. The government has obtained multi-million and multi-billion-dollar settlements under the False Claims Act in addition to individual criminal convictions under applicable criminal statutes. Given the significant size of actual and potential settlements, it is expected that the government will continue to devote substantial resources to investigating healthcare providers' and manufacturers' compliance with applicable fraud and abuse laws.

The U.S. federal Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), created new federal criminal statutes that prohibit among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payors, knowingly and willfully embezzling or stealing from a healthcare benefit program, willfully obstructing a criminal investigation of a healthcare offense, and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious

or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

There has also been a recent trend of increased federal and state regulation of payments made to physicians and other healthcare providers. The ACA, among other things, imposes new reporting requirements on drug manufacturers for payments made by them to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. Failure to submit required information may result in civil monetary penalties for all payments, transfers of value or ownership or investment interests that are not timely, accurately and completely reported in an annual submission. Certain states also mandate implementation of compliance programs and compliance with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government, impose restrictions on drug manufacturer marketing practices and/or require the tracking and reporting of pricing and marketing information as well as gifts, compensation and other remuneration or items of value provided to physicians and other healthcare professionals and entities.

We may also be subject to data privacy and security regulation by both the federal government and the states in which we conduct our business. HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act ("HITECH") and their respective implementing regulations, including the final omnibus rule published on January 25, 2013, imposes specified requirements relating to the privacy, security and transmission of individually identifiable health information. Among other things, HITECH makes HIPAA's privacy and security standards directly applicable to "business associates," defined as independent contractors or agents of covered entities that create, receive, maintain or transmit protected health information in connection with providing a service for or on behalf of a covered entity. HITECH also increased the civil and criminal penalties that may be imposed against covered entities, business associates and possibly other persons, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorney's fees and costs associated with pursuing federal civil actions. In addition, state laws and non-US laws and regulations (particularly EU laws regarding personal data relating to individuals based in Europe) govern the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways, thus complicating compliance efforts.

Environment

Our third-party manufacturers are subject to inspections by the FDA for compliance with cGMP and other U.S. regulatory requirements, including U.S. federal, state and local regulations regarding environmental protection and hazardous and controlled substance controls, among others. Environmental laws and regulations are complex, change frequently and have tended to become more stringent over time. We have incurred, and may continue to incur, significant expenditures to ensure we are in compliance with these laws and regulations. We would be subject to significant penalties for failure to comply with these laws and regulations.

Our Company Origins and Team

Our Probody platform technology has its origins in work performed at the University of California, Santa Barbara ("UCSB"), by our scientific founder Professor Patrick Daugherty. Since our inception, we have continued developing and adding to this technology and aspire to design a pipeline of Probody therapeutics that will better the lives of cancer patients. We have assembled an experienced and talented group of individuals dedicated to the advancement of cancer care. Our chief executive officer, Dr. Sean McCarthy, leads a team that draws on robust experience in all phases of product discovery, clinical development and commercialization. Our research and preclinical development team is led by Dr. Michael Kavanaugh, chief scientific officer, and includes renowned and established researchers, and our clinical development team is led by Dr. Rachel Humphrey, chief medical officer. Our management team members have significant experience in oncology with previous experience at AstraZeneca, BMS, Chiron, Five Prime, Maxygen, Millennium, Novartis, SGX and other companies.

Employees

As of December 31, 2018, we had 137 full-time employees and 2 part-time employees. Of these employees, 102 were primarily engaged in research and development activities.

Corporate Information

Our operations commenced in February 2008 when our predecessor entity was formed. We were incorporated in Delaware in September 2010. We maintain our executive offices at 151 Oyster Point Blvd., Suite 400, South San Francisco, California 94080, and our main telephone number is (650) 515-3185.

We were an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012. Based on our public float at June 30, 2018, we ceased to be an emerging growth company at December 31, 2018 and, accordingly,

we are required to comply with the auditor attestation requirements of Section 404 to include an opinion from our independent registered public accounting firm on the effectiveness of our internal controls over financial reporting for our 2018 Annual Report on Form 10-K.

We view our operations and measure our business as one reportable segment operating in the United States. See Note 2 to our audited financial statement included elsewhere in this Annual Report on Form 10-K for additional information. Additional information required by this item is incorporated herein by reference to PART II. Item 6 of this Annual Report on Form 10-K.

Our research and development expenses were $103.9 million, $92.3 million and $54.8 million for the years ended December 31, 2018, 2017 and 2016, respectively. Please see “Management’s Discussion and Analysis of Financial Condition and Results of Operations-Research and Development Expenses” for additional detail regarding our research and development activities.

We maintain a website at www.cytomx.com, which contains information about us. The information in, or that can be accessed through, our website is not part of this Annual Report on Form 10-K. Our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K and amendments to those reports are available, free of charge, on or through our website as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. The SEC maintains an Internet site that contains reports, proxy and information statements and other information regarding our filings at www.sec.gov.

PART II – OTHER INFORMATION

Item 1A.Risk Factors

You should consider carefully the risks and uncertainties described below, together with all of the other information in this Annual Report on Form 10-K, including our financial statements and the related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations." If any of the following risks are realized, our business, financial condition, results of operations and prospects could be materially and adversely affected. The risks described below are not the only risks facing the Company. Risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition, results of operations and/or prospects.

Risks Related to Our Business

We are a clinical-stage biopharmaceutical company with a limited operating history and have not generated any revenue from product sales. We have a history of losses, expect to continue to incur significant losses for the foreseeable future and may never achieve or maintain profitability, which could result in a decline in the market value of our common stock.

We are a clinical-stage biopharmaceutical company with a limited operating history, developing a novel class of therapeutic antibody product candidates, based on our proprietary biologic Probody technology platform. Since our inception, we have devoted our resources to the development of Probody therapeutics. We have had significant operating losses since our inception. As of December 31, 2018, and December 31, 2017, we had an accumulated deficit of $315.0 million and $219.5 million, respectively. 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.

Though we have developed our Probody platform, our technologies and product candidates are in early stages of development, and we are subject to the risks of failure inherent in the development of product candidates based on novel technologies. We have not yet demonstrated our ability to successfully complete any clinical trials, including large-scale, pivotal clinical trials, obtain regulatory approvals, arrange for a third party to manufacture a commercial scale product candidate, or conduct sales and marketing activities necessary for successful commercialization. Typically, it takes many years to develop one product candidate from the time it enters initial preclinical studies to when it is available for treating patients. Consequently, any predictions made about our future success or viability may not be as accurate as they could be if we had a longer operating history. We will need to transition from a company with a research and development focus to a company capable of supporting commercial activities. We may not be successful in such a transition.

Furthermore, we have never generated any revenue from product sales, and have not obtained regulatory approval for any of our product candidates. We also do not expect to generate any revenue from product sales for the foreseeable future, and we expect to continue to incur significant operating losses for the foreseeable future due to the cost of research and development, preclinical studies and clinical trials and the regulatory approval process for our product candidates. We expect our net losses to increase substantially as we continue clinical development of our lead programs and advance additional programs into clinical development. In particular, we expect our losses to increase substantially as we continue to enroll patients in our ongoing Phase 1/2 clinical trials of CX-072, our candidate directed against PD-L1, CX-2009, our PDC candidate directed against CD-166, CX-2029, and our PDC candidate directed against CD71 in collaboration with AbbVie Inc., and as we advance into later trials and new trials for other programs. However, the amount of our future losses is uncertain. Our ability to achieve profitability, if ever, will depend on, among other things, our, or our collaborators, successfully developing product candidates, obtaining

regulatory approvals to market and commercialize product candidates, manufacturing any approved products on commercially reasonable terms, establishing a sales and marketing organization or suitable third-party alternatives for any approved product and raising sufficient funds to finance business activities. If we, or our collaborators, are unable to develop our technologies and commercialize one or more of our product candidates or if sales revenue from any product candidate that receives approval is insufficient, we will not achieve profitability, which could have a material and adverse effect on our business, financial condition, results of operations and prospects.

We expect that we will need to raise substantial additional funds to advance development of our product candidates and we cannot guarantee that this additional funding will be available on acceptable terms or at all. Failure to obtain this necessary capital when needed may force us to delay, limit or terminate our product development and commercialization of our current or future product candidates.

The development of biopharmaceutical product candidates is capital-intensive. To date we have used substantial funds to develop our technology and product candidates and will require significant funds to conduct our ongoing clinical trials as well as to further our research and development, preclinical testing and future clinical trials of additional product candidates, to seek regulatory approvals for our product candidates and to manufacture and market any products that are approved for commercial sale. In addition, we have incurred and will continue to incur additional costs associated with operating as a public company.

As of December 31, 2018, we had $436.1 million in cash, cash equivalents and short-term investments. We believe that our existing capital resources will be sufficient to fund our planned operations into 2021. Our future capital requirements and the period for which we expect our existing resources to support our operations may vary significantly from what we expect. Our monthly spending levels vary based on our ongoing clinical trials, new and ongoing research and development and other corporate activities. For example, we expect our monthly spending to increase substantially as we continue to enroll patients in our ongoing Phase 1/2 clinical trials of CX-072, CX-2009, and CX-2029, and as we advance into later trials and new trials for other programs. Because the length of time and activities associated with conducting our clinical trials and successfully researching and developing our product candidates is highly uncertain, we are unable to estimate the actual funds we will require for development and, once any product candidate is approved, any subsequent marketing and commercialization activities.

The timing and amount of our operating expenditures will depend largely on:

- the scope, timing and progress of our ongoing clinical trials as well as any other preclinical and clinical development activities;
- the number, size and type of clinical trials and preclinical studies that we may be required to complete for our product candidates, as well as the cost and time of such studies and trials;
- the number, scope and prioritization of preclinical and clinical programs we decide to pursue;
- the time and cost necessary to produce clinical supplies of our product candidates;
- the time and cost necessary to scale our manufacturing capabilities following regulatory approval and commercial launch of any product candidates.
- the progress of the development efforts of parties with whom we have entered or may in the future enter into collaborations and research and development agreements;
- the timing and amount of payments we may receive or are obligated to pay under our collaboration agreements and license agreements;
- our ability to maintain our current licenses and research and development programs and to establish new collaboration arrangements;
- the costs involved in prosecuting and enforcing patent and other intellectual property claims;
- the cost and timing of regulatory approvals; and
- our efforts to enhance operational systems and hire additional personnel, including personnel to support development and commercialization of our product candidates and satisfy our obligations as a public company.

If we are unable to obtain funding on a timely basis or on acceptable terms, we may have to delay, reduce or terminate our research and development programs and preclinical studies or clinical trials, limit strategic opportunities or undergo reductions in our workforce or other corporate restructuring activities. We also could be required to seek funds through arrangements with collaborators or others that may require us to relinquish rights to some of our technologies or product 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 product candidates are clinically tested, approved for commercialization and successfully marketed. To date, we have financed our operations primarily through sales of our common stock, sale of our convertible preferred securities prior to our IPO and payments received under our collaboration agreements, including, most recently, the Collaboration and License Agreement that we entered into with Amgen in September 2017. We will be required to seek additional funding in the future and currently intend to do so through additional 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.

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. We may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.

As is the case with all oncology drugs, our product candidates in clinical development or preclinical development have a high risk of failure. We commenced enrollment of our Phase 1/2 clinical trial of CX-072, our candidate directed against PD-L1, for cancer and treated our first patient in January 2017. We also initiated our Phase 1/2 clinical trial of CX-2009, our PDC candidate directed against CD-166, for cancer in June 2017, and initiated our Phase 1/2 clinical trial of CX-2029, our PDC candidate directed against CD71 in collaboration with AbbVie, for cancer in June 2018. In addition, Bristol-Myers Squibb Company ("BMS") commenced enrollment of a Phase 1/2 clinical trial for BMS-986249, a Probody therapeutic directed against CTLA-4, in 2018. It is impossible to predict when or if any of our or our partner's product candidates will prove effective and safe in humans or will receive regulatory approval. Before obtaining marketing approval from regulatory authorities for the sale of any product candidate, we or our partners must complete extensive clinical trials to demonstrate the safety and efficacy of our product candidates in humans. Commencement of clinical trials for programs beyond CX-072, CX-2009, CX-2029 and BMS-986249 is subject to finalizing the trial design and filing an IND or similar filing with the FDA or similar foreign regulatory authority. In addition, even if we file our IND or comparable submissions in other jurisdictions for these or other product candidates, the FDA or other regulatory authorities could disagree that we have satisfied their requirements to commence our clinical trials or disagree with our study design, which may require us to complete additional preclinical studies or amend our protocols or impose stricter conditions on the commencement of clinical trials and may delay our ability to begin Phase 1 clinical trials, causing an increase in the amount of time and expense required to develop our product candidates. As a result of the foregoing, the research and development, preclinical studies and clinical testing of any product candidate is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the development process.

Further, we or our collaborators may also experience delays in completing ongoing clinical trials, completing preclinical studies or initiating further clinical trials of our product candidates. We do not know whether our or our collaborators' ongoing clinical trials or preclinical studies will be completed on schedule or at all, or whether planned clinical trials or preclinical studies will begin on time, need to be redesigned, enroll patients on time or be completed on schedule, if at all. We or our collaborators may have insufficient internal resources to complete ongoing clinical trials or initiate clinical trials for our other product candidates. The development programs for our product candidates may be delayed for a variety of reasons, including delays related to:

- recruiting suitable patients to participate in a clinical trial;
- developing and validating any companion diagnostic to be used in a clinical trial;
- the FDA or other regulatory authorities requiring us to submit additional data or imposing other requirements before permitting us to initiate a clinical trial;
- obtaining regulatory clearance to commence a clinical trial;
- reaching agreement on acceptable terms with prospective contract research organization ("CROs") and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and clinical trial sites;
- obtaining institutional review board ("IRB") approval at each clinical trial site;
- having patients complete a clinical trial or return for post-treatment follow-up;
- clinical trial sites deviating from trial protocol or dropping out of a trial;
- adding new clinical trial sites;
- manufacturing our product candidates in sufficient quality and quantity for use in clinical trials; or
- collaborators electing to not pursue development and commercialization of our product candidates.

In addition, the results of preclinical studies and early clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials. Product candidates in later stages of clinical trials may fail to show the desired

safety and efficacy traits despite having progressed through preclinical studies and initial clinical trials. A number of companies in the biopharmaceutical industry have suffered significant setbacks in advanced clinical trials due to lack of efficacy or safety profiles, notwithstanding promising results in earlier trials.

Our product candidates are in early stages of development and may fail or suffer delays that materially and adversely affect their commercial viability. If we are unable to advance our product candidates through clinical development, obtain regulatory approval and ultimately commercialize such product candidates, or experience significant delays in doing so, our business will be materially harmed.

We are very early in our development efforts, with only three product candidates, CX-072, CX-2009 and CX-2029, currently in early stage clinical development. In addition, BMS is currently evaluating BMS-986249, a CTLA-4-directed Probody therapeutic in a Phase 1/2 clinical trial that it initiated in January 2018. We have no products on the market and our ability to achieve and sustain profitability depends on obtaining regulatory approvals for and successfully commercializing our product candidates, either alone or with third parties. Before obtaining regulatory approval for the commercial distribution of our product candidates, we or our collaborator must conduct extensive preclinical tests and clinical trials to demonstrate sufficient safety and efficacy of our product candidates in patients.

As a result, we may not have the financial resources to continue development of, or to modify existing or enter into new collaborations for, a product candidate if we experience any issues that delay or prevent regulatory approval of, or our ability to commercialize, product candidates, including:

- negative or inconclusive results from our clinical trials, the clinical trials of our collaborators or the clinical trials of others for product candidates similar to ours, leading to a decision or requirement to conduct additional preclinical testing or clinical trials or abandon a program;
- product-related side effects experienced by participants in our clinical trials, the clinical trials of our collaborators or by individuals using drugs or therapeutic biologics similar to our product candidates;
- delays in submitting INDs or comparable foreign applications or delays or failure in obtaining the necessary approvals from regulators to commence a clinical trial, or a suspension or termination of a clinical trial once commenced;
- conditions imposed by the FDA or comparable foreign authorities regarding the scope or design of our clinical trials;
- delays in enrolling research subjects in clinical trials;
- high drop-out rates of research subjects;
- inadequate supply or quality of product candidate components or materials or other supplies necessary for the conduct of our clinical trials or the clinical trials of our collaborators;
- greater than anticipated clinical trial costs;
- delay in the development or approval of companion diagnostic tests for our product candidates;
- unfavorable FDA or other regulatory agency inspection and review of a clinical trial site;
- failure of our third-party contractors or investigators to comply with regulatory requirements or otherwise meet their contractual obligations in a timely manner, or at all;
- delays and changes in regulatory requirements, policy and guidelines, including the imposition of additional regulatory oversight around clinical testing generally or with respect to our technology in particular; or
- varying interpretations of data by the FDA and similar foreign regulatory agencies.

We could find that the therapeutics we or our collaborators pursue are not safe or efficacious or that the safety. Further, a clinical trial may be suspended or terminated by us, our collaborators, the IRBs of the institutions in which such trials are being conducted, the Data Safety Monitoring Board for such trial or by the FDA or other regulatory authorities due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial 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 or therapeutic biologic, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. Furthermore, we expect to rely on our collaborators, CROs and clinical trial sites to ensure proper and timely conduct of our clinical trials and while we expect to enter into agreements governing their committed activities, we have limited influence over their

actual performance.

If we or our collaborators experience delays in the completion of, or termination of, any clinical trial of our product candidates, the commercial prospects of our product candidates will be harmed, and our ability to generate product revenues or receive royalties from any of these product candidates will be delayed. In addition, any delays in completing our clinical trials will increase our costs, slow down our product development and approval process and jeopardize our ability to commence product sales and generate revenues. Furthermore, if one or more of our product candidates or our Probody therapeutic technology generally prove to be ineffective, unsafe or commercially unviable, the development of our entire platform and pipeline could be delayed, potentially permanently. Any of these occurrences may materially and adversely affect our business, financial condition, results of operations and prospects. In addition, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates.

Our product candidates may cause undesirable side effects 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 product candidates could cause us, our collaborators or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or other regulatory authorities. As is the case with all oncology drugs, there may be immediate or late side effects associated with the use of our product candidates (e.g. CX-072, CX-2009and CX-2029). For example, in June 2018 we announced initial clinical data on CX-072 at the Annual Meeting of the American Society of Clinical Oncology (“ASCO”) and in February 2019 we announced updated clinical data regarding CX-072 and our first clinical data on CX-2009. While CX-072 has generally been well tolerated to date, there can be no guaranty that unexpected adverse events will not occur later in this trial or in other trials involving our product candidates or the product candidates of our collaborators. The data described at ASCO show that the administration of monotherapy CX-072 was well tolerated with the majority of treatment-related adverse events (“TRAEs”) as Grade 1/2. However, Grade 3/4 TRAEs were reported in two patients (neutropenia and thrombocytopenia in a patient with thymic cancer (3 mg/kg) and transaminase elevation in a patient with breast cancer (30 mg/kg)) but both events were successfully managed with therapeutic intervention including steroids and discontinuation of CX-072. In addition, the results showed that the administration of CX-072 in combination with ipilimumab was well tolerated with the majority of TRAEs as Grade 1/2. Of the 16 treated patients, five (31%) reported a Grade 3/4 TRAE, a rate similar to that reported previously for 3 mg/kg ipilimumab monotherapy. These events included: Grade 3 colitis (n=1), Grade 3 dyspnea/pneumonitis (n=1), Grade 3 headache/Grade 3 hyponatremia (n=1), and Grade 3 amylase/Grade 4 lipase (n=1). A Grade 3 TRAE in one patient was designated as non-treatment related post data cutoff. A dose limiting toxicity of Grade 3 dyspnea was reported in one patient. On October 22, 2018, we presented follow-up data at the 2018 Annual Meeting of the European Society of Medical Oncology in Munich, Germany. In this presentation, we also disclosed initial data on immune related adverse events (irAE) and infusion related reactions (IRR). Of the 46 patients treated, 3 (7%) developed Grade 3/4 irAEs and 2 (4%) developed Grade 3/4 IRRs. Of the 20 patients treated in the combination with ipilimumab, 2 (10%) developed Grade 3/4 irAEs and 0 (0%) developed Grade 3/4 IRRs.

In February 2019, we announced updated data on the ongoing monotherapy clinical trial for CX-072 focused on our dose expansion cohort of 10 mg/kg. While the safety data we reported at 10 mg/kg is trending toward a similar or better profile than data presented previously, that rate may change with time as more patients are enrolled in the ongoing studies. We also reported at the 10 mg/kg dose an anti-drug antibody (“ADA”) rate of approximately 62%, The rate across all dose levels, including lower dose levels in our trial, is approximately 77% at the data cutoff. We do not believe this ADA is impacting our ability to reach targeted drug exposures. However, we cannot provide assurance that it will not later limit drug exposure or cause severe adverse events.

In February 2019, we announced data on the ongoing clinical trial for CX-2009. While CX-2009 has been generally well tolerated to date, 23 / 76 (30.3%) patients experienced a Grade 3/4 TRAE. The most common adverse event

observed was ocular toxicity, an anticipated toxicity associated with the DM4 payload. Other Grade 3/4 TRAEs included liver function test abnormalities, gastrointestinal disorders and nervous system disorders. Currently, dose optimization is underway to further to inform dose selection.

The results of our future clinical trials or the clinical trials of our collaborators could reveal a high and unacceptable severity of adverse side effects and it is possible that patients enrolled in such clinical trials could respond in unexpected ways. For instance, our Phase 1/2 clinical trial of CX-072 is being conducted in patients with advanced cancers, including metastatic or locally advanced unresectable solid tumors or lymphomas, who have failed other approved therapies for their disease, and as such, it may be difficult to establish safety and efficacy in this type of patient population. In addition, certain arms of our clinical trial of CX-072 enroll patients with tumor types that are not known to be responsive to PD-L1 agents and therefore may be less likely to show effectiveness. Because certain PD-1 and PD-L1 agents are already approved for the treatment of some tumor types, we cannot test CX-072 on those tumor types and will not be able to obtain clinical information about how CX-072 acts in these tumors. Comparing safety and efficacy of CX-072 against other PD-L1 or PD-1 antibodies (either in development or in the market) may be difficult since our Phase 1/2 study is enrolling a different patient population than other studies. Furthermore, a portion of our Phase 1/2 clinical trial of CX-072 includes the administration of CX-072 in combination with Yervoy (ipilimumab) or Zelboraf (vemurafenib), which could exacerbate immune system related adverse events, cause increased toxicity or otherwise lead to unexpected adverse events. The Phase 1/2 clinical trial of

BMS-986249 being conducted by BMS includes the administration of the product candidate at relatively high dosage levels, which could further exacerbate such risks. In our Phase 1/2 clinical trials of CX-2009 and CX-2029, we are targeting CD-166 and CD71, respectively, targets that are broadly expressed on normal tissue, which could create unacceptable toxicity or fail to result in anti-tumor activity. For instance, CD71, which is a metabolic protein with high levels of expression in healthy tissues, and the consequences of targeting such protein in humans are unknown. Any future clinical trials of our product candidates could face similar or heightened risks depending on the modality.

In the event that our clinical trials or the clinical trials of our collaborators reveal these or other adverse side effects, our trials or the clinical trials of our collaborators could be suspended or terminated and the FDA or comparable foreign regulatory authorities could impose a clinical hold, order us to cease further development of or deny approval of our product candidates for any or all targeted indications. Such side effects could also affect patient recruitment or the ability of enrolled patients to complete the trial or result in potential product liability claims. In addition, any of these occurrences with respect to one of our product candidates could negatively affect our or any collaborator's ability to enroll patients and seek regulatory approval for other product candidates that we have developed using our Probody platform, which could also result in a collaborator terminating any program utilizing our Probody platform and the termination of such collaborative relationship. Any of these occurrences may materially and adversely affect our business, financial condition, results of operations and prospects. Further, clinical trials by their nature utilize a sample of the potential patient population. With a limited number of patients and limited duration of exposure, rare and severe side effects of our product candidates may only be uncovered with a significantly larger number of patients exposed to the product candidate.

In the event that any of our product candidates receives regulatory approval and we, our collaborators or others identify undesirable side effects caused by such product or any other Probody therapeutics, any of the following adverse events could occur, which could result in the loss of significant revenue to us and materially and adversely affect our results of operations and business:

- regulatory authorities may withdraw their approval of the product or seize the product;
- we or our collaborators may be required to recall the product or change the way the 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;
- we may be subject to fines, injunctions or the imposition of civil or criminal penalties;
- regulatory authorities may require the addition of labeling statements, such as a "black box" warning or a contraindication;
- we may be required to 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.

In addition, adverse side effects caused by any drugs utilizing the same or similar anti-bodies of our product candidates, or that are similar in nature to our product candidates could delay or prevent regulatory approval of our product candidates, limit the commercial profile of an approved label for our product candidates, or result in significant negative consequences following marketing approval.

We believe that any of these events could prevent us from achieving or maintaining market acceptance of our product candidates and could substantially increase the costs of commercializing our product candidates, if approved, and significantly impact our ability to successfully commercialize our product candidates and generate revenues.

If we experience delays or difficulties in the enrollment of patients in clinical trials, our receipt of necessary regulatory approvals could be delayed or prevented.

We may not be able to initiate or continue clinical trials for our product candidates if we are unable to locate and enroll a sufficient number of eligible patients to participate in these trials as required by the FDA or similar regulatory authorities outside the United States. Patient enrollment, a significant factor in the timing of clinical trials, is affected by many factors, including:

- the size and nature of the target patient population;
- the eligibility criteria for the clinical trial;
- the design of the clinical trial;
- the availability of an appropriate genomic screening test;

- the perceived risks and benefits of the product candidate under study;
- the efforts to facilitate timely enrollment in clinical trials;
- the patient referral practices of physicians;
- the ability to monitor patients adequately during and after treatment; and
- the proximity and availability of clinical trial sites for prospective patients.

In addition, competing clinical trials and clinicians' and patients' perceptions as to the potential advantages of the product candidate being studied in relation to other available therapies, including any new drugs or therapeutic biologics that may be approved for the indications we are investigating, could affect our ability to enroll a sufficient number of eligible patients in our clinical trials. For example, in our Phase 1/2 clinical trial of CX-072, which is directed against PD-L1, we are only permitted to enroll patients with cancer types for which there are no PD inhibitors available for sale. As there are currently several PD-1 and/or PD-L1 agents approved for a growing list of cancer types along with hundreds of clinical trials exploring the use of PD-1 and PD-L1 agents, there can be no assurance that patients will choose to enroll in our clinical trial. In addition, any arms of our Phase 1/2 clinical trial of CX-072 for indications with small population sizes could be particularly difficult to enroll. Furthermore, the part of our Phase 1/2 clinical trial of CX-072 in which patients are treated with the combination of CX-072 and vemurafenib can only enroll those patients who do not have access to MEK inhibitors because the emerging standard of care in jurisdictions where MEK inhibitors are available in combination with a BRAF inhibitor (such as vemurafenib), which may have an impact on enrollment in this part of the trial. Our Phase 1/2 clinical trial of CX-2009 studies patients who have one of seven specific tumor types rather than patients suffering from any cancer, which may limit the rate of enrollment of the trial. As with the clinical trials of CX-072, our Phase 1/2 clinical trials of CX-2009 and CX-2029 are also competing with hundreds of clinical trials with alternative anti-cancer drugs in a similar class (e.g. antibody drug conjugates), and certain arms of the clinical trial may be difficult to enroll due to the emerging standard of care for such indications in certain jurisdictions, including the United States. Any clinical trials of our product candidates initiated by our collaborators, including BMS' ongoing Phase 1/2 clinical trial, face similar and additional risks relating to enrollment. We or our collaborators could also encounter delays in the development of any of our product candidates if prescribing physicians encounter unresolved ethical issues associated with enrolling patients in clinical trials of our product candidates in lieu of prescribing existing treatments that have established safety and efficacy profiles. Any delays relating to patient enrollment could cause significant delays in the timing of our clinical trials or the clinical trials of our collaborators, which may materially and adversely affect our business, financial condition, results of operations and prospects.

Our approach to the discovery and development of our therapeutic treatments is based on novel technologies that are unproven and may not result in marketable products.

We plan to continue to develop a pipeline of product candidates using our proprietary Probody platform. We believe that product candidates (including cancer immunotherapies, PDCs and bispecific antibodies) identified with our product discovery platform may offer an improved therapeutic approach by taking advantage of unique conditions in the tumor microenvironment, thereby reducing the dose-limiting toxic effects associated with traditional antibody products, which can also attack healthy tissue. However, the scientific research that forms the basis of our efforts to develop product candidates based on our Probody platform is ongoing, including the research resulting from our ongoing Phase 1/2 clinical trials for CX-072, CX-2009 and CX-2029.

We may ultimately discover that our Probody platform and any product candidates resulting from it do not possess certain properties required for therapeutic effectiveness or protection from toxicity. For example, when Probody therapeutics are administered to human subjects, protease levels in tumors may not be sufficient and the peptide mask may not be cleaved, which would limit the potential efficacy of the antibody. In addition, if the peptide mask is inappropriately released, for example, due to an inflammatory disease, it may reduce the potential to limit toxicity of the anti-cancer agent or result in unforeseen events when administered in humans. Binding of the peptide mask to the antigen binding domain of the Probody may not be constant, which could lead to intermittent periods when the antigen

binding domain or antibody portion is unmasked. Furthermore, Probody product candidates may not remain stable in the human body for the period of time required for the drug to reach and to bind to the target tissue. In addition, product candidates based on our Probody platform may demonstrate different chemical and pharmacological properties in patients than they do in laboratory studies. Although our Probody platform and certain product candidates have demonstrated successful results in animal studies, they may not demonstrate the same chemical and pharmacological properties in humans and may interact with human biological systems in unforeseen, ineffective or harmful ways. Our understanding of the molecular pharmacology of Probody therapeutics, that is, the precise manner and sequence in which they are activated and behave in vivo, is incomplete. Probody therapeutics are complex biological molecules and we are evaluating the performance of this new technology in cancer patients for the first time. Many specific elements of Probody therapeutic function may contribute their overall safety and efficacy profile including, but not limited to, the removal of only one mask from the dually masked antibody, the removal of both masks from the dually masked antibody, the binding strength of masks for the underlying antibody, and the binding strength of the underlying antibody for its target. We have no direct structural evidence for how masks interact with antibodies. It may take many years before we develop a full understanding of Probody

pharmacology, and we may never know precisely how they function in vivo. As with any new biologic or product developed on a novel platform, we have a limited understanding of the immunogenicity profile of Probody therapeutics. As a result, our Probody product candidates may trigger immune responses, such as ADA, that may inhibit the ability of the antibody to reach the target tissue, inhibit the ability of the antibody to bind to its target, cause adverse side effects in humans or cause hypersensitivity reactions. For example, we reported in February 2019 that in our ongoing CX-2019 trial at the 10 mg/kg dose, the anti-drug antibody ("ADA") rate was approximately 62%. Across all dose levels, including lower dose levels in our trial, the rate is approximately 77% at the data cutoff. We do not believe ADA is impacting our ability to reach targeted drug exposures. However, we cannot provide assurance that it will not later limit drug exposure or cause severe adverse events. Problems that are specific to our Probody platform may have an unfavorable impact on all of our product candidates. As a result, we may never succeed in developing a marketable product and we may never become profitable, which would cause the value of our common stock to decline.

In addition, the scientific evidence to support the feasibility of developing product candidates against novel, difficult to drug targets, is both preliminary and limited. For example, our understanding of the expression of CD166 in both healthy and diseased tissues is still developing. As a result, we cannot provide any assurance that we will be able to successfully identify and advance any product candidates to target novel, difficult to drug targets.

We believe the only clinical experience that the FDA and foreign regulatory authorities have with Probody-based therapeutics in oncology comes from CX-072, CX-2009, CX-2029 and BMS-986249. We believe that the FDA and foreign regulatory authorities, have no clinical experience in other disease areas, and such limited experience may increase the complexity, uncertainty and length of the regulatory approval process for our product candidates and may keep us from commencing first-in-human trials in certain countries. As there is limited historical precedent for the regulatory clearance of Probody-based therapeutics in oncology, there is a higher degree of risk that the FDA or other regulatory authorities could disagree that we or our collaborators have satisfied their requirements to commence clinical trials for some product candidates or disagree with our study designs, which may require us to complete additional preclinical studies or amend our protocols or impose stricter conditions on the commencement of clinical trials. In addition, local clinical practice in other countries may affect whether we or our collaborators are able to initiate a clinical trial there. As a result, we and our collaborators may never receive approval to market and commercialize any product candidate. Even if we or our collaborators obtain regulatory approval, the approval may be for targets, disease indications or patient populations that are not as broad as we or they intended or desired or may require labeling that includes significant use or distribution restrictions or safety warnings. We or our collaborators may be required to perform additional or unanticipated clinical trials to obtain approval or be subject to post-marketing testing requirements to maintain regulatory approval. If one or more of our product candidates or our Probody 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.

The market may not be receptive to our product candidates based on a novel therapeutic modality, and we may not generate any future revenue from the sale or licensing of product candidates.

Even if regulatory approval is obtained for a product candidate, we may not generate or sustain revenue from sales of the product due to factors such as whether the product can be sold at a competitive cost and whether it will otherwise be accepted in the market. The product candidates that we are developing are based on our Probody platform, which is a new technology and therapeutic approach. Market participants with significant influence over acceptance of new treatments, such as physicians and third-party payors, may not adopt a product or treatment based on our Probody platform and technologies, and we may not be able to convince the medical community and third-party payors to accept and use, or to provide favorable reimbursement for, any product candidates developed by us or our collaborators. This may be particularly true for any of our product candidates (including CX-072and BMS-986249)

for which there are existing approved therapies, such as approved agents targeting PD-L1, PD-1, or CTLA-4. Market acceptance of our product candidates will depend on, among other factors:

- the timing of our receipt of any marketing and commercialization approvals;
- the terms of any approvals and the countries in which approvals are obtained;
- the safety and efficacy of our product candidates, including those being developed by our collaborators;
- the prevalence and severity of any adverse side effects associated with our product candidates;
- limitations or warnings contained in any labeling approved by the FDA or other regulatory authority;
- the availability of effective companion diagnostics;
- relative convenience and ease of administration of our product candidates;

- the willingness of patients to accept any new methods of administration;
- the success of our physician education programs;
- the availability of adequate government and third-party payor reimbursement;
- the pricing of our products, particularly as compared to alternative treatments; and
- the availability of alternative effective treatments for the disease indications our product candidates are intended to treat and the relative risks, benefits and costs of those treatments.

If any product candidate we commercialize fails to achieve market acceptance, it could have a material and adverse effect on our business, financial condition, results of operations and prospects.

We have entered, and may in the future seek to enter, into collaborations with third parties for the development and commercialization of our product candidates using our Probody platform. If we fail to enter into such collaborations, or such collaborations are not successful, we may not be able to capitalize on the market potential of our Probody platform and resulting product candidates.

Since 2013, we have entered into collaborations with AbbVie, Amgen, BMS, ImmunoGen and Pfizer and others to develop certain Probody therapeutics. We may in the future seek third-party collaborators for development and commercialization of other therapeutic technologies or product candidates. Biopharmaceutical companies are our prior and likely future collaborators for any marketing, distribution, development, licensing or broader collaboration arrangements. With respect to our existing collaboration agreements, and what we expect will be the case with any future collaboration agreements, we have and would expect to have limited control over whether such collaborations pursue the development of our product candidates or the amount and timing of resources that such collaborators dedicate to the development or commercialization of our product candidates. For instance, in March 2018, Pfizer terminated the collaboration agreement we had entered into with them in May 2013. Such collaboration agreement had entitled Pfizer to nominate up to four research targets and since 2013, we had collaborated with Pfizer on three of such targets. However, no program was ever advanced beyond the lead optimization stage pursuant to the agreement, and Pfizer had previously elected not to select a fourth target and had decided to discontinue its epidermal growth factor receptor Probody Drug Conjugate. In July 2017, ImmunoGen discontinued the preclinical evaluation of one of its two programs being developed under our collaboration and in January 2019, BMS terminated its programs for three targets it had selected under our agreement with them. As a result, there can be no assurances that any of the programs covered by our existing or future collaborations will be developed further. Further, our ability to generate revenues from our existing and future arrangements will depend on our collaborators' abilities to successfully perform the functions assigned to them in these arrangements. Additionally, some of our collaborations may require us to share in certain development and commercialization expenses. If we cannot afford to share such expenses when required, our rights under such collaborations may be adversely affected, including potentially that our collaborator may terminate the relevant agreement.

Overall, collaborations involving our product candidates currently pose, and will continue to pose, the following risks to us:

- collaborators have significant discretion in determining the amount and timing of efforts and resources that they will apply to these collaborations, including, with respect to BMS, BMS-986249;
- collaborators may not pursue development and commercialization of our product candidates or may elect not to continue or renew development or commercialization programs based on preclinical or clinical trial results, changes in the collaborators' strategic focus or available funding or resources, or external factors such as an acquisition that diverts resources or creates competing priorities;
- collaborators have significant discretion in designing any clinical trials they operate pursuant to our collaboration agreements, including BMS' ongoing Phase 1/2 clinical trial of BMS-986249, and may release data from such clinical trials, including with respect to our Probody therapeutics, without consulting us;
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collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing and are not necessarily required to give us information about their clinical data;

- collaborators may independently develop, or develop with third parties, products that compete directly or indirectly with our product candidate if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- collaborators with marketing and distribution rights to one or more products may not commit sufficient resources to the marketing and distribution of such product or products;

- collaborators may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to litigation or potential liability;
- collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability;
- disputes may arise between the collaborators and us that result in the delay or termination of the research, development or commercialization of our product candidate or that result in costly litigation or arbitration that diverts management attention and resources; and
- collaborations may be terminated and, if terminated, may result in a need for additional capital to pursue further development or commercialization of the applicable product candidates.

As a result of the foregoing, our current and any future collaboration agreements may not lead to development or commercialization of our product candidates in the most efficient manner or at all and may not result in the realization of the benefits we expected to achieve upon our entry into such agreements. Any failure to successfully develop or commercialize our product candidates pursuant to our current or any future collaboration agreements could have a material and adverse effect on our business, financial condition, results of operations and prospects.

If our collaborators cease development efforts under our collaboration agreements, or if any of those agreements are terminated, these collaborations may fail to lead to commercial products and we may never receive milestone payments or future royalties under these agreements.

Substantially all of our revenue to date has been derived from our existing collaboration agreements, including, most recently, the Amgen Agreement that we entered into with Amgen in September 2017, and a significant portion of our future revenue and cash resources is expected to be derived from these agreements or other similar agreements we may enter into in the future. Revenue from research and development collaborations depend upon continuation of the collaborations, reimbursement of development costs, the achievement of milestones and royalties, if any, derived from future products developed from our research. If we are unable to successfully advance the development of our product candidates or achieve milestones, revenue and cash resources from milestone payments under our collaboration agreements will be substantially less than expected.

In addition, to the extent that any of our collaborators were to terminate a collaboration agreement, we may decide to independently develop these product candidates to the extent we retain development rights. Such development could include funding preclinical or clinical trials, assuming marketing and distribution costs and defending intellectual property rights. Alternatively, in certain instances, we may choose to abandon product candidates altogether. For instance, in March 2018, Pfizer terminated the collaboration agreement we had entered into with them in May 2013, and in January 2019, BMS terminated its programs for three targets it had selected under our agreement with them. Any of the foregoing could result in a change to our business plan and have a material adverse effect on our business, financial condition, results of operations and prospects. If a collaboration is terminated, we would not be eligible to receive the milestone, royalty or other payments that would have been payable under the collaboration agreement.

If we do not achieve our projected development and commercialization goals in the timeframes we announce and expect, the commercialization of any of our product candidates may be delayed, and our business will be harmed.

For planning purposes, we sometimes estimate the timing of the accomplishment of various scientific, clinical, regulatory and other product development objectives. These milestones may include our expectations regarding the commencement or completion of scientific studies and clinical trials, the submission of regulatory filings, or commercialization objectives. From time to time, we may publicly announce the expected timing of some of these milestones, such as the completion of an ongoing clinical trial, the initiation of other clinical programs, receipt of marketing approval, or a commercial launch of a product. The achievement of many of these milestones may be outside of our control. All of these milestones are based on a variety of assumptions which may cause the timing of

achievement of the milestones to vary considerably from our estimates, including:

- our available capital resources or capital constraints we experience;
- the rate of progress, costs and results of our clinical trials and research and development activities, including the extent of scheduling conflicts with participating clinicians and collaborators;
- our ability to identify and enroll patients who meet clinical trial eligibility criteria;
- our receipt of approvals by the FDA and other regulatory authorities and the timing thereof;
- other actions, decisions or rules issued by regulators;

- our ability to access sufficient, reliable and affordable supplies of materials used in the manufacture of our product candidates;
- our ability to manufacture and supply clinical trial materials to our clinical sites on a timely basis;
- the efforts of our collaborators with respect to the commercialization of our products; and
- the securing of, costs related to, and timing issues associated with, product manufacturing as well as sales and marketing activities.

If we fail to achieve announced milestones in the timeframes we expect, the commercialization of any of our product candidates may be delayed, and our business and results of operations may be harmed.

We may not successfully engage in strategic transactions, including any additional collaborations we seek, which could adversely affect our ability to develop and commercialize product candidates, impact our cash position, increase our expense and present significant distractions to our management.

Since commencing operations, we have entered into several collaboration agreements, including, most recently, the Amgen Agreement that we entered into with Amgen in September 2017. From time to time, we may consider strategic transactions, such as additional collaborations, acquisitions of companies, asset purchases and out- or in-licensing of product candidates or technologies. In particular, we will evaluate and, if strategically attractive, seek to enter into additional collaborations, including with major biotechnology or biopharmaceutical companies. The competition for collaborators is intense, and the negotiation process is time-consuming and complex. Any new collaboration may be on terms that are not optimal for us, and we may not be able to maintain any new collaboration if, for example, development or approval of a product candidate is delayed, sales of an approved product candidate do not meet expectations or the collaborator terminates the collaboration. Any such collaboration, or other strategic transaction, may require us to incur non-recurring or other charges, increase our near- and long-term expenditures and pose significant integration or implementation challenges or disrupt our management or business. These transactions would entail numerous operational and financial risks, including exposure to unknown liabilities, disruption of our business and diversion of our management's time and attention in order to manage a collaboration or develop acquired products, product candidates or technologies, incurrence of substantial debt or dilutive issuances of equity securities to pay transaction consideration or costs, higher than expected collaboration, acquisition or integration costs, write-downs of assets or goodwill or impairment charges, increased amortization expenses, difficulty and cost in facilitating the collaboration or combining the operations and personnel of any acquired business, impairment of relationships with key suppliers, manufacturers or customers of any acquired business due to changes in management and ownership and the inability to retain key employees of any acquired business. Accordingly, although there can be no assurance that we will undertake or successfully complete any transactions of the nature described above, any transactions that we do complete may be subject to the foregoing or other risks and have a material and adverse effect on our business, financial condition, results of operations and prospects. The termination by a collaborator of a collaboration may cause a decrease in the price of our stock. Conversely, any failure to enter any additional collaboration or other strategic transaction that would be beneficial to us could delay the development and potential commercialization of our product candidates and have a negative impact on the competitiveness of any product candidate that reaches market.

If we are unable to successfully develop companion diagnostic tests for certain of our product candidates, or experience significant delays in doing so, we may not realize the full commercial potential of our product candidates.

Because we are focused on precision medicine, in which predictive biomarkers will be used to identify the right patients for our product candidates, we believe that our success may depend, in part, on the development of companion diagnostic tests. To successfully develop a companion diagnostic test, we would need to address a number of scientific, technical and logistical challenges. However, we have little experience in the development of companion diagnostic tests and may not be successful in developing appropriate tests to pair with any of our product candidates. Companion diagnostic tests are subject to regulation by the FDA and similar regulatory authorities outside the United

States as medical devices and require separate regulatory approval prior to commercialization. Given our limited experience in developing companion diagnostic tests, we could seek to rely on third parties to design, manufacture, obtain regulatory approval for any companion diagnostic tests for our product candidates. However, we and such collaborators may encounter difficulties in developing and obtaining approval for the companion diagnostic tests, including issues relating to selectivity/specificity, analytical validation, reproducibility, or clinical validation. Any delay or failure by us or our collaborators to develop or obtain regulatory approval of the companion diagnostic tests could delay or prevent approval of our product candidates. As a result, our business would be harmed, possibly materially.

We rely on third parties to conduct all of our clinical trials and certain of our preclinical studies and intend to continue to do so, and if such third parties do not perform as contractually required, fail to satisfy regulatory or legal requirements or miss expected deadlines, our development programs could be delayed with material and adverse effects on our business, financial condition, results of operations and prospects.

We do not have the ability to independently conduct clinical trials. As such, we currently rely and intend to continue to rely on third-party clinical investigators, CROs, clinical data management organizations and consultants to help us design, conduct, supervise and monitor clinical trials of our product candidates. As a result, we will have less control over the timing, quality and other aspects of our clinical trials than we would have had we conducted them on our own. These investigators, CROs and consultants are not our employees and we have limited control over the amount of time and resources that they dedicate to our programs. These third parties may have contractual relationships with other entities, some of which may be our competitors, which may draw time and resources from our programs. The third parties with which we contract might not be diligent, careful or timely in conducting our preclinical studies or clinical trials, resulting in the preclinical studies or clinical trials being delayed or unsuccessful.

If we cannot contract with acceptable third parties on commercially reasonable terms, or at all, or if these third parties do not carry out their contractual duties, satisfy legal and regulatory requirements for the conduct of preclinical studies or clinical trials or meet expected deadlines, our clinical development programs could be delayed and otherwise adversely affected. In all events, we will be responsible for ensuring that each of our preclinical studies and clinical trials are conducted in accordance with the general investigational plan and protocols for the trial. The FDA requires preclinical studies to be conducted in accordance with good laboratory practices ("GLPs") and clinical trials to be conducted in accordance with good clinical practices ("GCPs"), including for designing, conducting, recording and reporting the results of preclinical studies and clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of clinical trial participants are protected. Our reliance on third parties that we do not control will not relieve us of these responsibilities and requirements. Any adverse development or delay in our clinical trials could have a material and adverse effect on our business, financial condition, results of operations and prospects.

Because we have no long term contracts with and rely on third-party manufacturing and supply partners, most of which are sole source suppliers, our supply of research and development, preclinical and clinical development materials may become limited or interrupted or may not be of satisfactory quantity or quality.

We rely on third-party contract manufacturers to manufacture our clinical trial and preclinical study product supplies. Most of our clinical trial manufacturing contractors and suppliers are our sole source for their respective manufacturing and supplies. Failure of any of these contractors could put our ability to have clinical trial material available when needed. This could result in a substantial delay of our clinical trials. For example, for each of CX-072 CX-2009 and CX-2029, our manufacturing supply chain includes several contract manufacturers, and failure by any of these manufacturers could result in interruptions of our clinical studies. We do not own manufacturing facilities for producing such supplies and do not have any long term contracts and we do not currently have an alternative to any of our third-party contract manufacturers. There can be no assurance that our preclinical and clinical development product supplies will not be limited, interrupted, or of satisfactory quality or continue to be available at acceptable prices. In particular, any replacement of any of our third-party contract manufacturers could require significant effort and expertise because there may be a limited number of qualified replacements. In addition, we may encounter issues with transferring technology to a new third-party manufacturer, and we may encounter regulatory delays if we need to move the manufacturing of our products from one third-party manufacturer to another. For example, we were dependent on ImmunoGen under our collaboration for certain steps in the manufacturing of clinical quantities of CX-2009. At the end of 2018, ImmunoGen closed their clinical manufacturing facility in Norwood, MA. This site provided clinical manufacturing support for the CX-2009 program. We have initiated the transfer of the drug substance manufacturing process from ImmunoGen to CMO, where we have an existing relationship and which has

expertise in the manufacture of antibody drug conjugates at a clinical and commercial scale. To date, the manufacturing transfer process is still ongoing and has not yet been completed. However, there can be no assurances that we will not experience a disruption to the supply of CX-2009 in connection with such transfer or that the transfer will be successful.

The manufacturing process for a product candidate is subject to FDA and foreign regulatory authority review. Suppliers and manufacturers must meet applicable manufacturing requirements and undergo rigorous facility and process validation tests required by regulatory authorities in order to comply with regulatory standards, such as current Good Manufacturing Practices ("cGMPs"). In the event that any of our manufacturers fails to comply with such requirements or to perform its obligations to us in relation to quality, timing or otherwise, or if our supply of components or other materials becomes limited or interrupted for other reasons, such as one of our manufacturers going out of business, we may be forced to manufacture the materials ourselves, for which we currently do not have the capabilities or resources, or enter into an agreement with another third party, which we may not be able to do on reasonable terms, if at all. In some cases, the technical skills or technology required to manufacture our product candidates may be unique or proprietary to the original manufacturer and we may have difficulty transferring such skills or technology to another third party and a feasible alternative may not exist. These factors would increase our reliance on such manufacturer or require us to obtain a license from such manufacturer in order to have another third party manufacture our product candidates. If we are required to change manufacturers for any reason, we will be required to verify that the new manufacturer maintains facilities and procedures that comply with quality standards and with all applicable regulations and guidelines. The delays associated with the verification of a new manufacturer could negatively affect our ability to develop product candidates in a timely manner or within budget.

We expect to continue to rely on third-party manufacturers if we receive regulatory approval for any product candidate. To the extent that we have existing, or enter into future, manufacturing arrangements with third parties, we will depend on these third parties to perform their obligations in a timely manner consistent with contractual and regulatory requirements, including those related to quality control and assurance. If we are unable to obtain or maintain third-party manufacturing for product candidates, or to do so on commercially reasonable terms, we may not be able to develop and commercialize our product candidates successfully. We may find that our third-party manufacturer is unable to scale up the process in order to produce commercial quantities of our products. Our or a third party's failure to execute on our manufacturing requirements and comply with cGMPs could adversely affect our business in a number of ways, including:

- an inability to initiate or continue clinical trials of product candidates under development;
- delay in submitting regulatory applications, or receiving regulatory approvals, for product candidates;
- loss of the cooperation of a collaborator;
- subjecting third-party manufacturing facilities or our manufacturing facilities to additional inspections by regulatory authorities;
- requirements to cease distribution or to recall batches of our product candidates; and
- in the event of approval to market and commercialize a product candidate, an inability to meet commercial demands for our products.

The supply chain for the manufacturing of our product candidates is complicated and can involve many parties. This is especially the case for our clinical stage Probody Drug Conjugates, CX-2009 and CX-2029. If we were to experience any supply chain issues, our product supply could be seriously disrupted. In addition, we expect the logistical challenges associated with our supply chain to grow more complex as additional product candidates commence any clinical trials.

We, or third-party manufacturers, may be unable to successfully scale-up manufacturing of our product candidates in sufficient quality and quantity, which would delay or prevent us from developing our product candidates and commercializing approved products, if any.

It may prove more challenging than we anticipate to manufacture products that incorporate our Probody therapeutic technology. In order to conduct clinical trials of our product candidates, including our Phase 1/2 clinical trials for CX-072, CX-2009 and CX-2029, we will need to manufacture them in large quantities. To date we have been able to successfully manufacture CX-072, CX-2009 and CX-2029 for our ongoing early stage clinical trials. However, in order to conduct later stage clinical trials of our product candidates, including CX-072, CX-2009 and CX-2029, and eventually, if approved, commercial products, we will need to manufacture them in larger quantities. We, or any manufacturing partners, may be unable to successfully increase the manufacturing scale and capacity for any of our product candidates in a timely or cost-effective manner, or at all. For example, we are currently working with our CMOs to change our manufacturing processes and formulations as well as scaling up for larger drug manufacturing capability and to increase the term of stability for CX-072 drug product for late stage clinical trials and commercialization. However, we may have to start late stage trials with our early clinical trial drug product and switch to late stage or commercial drug product mid trial. In such event, the FDA will require us to complete bridging studies to compare the earlier stage material with late stage or commercial material to assure comparability between the earlier trial material and the late stage or commercial material. Changing formulation and scale up process is a complicated and difficult task. While we believe we can complete this process successfully, there can be no assurances that the changes we make to the drug product and manufacturing process will be successful or completed in a timely manner or that the FDA will not require additional development steps or studies from those we believe are necessary. If we are not able to scale up our manufacturing capabilities with respect to CX-072 or any of our other product candidates, increase the life of drug stability of CX-072 or such other product candidates, or successfully complete the FDA's bridging requirements, we may not be able to successfully obtain FDA approval and commercialize CX-072 or such other product candidates in a timely manner or at all.

Additionally, we were dependent on ImmunoGen under our collaboration for certain steps in the manufacturing of clinical quantities of CX-2009. At the end of 2018, ImmunoGen closed their clinical manufacturing facility in Norwood, Massachusetts, which provided clinical manufacturing support for the CX-2009 program. We have initiated the transfer of the drug substance manufacturing process from ImmunoGen to a contract manufacturer, where we have an existing relationship and with expertise in the manufacture of antibody drug conjugates at a clinical and commercial scale. However, there can be no assurances that we will not experience a disruption to the supply of CX-2009 in connection with such transfer. To date, the manufacturing transfer process is still ongoing and has not yet been completed. In addition, for CX-2029, the manufacturing of additional clinical quantities could be particularly difficult because we are relying on three different parties to manufacture supplies. If we, or any manufacturing partners, are unable to successfully scale up the manufacture of our product candidates in sufficient quality and quantity, the development, testing, and clinical trials of that product candidate may be delayed or infeasible, and regulatory approval or commercial launch of any resulting product may be delayed or not obtained, which could significantly harm our business.

We may acquire assets or form strategic alliances in the future, and we may not realize the benefits of such acquisitions.

As we continue to mature our Probody platform and our clinical stage pipeline, we may seek to acquire and/or in-license other oncology products, product candidates, programs or companies that we consider complimentary to our efforts. Such efforts may never result in a transaction and any future growth through acquisition or in-licensing will depend upon the availability of suitable products, product candidates, programs or companies for acquisition or in-licensing on acceptable prices, terms and conditions. Even if appropriate opportunities are available, we may not be able to acquire rights to them on acceptable terms, or at all. The competition to acquire or in-license rights to promising products, product candidates, programs and companies is fierce, and many of our competitors are large, multinational pharmaceutical and biotechnology companies with considerably more financial, development and commercialization resources, personnel, and experience than we have. In order to compete successfully in the current business climate, we may have to pay higher prices for assets than may have been paid historically, which may make it more difficult for us to realize an adequate return on any acquisition. In addition, even if we succeed in identifying promising products, product candidates, programs or companies, we may not have the ability to develop, obtain regulatory approval for and commercialize such opportunities, or the financial resources necessary to pursue them.

Even if we are able to successfully identify and acquire or in-license new products, product candidates, programs or companies, we may not be able to successfully manage the risks associated with integrating any products, product candidates, programs or companies into our business or the risks arising from anticipated and unanticipated problems in connection with an acquisition or in-licensing. Further, while we seek to mitigate risks and liabilities of potential acquisitions through, among other things, due diligence, there may be risks and liabilities that such due diligence efforts fail to discover, that are not disclosed to us, or that we inadequately assess. Any failure in identifying and managing these risks and uncertainties effectively would have a material adverse effect on our business. In any event, we may not be able to realize the anticipated benefits of any acquisition or in-licensing for a variety of reasons, including the possibility that a product candidate fails to advance to clinical development, proves not to be safe or effective in clinical trials, or fails to reach its forecasted commercial potential or that the integration of a product, product candidate, program or company gives rise to unforeseen difficulties and expenditures. Any failure in identifying and managing these risks and uncertainties would have a material adverse effect on our business.

In addition, acquisitions create other uncertainties and risks, particularly when the acquisition takes the form of a merger or other business consolidation. We may encounter unexpected difficulties, or incur unexpected costs, in connection with transition activities and integration efforts, which include:

- high acquisition costs;
- the need to incur substantial debt or engage in dilutive issuances of equity securities to pay for acquisitions;
- the potential disruption of our historical business and our activities under our collaboration agreements;
- the strain on, and need to expand, our existing operational, technical, financial and administrative infrastructure;
- our lack of experience in late-stage product development and commercialization;
- the difficulties in assimilating employees and corporate cultures;
- the difficulties in hiring qualified personnel and establishing necessary development and/or commercialization capabilities;
- the failure to retain key management and other personnel;
- the challenges in controlling additional costs and expenses in connection with and as a result of the acquisition;
- the need to write down assets or recognize impairment charges;
- the diversion of our management’s attention to integration of operations and corporate and administrative infrastructures; and

- any unanticipated liabilities for activities of or related to the acquired business or its operations, products or product candidates.

If we fail to integrate or otherwise manage an acquired business successfully and in a timely manner, resulting operating inefficiencies could increase our costs more than we planned, could negatively impact the market price of our common stock and could otherwise distract us from execution of our strategy. Failure to maintain effective financial controls and reporting systems and procedures could also impact our ability to produce timely and accurate financial statements.

We may expend our limited resources to pursue a particular product candidate and fail to capitalize on product candidates that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial and managerial resources, we focus on specific product candidates, including CX-072, CX-2009 and CX-2029. As a result, we may forgo or delay pursuit of opportunities with other product candidates that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs and product candidates for specific indications may not yield any commercially viable product candidates. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate.

We may experience difficulties in managing our growth and expanding our operations successfully.

We will need to grow our organization substantially to continue development and pursue the potential commercialization of CX-072, CX-2009 and CX-2029 and our other product candidates, as well as function as a public company. As we increase the number of our product candidates entering and advancing through preclinical studies and clinical trials, we will need to expand our development, regulatory and manufacturing capabilities or contract with additional organizations to provide these capabilities for us. In addition, we expect our collaborations to require greater resources as the development of our product candidates under such agreements progresses. In the future, we expect to also have to manage additional relationships with collaborators or partners, suppliers and other organizations. In particular, if the third-parties on which we currently rely are not capable of delivering services or supplies in a manner that is sufficient to meet our requirements as we expand our operations, we could be required to contract with new third parties and there can be no assurances that the services or supplies of such third parties will be available on commercially reasonable terms, or at all. Furthermore, our ability to manage our operations and future growth will require us to continue to increase headcount as well as improve our operational, financial and management controls, reporting systems and procedures. We may not be able to implement improvements to our management information and control systems in an efficient or timely manner and may discover deficiencies in existing systems and controls.

We face competition from entities that have developed or may develop product candidates for cancer, including companies developing novel treatments and technology platforms. If these companies develop technologies or product candidates more rapidly than we do or their technologies are more effective, our ability to develop and successfully commercialize product candidates may be adversely affected.

The development and commercialization of drugs and therapeutic biologics is highly competitive. We compete with a variety of multinational biopharmaceutical companies and specialized biotechnology companies, as well as technology being developed at universities and other research institutions. Our competitors have developed, are developing or will develop product candidates and processes competitive with our product candidates. Competitive therapeutic treatments include those that have already been approved and accepted by the medical community and any new treatments that enter the market. We believe that a significant number of products are currently under development, and may become commercially available in the future, for the treatment of conditions for which we may try to develop product candidates. For instance, there is intense and rapidly evolving competition in the biotechnology, biopharmaceutical and antibody and immunoregulatory therapeutics fields, and our competitors include larger and better funded biopharmaceutical, biotechnological and therapeutics companies. In addition, these companies compete with us in recruiting scientific and managerial talent.

We believe that while our Probody platform, its associated intellectual property and our scientific and technical know-how, give us a competitive advantage in this space, competition from many sources remains. The clinical development pipeline for cancer includes small molecules, antibodies and therapies from a variety of groups. In addition, numerous compounds are in clinical development for cancer treatment. As a result, our success will partially depend on our ability to develop and protect therapeutics that are safer and more effective than competing products. Our commercial opportunity and success will be reduced or eliminated if competing products that are safer, more effective, or less expensive than the therapeutics we develop or if we are unable to utilize our Probody therapeutic technology to differentiate our Probody therapeutics from the products of our competitors. For instance, if any of our lead product candidates, including CX-072, CX-2009 and CX-2029 are approved, they will compete with a range of therapeutic treatments that are either in development or currently marketed. A variety of oncology drugs and therapeutic biologics are currently on the market or in clinical development. The market for immunotherapies like CX-072 is, in particular, highly competitive and the field is changing quickly. Given the amount of time required to successfully develop and obtain regulatory approval for each of our product candidates, it is therefore possible that by the time we obtain any such approval, if ever, and commence sales, we may no longer be able to differentiate such product candidate from those of our competitors.

We face substantial competition from pharmaceutical companies developing products in immuno-oncology, including companies, such as Amgen, AstraZeneca PLC, BMS, Celgene, GlaxoSmithKline plc, Merck & Co., Inc. Novartis AG, Pfizer, Roche Holding Ltd. and Sanofi SA. Many large and mid-sized biotech companies, including BeiGene, Incyte, TESARO, Inc., Nektar, and Alkermes have ongoing efforts in cancer immunotherapy. Finally, numerous small companies are also working in the space. Several companies, including Akriveia, Amgen, Amunix, BioAtla, Halozyme, Maverick Therapeutics, Pandion Therapeutics, Revitope, Roche, and Seattle Genetics are exploring antibody masking and/or conditional activation strategies, which could compete with our Probody Platform. We are also aware of several companies that are developing ADCs, such as AbbVie, Immunomedics, Pfizer, Roche Holding Ltd. And Takeda. In addition, two mid-sized companies, ImmunoGen and Seattle Genetics, Inc. are also leaders in the development of ADCs and we are aware of numerous small companies with ongoing efforts in this field. Furthermore, several large pharmaceutical companies, including Amgen, Novartis AG and Roche Holding Ltd., are developing T-cell engaging immunotherapies, and we are aware of several mid-sized biotech companies, such as Macrogenics and Xencor, and small companies with ongoing efforts to develop T-cell engaging immunotherapies. Any of these companies may be well-capitalized and may have significant clinical experience. In addition, these companies include our collaborators.

Many of our competitors have significantly greater financial, technical, manufacturing, marketing, sales and supply resources or experience than we do. If we successfully obtain approval for any product candidate, we will face competition based on many different factors, including the safety and effectiveness of our products, the ease with which our products can be administered and the extent to which patients accept relatively new routes of administration, the timing and scope of regulatory approvals for these products, the availability and cost of manufacturing, marketing and sales capabilities, price, reimbursement coverage and patent position. Competing products could present superior treatment alternatives, including by being more effective, safer, less expensive or marketed and sold more effectively than any products we may develop. Competitive products may make any products we develop less differentiated or noncompetitive before we recover the expense of developing and commercializing our product candidates. Such competitors could also recruit our employees, which could negatively impact our level of expertise and our ability to execute our business plan.

Any inability to attract and retain qualified key management and technical personnel would impair our ability to implement our business plan.

Our success largely depends on the continued service of key management, advisors and other specialized personnel, including Sean A. McCarthy, D.Phil., our president and chief executive officer, W. Michael Kavanaugh, M.D., our chief scientific officer and Rachel W. Humphrey, M.D., our chief medical officer. The loss of one or more members of our management team or other key employees or advisors could delay our research and development programs and have a material and adverse effect on our business, financial condition, results of operations and prospects. The relationships that our key managers have cultivated within our industry make us particularly dependent upon their continued employment with us. We are dependent on the continued service of our technical personnel because of the highly technical nature of our product candidates and technologies and the specialized nature of the regulatory approval process. Because our management team and key employees are not obligated to provide us with continued service, they could terminate their employment with us at any time without penalty. Our future success will depend in large part on our continued ability to attract and retain other highly qualified scientific, technical and management personnel, as well as personnel with expertise in clinical testing, manufacturing, governmental regulation and commercialization. We face competition for personnel from other companies, universities, public and private research institutions, government entities and other organizations, especially as job opportunities in the biotechnology industry have recently increased significantly in the San Francisco Bay Area.

If any of our product candidates are approved for marketing and commercialization and we are unable to develop sales, marketing and distribution capabilities on our own or enter into agreements with third parties to perform these

functions on acceptable terms, we will be unable to commercialize successfully any such future products.

We currently have no sales, marketing or distribution capabilities or experience. If any of our product candidates is approved, we will need to develop internal sales, marketing and distribution capabilities to commercialize such products, which would be expensive and time-consuming, or enter into collaborations with third parties to perform these services. If we decide to market our products directly, we will need to commit significant financial and managerial resources to develop a marketing and sales force with technical expertise and supporting distribution, administration and compliance capabilities. If we rely on third parties with such capabilities to market our products or decide to co-promote products with collaborators, we will need to establish and maintain marketing and distribution arrangements with third parties, and there can be no assurance that we will be able to enter into such arrangements on acceptable terms or at all. In entering into third-party marketing or distribution arrangements, any revenue we receive will depend upon the efforts of the third parties and there can be no assurance that such third parties will establish adequate sales and distribution capabilities or be successful in gaining market acceptance of any approved product. If we are not successful in commercializing any product approved in the future, either on our own or through third parties, our business, financial condition, results of operations and prospects could be materially and adversely affected.

Our future growth may depend, in part, on our ability to operate in foreign markets, where we would be subject to additional regulatory burdens and other risks and uncertainties.

Our future growth may depend, in part, on our ability to develop and commercialize our product candidates in foreign markets for which we may rely on collaboration with third parties. We are not permitted to market or promote any of our product candidates before we receive regulatory approval from the applicable regulatory authority in that foreign market, and we may never receive such regulatory approval for any of our product candidates. To obtain separate regulatory approval in many other countries we must comply with numerous and varying regulatory requirements of such countries regarding safety and efficacy and governing, among other things, clinical trials and commercial sales, pricing and distribution of our product candidates, and we cannot predict success in these jurisdictions. If we obtain approval of our product candidates and ultimately commercialize our product candidates in foreign markets, we would be subject to the risks and uncertainties, including the burden of complying with complex and changing foreign regulatory, tax, accounting and legal requirements and the reduced protection of intellectual property rights in some foreign countries. We may need to rely on third parties to market, distribute and sell our products in foreign markets.

Price controls imposed in foreign markets may adversely affect our future profitability.

In some countries, particularly member states of the European Union, the pricing of prescription drugs is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after receipt of marketing approval for a product. In addition, there can be considerable pressure by governments and other stakeholders on prices and reimbursement levels, including as part of cost containment measures. Political, economic and regulatory developments may further complicate pricing negotiations, and pricing negotiations may continue after reimbursement has been obtained. Reference pricing used by various European Union member states and parallel distribution, or arbitrage between low-priced and high-priced member states, can further reduce prices. In some countries, we or future collaborators may be required to conduct a clinical trial or other studies that compare the cost-effectiveness of our Probody therapeutic candidates to other available therapies in order to obtain or maintain reimbursement or pricing approval. Publication of discounts by third-party payors or authorities may lead to further pressure on the prices or reimbursement levels within the country of publication and other countries. If reimbursement of any product candidate approved for marketing is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our business, financial condition, results of operations or prospects could be materially and adversely affected. We currently do not know how the exit of the United Kingdom from the European Union will affect the pricing of prescription drugs, either in the United Kingdom or in the remaining European Union member states.

Our business entails a significant risk of product liability and our ability to obtain sufficient insurance coverage could have a material and adverse effect on our business, financial condition, results of operations and prospects.

We are exposed to significant product liability risks inherent in the development, testing, manufacturing and marketing of therapeutic treatments, including as a result of the clinical testing of CX-072, CX-2009, CX-2029 and BMS-986249 and any other product candidates we or our collaborators may conduct clinical trials for. Product liability claims could delay or prevent completion of our development programs. If we succeed in marketing product candidates, such claims could result in an FDA investigation of the safety and effectiveness of our product candidates, our manufacturing processes and facilities (or the manufacturing processes and facilities of our third-party manufacturer) or our marketing programs and potentially a recall of our products or more serious enforcement action, limitations on the approved indications for which they may be used or suspension or withdrawal of approvals. Regardless of the merits or eventual outcome, liability claims may also result in decreased demand for our products, injury to our reputation, costs to defend the related litigation, a diversion of management’s time and our resources, substantial monetary awards to trial participants or patients and a decline in our stock price. We currently have insurance that we believe is appropriate for our stage of development and may need to obtain higher levels of

insurance prior to marketing any of our product candidates. Any insurance we have or may obtain may not provide sufficient coverage against potential liabilities. Furthermore, clinical trial and product liability insurance is becoming increasingly expensive. As a result, we may be unable to obtain sufficient insurance at a reasonable cost to protect us against losses caused by product liability claims that could have a material and adverse effect on our business, financial condition, results of operations and prospects.

Our employees and independent contractors may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.

We are exposed to the risk of fraud or other misconduct by our employees or independent contractors. Misconduct by these parties could include intentional failures to comply with FDA regulations, provide accurate information to the FDA, comply with manufacturing standards we may establish, comply with federal and state data privacy, security, fraud and abuse, and other healthcare laws and regulations, report financial information or data accurately or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing,

discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Activities subject to these laws could also involve the improper use or misrepresentation of information obtained in the course of clinical trials, 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. Additionally, 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 material and adverse effect on our business, financial condition, results of operations and prospects, including the imposition of significant fines or other sanctions.

Our information technology systems, or those of our CROs or other contractors or consultants we may utilize, may fail, suffer disruptions or suffer security breaches, which could result in a material disruption of our product development programs.

Our information technology and other internal infrastructure systems and those of our CROs and contractors and consultants, including corporate firewalls, servers, leased lines and connection to the Internet, face the risk of systemic failure and may be vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. Such events could cause interruptions of our operations. For instance, the loss of data from any current or future clinical trial or data from any preclinical studies involving our product candidates could result in delays in our development and regulatory filing efforts and significantly increase our costs. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data, or inappropriate disclosure of confidential or proprietary information, we could incur liability, recovery of our data could take a prolonged period of time, and the development of our research or product candidates could be delayed.

Cybersecurity breaches could expose us to liability, damage our reputation, compromise our confidential information or otherwise adversely affect our business.

We maintain sensitive company data on our computer networks, including our intellectual property and proprietary business information. We face a number of threats to our networks from unauthorized access, security breaches and other system disruptions. Despite our security measures, our infrastructure may be vulnerable to attacks by hackers or other disruptive problems. Any such security breach may compromise information stored on our networks and may result in significant data losses or theft of our intellectual property or proprietary business information. A cybersecurity breach could adversely affect our reputation and could result in other negative consequences, including disruption of our internal operations, increased cyber security protection costs, lost revenues or litigation.

If we do not comply with laws regulating the protection of the environment and health and human safety, our business could be adversely affected.

Our research and development activities involve the use of hazardous materials and various chemicals. We maintain quantities of various flammable and toxic chemicals in our facilities in South San Francisco, California that are required for our research and development activities. We are subject to federal, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of these hazardous materials. We believe our procedures for storing, handling and disposing these materials in our South San Francisco facilities comply with the relevant guidelines of South San Francisco, the state of California and the Occupational Safety and Health Administration of the U.S. Department of Labor. Although we believe that our safety procedures for handling and disposing of these materials comply with the standards mandated by applicable regulations, the risk of accidental contamination or injury from these materials cannot be eliminated. If an accident occurs, we could be held liable for

resulting damages, which could be substantial. We are also subject to numerous environmental, health and workplace safety laws and regulations, including those governing laboratory procedures, exposure to blood-borne pathogens and the handling of animals and biohazardous materials. 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 these materials, this insurance may not provide adequate coverage against potential liabilities. We do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us in connection with our storage or disposal of biological or hazardous materials. Additional federal, state and local laws and regulations affecting our operations may be adopted in the future. We may incur substantial costs to comply with, and substantial fines or penalties if we violate, any of these laws or regulations.

Our current operations are concentrated in one location, and 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 current operations are located in our facilities in South San Francisco, California. Any unplanned event, such as flood, fire, explosion, earthquake, extreme weather condition, medical epidemics, power shortage, telecommunication failure or other natural or manmade accidents or incidents that result in us being unable to fully utilize our facilities, or the manufacturing facilities of our third-party contract manufacturers, may have a material and adverse effect on our ability to operate our business, particularly on a daily basis, and have significant negative consequences on our financial and operating conditions. Loss of access to these facilities may result in increased costs, delays in the development of our product candidates or interruption of our business operations. Earthquakes or other natural disasters could further disrupt our operations and have a material and adverse effect on our business, financial condition, results of operations 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 research facilities or the manufacturing facilities of our third-party contract manufacturers, 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 may prove inadequate 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, could have a material and adverse effect on our business. As part of our risk management policy, we maintain insurance coverage at levels that we believe are appropriate for our business. However, in the event of an accident or incident at these facilities, we cannot assure you that the amounts of insurance will be sufficient to satisfy any damages and losses. If our facilities, or the manufacturing facilities of our third-party contract manufacturers, are unable to operate because of an accident or incident or for any other reason, even for a short period of time, any or all of our research and development programs may be harmed. Any business interruption may have a material and adverse effect on our business, financial condition, results of operations and prospects.

Our reported financial results may be adversely affected by changes in accounting principles generally accepted in the U.S.

We prepare our financial statements in conformity with accounting principles generally accepted in the U.S. These accounting principles are subject to interpretation by the Financial Accounting Standards Board (“FASB”) and the SEC. A change in these policies or interpretations could have a significant effect on our reported financial results, may retroactively affect previously reported results, could cause unexpected financial reporting fluctuations, and may require us to make costly changes to our operational processes and accounting systems. For example, in May 2014, the FASB issued Accounting Standards Update (“ASU”) 2014-09, Revenue from Contracts with Customers, which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The ASU replaced most existing revenue recognition guidance in the U.S. GAAP when it became effective. The new standard was effective at the beginning of our fiscal year 2018 with early adoption permitted for our fiscal year 2017. We evaluated the impact of ASU 2014-09 on our financial statements and adoption of the standard had a significant impact on our financial statements and retroactively affected the accounting treatment of transactions completed before adoption.

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

Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended (the “IRC”), if a corporation undergoes an “ownership change” (generally defined as a greater than 50 percentage points change (by value) in the ownership of its equity over a rolling three-year period), the corporation’s ability to use its pre-change net operating loss carryforwards and certain other pre-change tax attributes to offset its post-change income and taxes may be limited.

California has similar rules. We have performed an IRC Section 382 analysis and determined there was an ownership change in 2017, that resulted in Section 382 limitations. The ownership change limited our ability to utilize net operating losses against taxable income in 2018 for both federal and California tax purposes. The remaining net operating losses and credit will be available in future years before expiration during their respective carryforward periods. We may experience ownership changes in the future as a result of shifts in our stock ownership, some of which are outside our control, and our ability to utilize net operating loss carryforwards could be limited by an "ownership change" as described above, which could result in additional increased tax liability to our company.

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

We are subject to income and other taxes in the U.S. and foreign jurisdictions. Changes in laws and policy relating to taxes or trade 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 may adversely affect us. Changes include, but are not limited to, a federal corporate tax rate decrease from 34% to 21% for tax years beginning after December 31, 2017, the transition of U.S. international taxation from a worldwide tax system to a more generally territorial system, and a one-time transition tax on the mandatory deemed repatriation of foreign earnings. 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. or foreign 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 Intellectual Property

If we are not able to obtain and enforce patent protection for our technologies or product candidates, development and commercialization of our product candidates may be adversely affected.

Our success depends in part on our ability to obtain and maintain patents and other forms of intellectual property rights, including in-licenses of intellectual property rights of others, for our product candidates, methods used to manufacture our product candidates and methods for treating patients using our product candidates, as well as our ability to preserve our trade secrets, to prevent third parties from infringing upon our proprietary rights and to operate without infringing upon the proprietary rights of others. We have a substantial number of issued patents and pending patent applications, some of which are co-owned with a third party, covering our Probody platforms and products as well as methods of use and production thereof; we have exclusively licensed UCSB's interest in the patent family co-owned with UCSB that covers Probody and other pro-protein technology in the fields of therapeutics, in vivo diagnostics and prophylactics. In addition, we have exclusively licensed a patent portfolio of three patent families from UCSB that includes patents and patent applications that cover compositions and methods related to the screening for and identification of the masks and protease-cleavable linkers that we incorporate into our Probody candidates. We may not be able to apply for patents on certain aspects of our product candidates in a timely fashion or at all. Our existing issued and granted patents and any future patents we obtain may not be sufficiently broad to prevent others from using our technology or from developing competing products and technology. There is no guarantee that any of our pending patent applications will result in issued or granted patents, that any of our issued or granted patents will not later be found to be invalid or unenforceable or that any issued or granted patents will include claims that are sufficiently broad to cover our product candidates or to provide meaningful protection from our competitors. Moreover, the patent position of biotechnology and biopharmaceutical companies can be highly uncertain because it involves complex legal and factual questions. We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our current and future proprietary technology and product candidates are covered by valid and enforceable patents or are effectively maintained as trade secrets. If third parties disclose or misappropriate our proprietary rights, it may materially and adversely affect our position in the market.

The U.S. Patent and Trademark Office ("USPTO") and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other provisions during the patent process. There are situations in which noncompliance can result in abandonment or lapse of a patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, competitors might be able to enter the market earlier than would otherwise have been the case. The standards applied by the USPTO and foreign patent offices in granting patents are not always applied uniformly or predictably. For example, there is no uniform worldwide policy regarding patentable subject matter or the scope of claims allowable in biotechnology and biopharmaceutical patents. As such, we do not know the degree of future protection that we will have on our proprietary products and technology. While we will endeavor to try to protect our product candidates with intellectual property rights such as patents, as appropriate, the process of obtaining patents is time-consuming, expensive and sometimes unpredictable.

In addition, there are numerous recent changes to the patent laws and proposed changes to the rules of the USPTO that may have a significant impact on our ability to protect our technology and enforce our intellectual property rights. For example, the America Invents Act ("AIA") enacted within the last several years involves significant changes in patent legislation. The Supreme Court has ruled on several patent cases in recent years, some of which cases either narrow the scope of patent protection available in certain circumstances or weaken the rights of patent owners in certain situations. The recent decision by the Supreme Court in Association for Molecular Pathology v. Myriad Genetics, Inc. precludes a claim to a nucleic acid having a stated nucleotide sequence that is identical to a sequence found in nature and has not been modified. We currently are not aware of an immediate impact of this decision on our patents or patent applications because we are developing product candidates that contain modifications, such as our Probody substrates and masks, that we believe are not found in nature. However, this decision has yet to be clearly interpreted by courts and by the USPTO. We cannot assure you that the interpretations of this decision or subsequent rulings will not adversely impact our patents or patent applications. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on decisions by the U.S. Congress, the federal courts and the USPTO, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future.

Once granted, patents may remain open to opposition, interference, re-examination, post-grant review, inter parties review, nullification or derivation action in court or before patent offices or similar proceedings for a given period after allowance or grant, during which time third parties can raise objections against such initial grant. In the course of such proceedings, which may continue for a protracted period of time, the patent owner may be compelled to limit the scope of the allowed or granted claims thus attacked, or may lose the allowed or granted claims altogether. In addition, there can be no assurance that:

- Others will not or may not be able to make, use or sell compounds that are the same as or similar to our product candidates but that are not covered by the claims of the patents that we own or license.
- We or our licensors, or our collaborators are the first to make the inventions covered by each of our issued patents and pending patent applications that we own or license.
- We or our licensors, or our collaborators are the first to file patent applications covering certain aspects of our inventions.
- Others will not independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights.
- A third party may not challenge our patents and, if challenged, a court would hold that our patents are valid, enforceable and infringed.
- Any issued patents that we own or have licensed will provide us with any competitive advantages, or will not be challenged by third parties.
- We may develop additional proprietary technologies that are patentable.
- The patents of others will not have a material or adverse effect on our business, financial condition, results of operations and prospects.
- Our competitors do not conduct research and development activities in countries where we do not have enforceable patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets.

Other companies or organizations may challenge our or our licensors' patent rights or may assert patent rights that prevent us from developing and commercializing our products.

Probody therapeutics are a relatively new scientific field. We have obtained grants and issuances of Probody therapeutic patents and have licensed one patent family comprising several of these patents from a third party on an exclusive basis for therapeutics applications. The issued patents and pending patent applications in the United States and in key markets around the world that we own or license claim many different methods, compositions and processes relating to the discovery, development, manufacture and commercialization of antibody and immunoregulatory therapeutics. Specifically, we own and have licensed a portfolio of patents, patent applications and other intellectual property covering Probody compositions of matter as well as their methods of manufacturing and use.

As the field of antibody and immunoregulatory therapeutics matures, patent applications are being processed by national patent offices around the world. There is uncertainty about which patents will issue, and, if they do, as to when, to whom, and with what claims. In addition, third parties may attempt to invalidate our intellectual property rights. Even if our rights are not directly challenged, disputes could lead to the weakening of our intellectual property rights. Our defense against any attempt by third parties to circumvent or invalidate our intellectual property rights could be costly to us, could require significant time and attention of our management and could have a material and adverse effect on our business, financial condition, results of operations and prospects or our ability to successfully compete.

There are many issued and pending patents that claim aspects of our product candidates and modifications that we may need to apply to our product candidates. There are also many issued patents that claim antibodies or portions of antibodies that may be relevant for Probody products we wish to develop. Thus, it is possible that one or more

organizations will hold patent rights to which we will need a license. If those organizations refuse to grant us a license to such patent rights on reasonable terms, we may not be able to market products or perform research and development or other activities covered by these patents.

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

Obtaining a valid and enforceable issued or granted patent covering our technology in the U.S. and worldwide can be extremely costly. In jurisdictions where we have not obtained patent protection, competitors may use our technology to develop their own products and further, may export otherwise infringing products to territories where we have patent protection, but where it is more difficult to enforce a patent as compared to the U.S. Competitor products may compete with our future products in jurisdictions where we do not have issued or granted patents or where our issued or granted patent claims or other intellectual property rights are not sufficient to prevent competitor activities in these jurisdictions. The legal systems of certain countries, particularly certain developing countries, make it difficult to enforce patents and such countries may not recognize other types of intellectual property protection, particularly that relating to biopharmaceuticals. This could make it difficult for us to prevent the infringement of our patents or marketing of competing products in violation of our proprietary rights generally in certain jurisdictions. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business.

We generally file a provisional patent application first (a priority filing) at the USPTO. An international application under the Patent Cooperation Treaty ("PCT") is usually filed within twelve months after the priority filing. Based on the PCT filing, national and regional patent applications may be filed in the United States, Europe, Japan, Australia and Canada and, depending on the individual case, also in any or all of, inter alia, Brazil, China, Hong Kong, India, Indonesia, Israel, Malaysia, Mexico, New Zealand, Russia or Eurasian Patent Organization, Singapore, South Africa, South Korea and other jurisdictions. We have so far not filed for patent protection in all national and regional jurisdictions where such protection may be available. In addition, we may decide to abandon national and regional patent applications before grant. Finally, the grant proceeding of each national or regional patent is an independent proceeding which may lead to situations in which applications might in some jurisdictions be refused by the relevant registration authorities, while granted by others. It is also quite common that depending on the country, various scopes of patent protection may be granted on the same product candidate or technology.

The laws of some jurisdictions do not protect intellectual property rights to the same extent as the laws in the U.S., and many companies have encountered significant difficulties in protecting and defending such rights in such jurisdictions. If we or our licensors encounter difficulties in protecting, or are otherwise precluded from effectively protecting, the intellectual property rights important for our business in such jurisdictions, the value of these rights may be diminished and we may face additional competition from others in those jurisdictions. Many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If we or any of our licensors are forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position in the relevant jurisdiction may be impaired and our business and results of operations may be adversely affected.

We or our licensors, or any future strategic partners may become subject to third party claims or litigation alleging infringement of patents or other proprietary rights or seeking to invalidate patents or other proprietary rights, and we may need to resort to litigation to protect or enforce our patents or other proprietary rights, all of which could be costly, time consuming, delay or prevent the development and commercialization of our product candidates, or put our patents and other proprietary rights at risk.

We or our licensors, or any future strategic partners may be subject to third-party claims for infringement or misappropriation of patent or other proprietary rights. We are generally obligated under our license or collaboration agreements to indemnify and hold harmless our licensors or collaborators for damages arising from intellectual property infringement by us. If we or our licensors, or any future strategic partners are found to infringe a third-party

patent or other intellectual property rights, we could be required to pay damages, potentially including treble damages, if we are found to have willfully infringed. In addition, we or our licensors, or any future strategic partners may choose to seek, or be required to seek, a license from a third party, which may not be available on acceptable terms, if at all. Even if a license can be obtained on acceptable terms, the rights may be non-exclusive, which could give our competitors access to the same technology or intellectual property rights licensed to us. If we fail to obtain a required license, we or our collaborators may be unable to effectively market product candidates based on our technology, which could limit our ability to generate revenue or achieve profitability and possibly prevent us from generating revenue sufficient to sustain our operations. In addition, we may find it necessary to pursue claims or initiate lawsuits to protect or enforce our patent or other intellectual property rights. The cost to us in defending or initiating any litigation or other proceeding relating to patent or other proprietary rights, even if resolved in our favor, could be substantial, and litigation would divert our management's attention. 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. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could delay our research and development efforts and limit our ability to continue our operations.

If we were to initiate legal proceedings against a third party to enforce a patent covering one of our products or our technology, the defendant could counterclaim that our patent is invalid or unenforceable. In patent litigation in the U.S., defendant counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, for example, 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. The outcome following legal assertions of invalidity and unenforceability during patent litigation 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 or unenforceability, we would lose at least part, and perhaps all, of the patent protection on one or more of our products or certain aspects of our platform technology. Such a loss of patent protection could have a material and adverse effect on our business, financial condition, results of operations and prospects. Patents and other intellectual property rights also will not protect our technology if competitors design around our protected technology without legally infringing our patents or other intellectual property rights.

Intellectual property rights of third parties could adversely affect our ability to commercialize our product candidates, and we might be required to litigate or obtain licenses from third parties in order to develop or market our product candidates. Such litigation or licenses could be costly or not available on commercially reasonable terms.

Because the antibody landscape is still evolving, including the masked antibody landscape, it is difficult to conclusively assess our freedom to operate without infringing on third-party rights. There are numerous companies that have pending patent applications and issued patents broadly covering antibodies generally or covering antibodies directed against the same targets as, or targets similar to, those we are pursuing. There are many issued patents and patent applications covering antibodies targeted against PD-1 and PD-L1, and the intellectual property covering PD-1 and PD-L1 antibodies has been the subject of litigation and licensing, especially regarding how broadly certain claims should be construed. If the claims were to be construed broadly by the courts, we may need to obtain a license to some of such intellectual property, covering PD-1 and/or PD-L1 antibodies, which would decrease the profits we would realize from the sale of such products. An increasing number of third parties are filing masked antibody patent applications, several of which contain claims that are patterned after our own patent claims. Our competitive position may suffer if patents issued to third parties or other third-party intellectual property rights cover our products or product candidates or elements thereof, or our manufacture or uses relevant to our development plans. In such cases, we may not be in a position to develop or commercialize products or product candidates unless we successfully pursue litigation to nullify or invalidate the third-party intellectual property right concerned, or enter into a license agreement with the intellectual property right holder, if available on commercially reasonable terms. There may be issued patents of which we are not aware, held by third parties that, if found to be valid and enforceable, could be alleged to be infringed by our Probody therapeutic technologies. There also may be pending patent applications of which we are not aware that may result in issued patents, which could be alleged to be infringed by our Probody therapeutic technologies. If such an infringement claim should be brought and be successful, we may be required to pay substantial damages, be forced to abandon our product candidates or seek a license from any patent holders. No assurances can be given that a license will be available on commercially reasonable terms, if at all.

It is also possible that we have failed to identify relevant third-party patents or applications. For example, U.S. applications filed before November 29, 2000 and certain U.S. applications filed after that date that will not be filed outside the U.S. remain confidential until patents issue. Patent applications in the U.S. and elsewhere are published approximately 18 months after the earliest filing for which priority is claimed, with such earliest filing date being commonly referred to as the priority date. Therefore, patent applications covering our products or platform technology could have been filed by others without our knowledge. Additionally, pending patent applications that have been published can, subject to certain limitations, be later amended in a manner that could cover our platform technologies, our products or the use of our products. Third-party intellectual property right holders may also actively bring

infringement claims against us. We cannot guarantee that we will be able to successfully settle or otherwise resolve such infringement claims. If we are unable to successfully settle future claims on terms acceptable to us, we may be required to engage in or continue costly, unpredictable and time-consuming litigation and may be prevented from or experience substantial delays in marketing our products. If we fail in any such dispute, in addition to being forced to pay damages, we may be temporarily or permanently prohibited from commercializing any of our product candidates that are held to be infringing. We might, if possible, also be forced to redesign product candidates so that we no longer infringe the third-party intellectual property rights. Any of these events, even if we were ultimately to prevail, could require us to divert substantial financial and management resources that we would otherwise be able to devote to our business.

Intellectual property litigation could cause us to spend substantial resources and distract our personnel from their normal responsibilities.

Litigation or other legal proceedings relating to intellectual property claims, with or without merit, is unpredictable and generally expensive and time consuming and is likely to divert significant resources from our core business, including distracting our technical and management personnel from their normal responsibilities. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing or distribution activities.

We may not have sufficient financial or other resources to adequately conduct such litigation or proceedings. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. Accordingly, despite our efforts, we may not be able to prevent third parties from infringing upon or misappropriating or from successfully challenging our intellectual property rights. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material and adverse effect on our ability to compete in the marketplace.

If we fail to comply with our obligations under any license, collaboration or other agreements, we may be required to pay damages and could lose our rights to intellectual property rights that are necessary for developing and protecting our product candidates or we could lose certain rights to grant sublicenses.

Our licenses from Amgen, ImmunoGen and UCSB impose, and any future licenses we enter into are likely to impose, various development, commercialization, funding, diligence, sublicensing, insurance, patent prosecution and enforcement and/or other obligations on us, including various payment obligations such as milestone and royalty payments and payments based on sublicensing revenues. Our rights under our agreements with our licensors or collaborators may be limited or modified according to their terms. Additionally, if we breach any of these obligations, or use the intellectual property licensed to us in an unauthorized manner, we may be required to pay damages and the licensor may have the right to terminate the license, which could result in us being unable to develop, manufacture and sell products that are covered by the licensed technology or enable a competitor to gain access to the licensed technology. Moreover, our licensors and collaborators may own or control intellectual property that has not been licensed to us and, as a result, we may be subject to claims, regardless of their merit, that we are infringing or otherwise violating the licensor’s rights. In addition, while we cannot currently determine the amount of the royalty or sublicense revenue payment obligations we would be required to pay on development or sales of future products, if any, the amounts may be significant. The amount of our future royalty or sublicense revenue payment obligations will depend on the technology and intellectual property we use in products that we successfully develop and commercialize, if any. Therefore, even if we successfully develop and commercialize products, we may be unable to achieve or maintain profitability.

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

Certain provisions in our intellectual property agreements may be susceptible to multiple interpretations. For example, we may disagree with our licensors or collaborators regarding whether, when and to what extent various obligations

under these agreements apply to certain of our product candidates and products, including various payment, development, commercialization, funding, diligence, sublicensing, insurance, patent prosecution and enforcement and/or other obligations. 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. In either case, such disagreement 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.

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

In addition to seeking patent protection for certain aspects of our product candidates, we also consider trade secrets, including confidential and unpatented know-how, important to the maintenance of our competitive position. We protect trade secrets and confidential and unpatented know-how, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to such knowledge, such as our employees, corporate collaborators, outside scientific collaborators, CROs, contract manufacturers, consultants, advisors and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants that obligate them to maintain confidentiality and assign their inventions to us.

Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts in the U.S. and certain foreign jurisdictions are less willing or unwilling to protect trade secrets. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor, our competitive position would be harmed.

We may be subject to claims that we or our employees or consultants have wrongfully used or disclosed alleged trade secrets of our employees' or consultants' former employers or their clients. These claims may be costly to defend and if we do not successfully do so, we may be required to pay monetary damages and may lose valuable intellectual property rights or personnel.

Many of our employees were previously employed at universities or biotechnology or biopharmaceutical companies, including our competitors or potential competitors. Although no claims against us are currently pending, we may be subject to claims that these employees or we have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Litigation may be necessary to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. A loss of key research personnel or their work product could hamper our ability to commercialize, or prevent us from commercializing, our product candidates, which could severely harm our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

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 trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. We may not be able to protect our rights to these trademarks and trade names or may be forced to stop using these names, which we need for name recognition by potential partners or customers in our markets of interest. If we are unable to establish name recognition based on our trademarks and trade names, we may not be able to compete effectively and our business may be adversely affected.

Risks Related to Government Regulation

We may be unable to obtain or be delayed in obtaining U.S. or foreign regulatory approval and, as a result, unable or delayed in being able to commercialize our product candidates.

Our product candidates are subject to extensive governmental regulations relating to, among other things, research, testing, development, manufacturing, safety, efficacy, approval, recordkeeping, reporting, labeling, storage, packaging, advertising and promotion, pricing, marketing and distribution of drugs and therapeutic biologics. Rigorous preclinical testing and clinical trials and an extensive regulatory approval process are required to be successfully completed in the U.S. and in many foreign jurisdictions before a new drug or therapeutic biologic can be marketed. Satisfaction of these and other regulatory requirements is costly, time consuming, uncertain and subject to unanticipated delays. It is possible that none of the product candidates we may develop will obtain the regulatory approvals necessary for us or our existing or future collaborators to begin selling them.

As a company, we have limited experience in conducting and managing the clinical trials necessary to obtain regulatory approvals, including approval by the FDA. The time required to obtain FDA and other approvals is unpredictable but typically takes many years following the commencement of clinical trials, depending upon the type, complexity and novelty of the product candidate. The standards that the FDA and its foreign counterparts use when regulating us require judgment and can change, which makes it difficult to predict with certainty how they will be applied. Any analysis we perform of data from preclinical and clinical activities is subject to confirmation and interpretation by regulatory authorities, which could delay, limit or prevent regulatory approval. We may also encounter unexpected delays or increased costs due to new government regulations, for example, from future legislation or administrative action, or from changes in FDA policy during the period of product development, clinical trials and FDA regulatory review. Further, government shutdowns, such as the recent U.S. shutdown in late 2018 or the uncertainty of Great Britain’ departure

from the European Union may impact our ability to access government agencies in a timely manner or otherwise impact our ability to move our product candidates through the regulatory process. It is impossible to predict whether legislative changes will be enacted, or whether FDA or foreign regulations, guidance or interpretations will be changed, or what the impact of such changes, if any, may be.

Because the product candidates we are developing may represent a new class of therapeutic biologics, the FDA and its foreign counterparts have not yet established any definitive policies, practices or guidelines in relation to these product candidates. While we believe the product candidates that we are currently developing are regulated as therapeutic biologics that are subject to requirements for review and approval of a BLA by the FDA's Center for Drug Evaluation and Research ("CDER"), the FDA could decide to regulate them as drugs that are subject to requirements for review and approval of an NDA by CDER or as biological products that are subject to requirements for review and approval of a BLA by the FDA's Center for Biologics Evaluation and Research ("CBER"). The lack of policies, practices or guidelines may hinder or slow review by the FDA of any regulatory filings that we may submit. Moreover, the FDA may respond to these submissions by defining requirements we may not have anticipated. Such responses could lead to significant delays in the clinical development of our product candidates. In addition, because there may be approved treatments for some of the diseases for which we may seek approval, in order to receive regulatory approval, we may need to demonstrate through clinical trials that the product candidates we develop to treat these diseases, if any, are not only safe and effective, but safer or more effective than existing products. Furthermore, in recent years, there has been increased public and political pressure on the FDA with respect to the approval process for new drugs and therapeutic biologics, and the FDA's standards, especially regarding product safety, appear to have become more stringent.

Any delay or failure in obtaining required approvals could have a material and adverse effect on our ability to generate revenues from the particular product candidate for which we are seeking approval. Furthermore, any regulatory approval to market a product may be subject to limitations on the approved uses for which we may market the product or the labeling or other restrictions. In addition, the FDA has the authority to require a risk evaluation and mitigation strategies ("REMS") plan as part of an NDA or BLA or after approval, which may impose further requirements or restrictions on the distribution or use of an approved drug or biologic, such as limiting prescribing to certain physicians or medical centers that have undergone specialized training, limiting treatment to patients who meet certain safe-use criteria and requiring treated patients to enroll in a registry. These limitations and restrictions may limit the size of the market for the product and affect reimbursement by third-party payors.

We are also subject to numerous foreign regulatory requirements governing, among other things, the conduct of clinical trials, manufacturing and marketing authorization, pricing and third-party reimbursement. The foreign regulatory approval process varies among countries and may include all of the risks associated with FDA approval described above as well as risks attributable to the satisfaction of local regulations in foreign jurisdictions. Moreover, the time required to obtain approval may differ from that required to obtain FDA approval. Approval by the FDA does not ensure approval by regulatory authorities outside the U.S. and vice versa.

Even if we receive regulatory approval for any of our product candidates, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense. Additionally, our product candidates, if approved, could be subject to labeling and other restrictions and market withdrawal and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our products.

Any regulatory approvals that we or our collaborators obtain for our product candidates may also be subject to limitations on the approved indicated uses for which a product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including "Phase 4" clinical trials, and surveillance to monitor the safety and efficacy of the product candidate. In addition, if the FDA or a comparable foreign regulatory

authority approves any of our product candidates, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, import, export, advertising, promotion and recordkeeping for the product will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with cGMPs and good clinical practices for any clinical trials that we conduct post-approval. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with our third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in, among other things:

- restrictions on the marketing or manufacturing of the product, withdrawal of the product from the market or voluntary or mandatory product recalls;
- fines, warning letters or holds on clinical trials;
- refusal by the FDA to approve pending applications or supplements to approved applications filed by us or our strategic partners;

- suspension or revocation of product license approvals;
- product seizure or detention or refusal to permit the import or export of products; and
- injunctions or the imposition of civil or criminal penalties.

The FDA's policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. For example, in December 2016, the 21st Century Cures Act, or "Cures Act", was signed into law. The Cures Act, among other things, is intended to modernize the regulation of drugs and biologics and to spur innovation, but its ultimate implementation is unclear. 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, which would adversely affect our business.

We also cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative or executive action, either in the United States 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 regulatory and 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 requirements 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 constraints on FDA's ability to engage in oversight and implementation activities in the normal course, our business may be negatively impacted.

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

In the United States, there have been and continue to be a number of legislative initiatives to contain healthcare costs. For example, in March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act (together, the "ACA"), was passed, which substantially changed the way healthcare is financed by both governmental and private insurers, and significantly impacts the U.S. pharmaceutical industry. The ACA, among other things, subjected therapeutic biologics to potential competition by lower-cost biosimilars, addressed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs and therapeutic biologics that are inhaled, infused, instilled, implanted or injected, increased the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program and extended the rebate program to individuals enrolled in Medicaid managed care organizations, established annual fees and taxes on manufacturers of certain branded prescription drugs and therapeutic biologics, and created a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts, which, through subsequent legislative amendments, will be increased to 70% starting in 2019, off negotiated prices of applicable brand drugs and therapeutic biologics to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs and therapeutic biologics to be covered under Medicare Part D.

Since its enactment, there have been judicial and Congressional challenges to certain aspects of the ACA, and we expect there will be additional challenges and amendments to the ACA in the future. The current Presidential Administration and U.S. Congress will likely continue to seek to modify, repeal, or otherwise invalidate all, or certain provisions of, the ACA. Since taking office, President Trump has continued to support the repeal of all or portions of the ACA. On October 12, 2017, President Trump issued an executive order that expands the use of association health plans and allows anyone to purchase short-term health plans that provide temporary, limited insurance. This executive order also calls for the halt of federal payments to health insurers for cost-sharing reductions previously available to lower-income Americans to afford coverage. There is still uncertainty with respect to the impact this executive order could have on coverage and reimbursement for healthcare items and services covered by plans that were authorized by

the ACA. In addition, the Tax Cuts and Jobs Act was enacted, which, among other things, removes penalties for not complying with the Affordable Care Act's individual mandate to carry health insurance. On January 22, 2018, President Trump signed a continuing resolution on appropriations for fiscal year 2018 that delayed the implementation of certain mandated fees under the Affordable Care Act, including the so-called "Cadillac" tax on certain high cost employer-sponsored insurance plans, the annual fee imposed on certain health insurance providers based on market share, and the medical device excise tax on non-exempt medical devices. Congress may consider other legislation to repeal or replace other elements 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 United States since the ACA was enacted to reduce healthcare expenditures. The Budget Control Act of 2011, among other things, included aggregate reductions of Medicare payments to providers of 2% per fiscal year. These reductions went into effect on April 1, 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2027 unless additional Congressional action is taken. On January 2, 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several types of providers, 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. If federal spending is further reduced, anticipated budgetary shortfalls may also impact the ability of relevant agencies, such as the FDA or the National Institutes of Health to continue to function at current levels. Amounts allocated to federal grants and contracts may be reduced or eliminated. These reductions may also impact the ability of relevant agencies to timely review and approve research and development, manufacturing, and marketing activities, which may delay our ability to develop, market and sell any products we may develop.

Moreover, payment methodologies, including payment for companion diagnostics, may be subject to changes in healthcare legislation and regulatory initiatives. For example, the Centers for Medicare & Medicaid Services (“CMS”) has begun bundling the Medicare payments for certain laboratory tests ordered while a patient received services in a hospital outpatient setting and, beginning in 2018, CMS will pay for clinical laboratory services based on a weighted average of reported prices that private payors, Medicare Advantage plans, and Medicaid Managed Care plans pay for laboratory services. Further, in March 2018, CMS finalized a national coverage determination extending coverage under the Medicare program for certain diagnostic laboratory tests using next generation sequencing (“NGS”) that are approved by the FDA as a companion in vitro diagnostic and used in a cancer with an FDA-approved companion diagnostic indication. Under the national coverage determination, diagnostic tests that meet these criteria are covered only in patients with recurrent, metastatic, relapsed, refractory or stages III or IV cancer if the test has an FDA-approved or cleared indication for use in that patient’s cancer and results are provided to the treating physician for management of the patient using a report template to specify treatment options. Although the Medicare program increasingly is used as a model for how private payors and other governmental payors develop their coverage and reimbursement policies, it is difficult to predict at this time what third-party payors will decide with respect to the coverage and reimbursement for any companion diagnostics associated with our product candidates.

In addition, recently there has 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. For example, the 21st Century Cures Act changed the reimbursement methodology for infusion drugs and biologics furnished through durable medical equipment in an attempt to remedy over- and underpayment of certain products. Individual states in the United States have also become increasingly active in passing legislation and 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. 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. We expect that additional state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for our product candidates or companion diagnostics or additional pricing pressures.

If we or our collaborators, manufacturers or service providers fail to comply with healthcare laws and regulations, we or they could be subject to enforcement actions, which could affect our ability to develop, market and sell our products and may harm our reputation.

Although we do not currently have any products on the market, once we begin commercializing our product candidates, we will be subject to additional healthcare statutory and regulatory requirements and enforcement by the federal government and the states and foreign governments in which we conduct our business. Healthcare providers, physicians and third-party payors play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our future arrangements with third-party payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the

business or financial arrangements and relationships through which we market, sell and distribute our product candidates for which we obtain marketing approval. In addition, we may be subject to patient data privacy and security regulation by both the U.S. federal government and the states in which we conduct our business. Restrictions under applicable federal and state healthcare laws and regulations, include the following:

- the U.S. federal Anti-Kickback Statute, which prohibits, among other things, persons from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind to induce or reward either the referral of an individual for, or the purchase, or order or recommendation of, any good or service, for which payment may be made under federal and state healthcare programs such as Medicare and Medicaid. 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 Act, which imposes 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 federal government, claims for payment 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 federal government. In addition, the government may assert that a claim including items and services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act;

- the U.S. federal Health Insurance Portability and Accountability Act of 1996 ("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 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 ("HITECH"), which imposes obligations on certain covered entity healthcare providers, health plans, and healthcare clearinghouse as well as their business associates that perform certain services involving the use or disclosure of individually identifiable health information, including mandatory contractual terms, with respect to safeguarding the privacy, security, and transmission of individually identifiable health information, and require notification to affected individuals and regulatory authorities of certain breaches of security of individually identifiable health information;
- The new EU General Data Protection Regulation ("GDPR") which came into effect on May 25, 2018 and imposes obligations and restrictions on how we collect and use personal data relating to individuals located in the EU (including health data), and introduces fines of up to 4% total worldwide annual turnover or up to €20 million (whichever is higher) for non-compliance with its requirements. The GDPR also provides that EU member states may make their own further laws and regulations limiting the processing of special categories of personal data such as genetic, biometric or health data;
- the U.S. federal legislation commonly referred to as Physician Payments Sunshine Act, enacted as part of the ACA, and its implementing regulations, which requires 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 CMS information related to certain payments and other transfers of value to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, as well as ownership and investment interests held by the physicians described above and their immediate family members; and
- analogous state laws and regulations, such as state anti-kickback and false claims laws that may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, 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 federal government in addition to requiring drug and therapeutic biologics manufacturers to report information related to payments to physicians and other healthcare providers or marketing expenditures and pricing information; 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.

Ensuring that our future business arrangements with third-parties comply with applicable healthcare laws and regulations could involve substantial costs. It is possible that governmental authorities will conclude that our business practices do not comply with current or future statutes, regulations, 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 such requirements, we may be subject to penalties, including civil or criminal penalties, monetary damages, the curtailment or restructuring of our operations, loss of eligibility to obtain approvals from the FDA, or exclusion from participation in government contracting, healthcare reimbursement or other government programs, including Medicare and Medicaid, any of which could adversely our financial results. Although effective compliance programs can mitigate the risk of investigation and prosecution for violations of these laws, these risks cannot be entirely eliminated. Any action against us for an alleged or suspected violation could cause us to incur significant legal expenses and could divert our management's attention from the operation of our business, even if our defense is successful. In addition, achieving and sustaining compliance with applicable laws and regulations may be costly to us in terms of money, time and resources.

If we or future collaborators, manufacturers or service providers fail to comply with applicable federal, state or foreign laws or regulations, we could be subject to enforcement actions, which could affect our ability to develop, market and

sell our products successfully and could harm our reputation and lead to reduced acceptance of our products by the market. These enforcement actions include, among others:

- adverse regulatory inspection findings;
- warning letters;
- voluntary or mandatory product recalls or public notification or medical product safety alerts to healthcare professionals;
- restrictions on, or prohibitions against, marketing our products;

- restrictions on, or prohibitions against, importation or exportation of our products;
- suspension of review or refusal to approve pending applications or supplements to approved applications;
- exclusion from participation in government-funded healthcare programs;
- exclusion from eligibility for the award of government contracts for our products;
- suspension or withdrawal of product approvals;
- seizures or administrative detention of products;
- injunctions; and
- civil and criminal penalties and fines.

If we fail to comply with U.S. and foreign regulatory requirements, regulatory authorities could limit or withdraw any marketing or commercialization approvals we may receive and subject us to other penalties that could materially harm our business.

Even if we receive marketing and commercialization approval of a product candidate, we will be subject to continuing regulatory requirements, including in relation to adverse patient experiences with the product and clinical results that are reported after a product is made commercially available, both in the U.S. and any foreign jurisdiction in which we seek regulatory approval. The FDA has significant post-market authority, including the authority to require labeling changes based on new safety information and to require post-market studies or clinical trials to evaluate safety risks related to the use of a product or to require withdrawal of the product from the market. The FDA also has the authority to require a REMS plan after approval, which may impose further requirements or restrictions on the distribution or use of an approved drug or therapeutic biologic. The manufacturer and manufacturing facilities we use to make a future product, if any, will also be subject to periodic review and inspection by the FDA and other regulatory agencies, including for continued compliance with cGMP requirements. The discovery of any new or previously unknown problems with our third-party manufacturers, manufacturing processes or facilities may result in restrictions on the product, manufacturer or facility, including withdrawal of the product from the market. If we rely on third-party manufacturers, we will not have control over compliance with applicable rules and regulations by such manufacturers. Any product promotion and advertising will also be subject to regulatory requirements and continuing regulatory review. If we or our collaborators, manufacturers or service providers fail to comply with applicable continuing regulatory requirements in the U.S. or foreign jurisdictions in which we seek to market our products, we or they may be subject to, among other things, fines, warning letters, holds on clinical trials, delay of approval or refusal by the FDA to approve pending applications or supplements to approved applications, suspension or withdrawal of regulatory approval, product recalls and seizures, administrative detention of products, refusal to permit the import or export of products, operating restrictions, injunction, civil penalties and criminal prosecution.

We face regulation and potential liability related to the privacy, data protection and information security which may require significant resources and may adversely affect our business, operations and financial performance.

The regulatory environment surrounding information security, data collection and privacy is increasingly demanding. We are subject to numerous U.S. federal and state laws and non-U.S. regulations governing the protection of personal and confidential information of our clinical subjects, clinical investigators, employees and vendors/business contacts, including in relation to medical records, credit card data and financial information. For example, on May 25, 2018, the European General Data Protection Regulation, or GDPR, became effective, implementing more stringent requirements in relation to our use of personal data relating to individuals located in the E.U. (and E.E.A.). The GDPR repeals the Data Protection Directive (95/46/EC) and is directly applicable in all E.U. member states. The GDPR significantly increased fining levels to up to 4% total worldwide annual turnover or up to €20 million (whichever is higher) for non-compliance with its requirements. We will be subject to the GDPR where we have an E.U. presence or "establishment" (e.g., E.U. based subsidiary or operations), when conducting clinical trials with E.U. based data subjects (whether the trials are conducted directly by us or through a clinical vendor or collaborator) or offering approved products or services (if relevant) to E.U. based data subjects (regardless of whether involving our E.U. based subsidiary or operations).

The GDPR sets out a number of requirements that must be complied with when handling the personal data of such E.U. based data subjects including: providing expanded disclosures about how their personal data will be used; higher standards for organizations to demonstrate that they have obtained valid consent or have another legal basis in place to justify their data processing activities; the obligation to appoint data protection officers in certain circumstances; new rights for individuals to be "forgotten" and rights to data portability, as well as enhanced current rights (e.g., access requests); the principal of accountability and demonstrating compliance through policies, procedures, training and audit; the new mandatory data breach regime. In particular, medical or health data, genetic data and biometric data where the latter is used to uniquely identify an individual (even, in certain situations, where such data is key coded) are all classified as "special category" data under GDPR and afford greater protection and require additional compliance obligations. Further, E.U. member states have a broad right to impose additional conditions – including restrictions – on these data

categories. This is because the GDPR allows E.U. member states to derogate from the requirements of the GDPR mainly in regard to specific processing situations (including special category data and processing for scientific or statistical purposes). As the E.U. member states reframe their national legislation to harmonize with the GDPR, we will need to monitor compliance with all relevant E.U. member states' laws and regulations, including where permitted derogations from the GDPR are introduced.

We will also be subject to evolving E.U. laws on data export, where we transfer data outside the E.U. (or E.E.A.) to group companies or third parties. The GDPR only permits exports of data outside the E.U. (and E.E.A.) where there is a suitable data transfer solution in place to safeguard personal data (e.g., the EU Commission approved Standard Contractual Clauses). Some of the approved current data transfer mechanisms are under review in the E.U. courts and by the E.U. Commission and therefore we need to monitor this space for any future changes.

Where we rely on third parties to carry out a number of services for us, including processing personal data on our behalf, we are required under GDPR to enter into contractual arrangements to help ensure that these third parties only process such data according to our instructions and have sufficient security measures in place. Any security breach or non-compliance with our contractual terms or breach of applicable law by such third parties could result in enforcement actions, litigation, fines and penalties or adverse publicity and could cause our customers to lose trust in us, which could have an adverse impact on our reputation and business.

In recent years, U.S. and European lawmakers and regulators have expressed concern over electronic marketing and the use of third-party cookies, web beacons and similar technology for online behavioral advertising. In the E.U., marketing is defined broadly to include any promotional material and the rules specifically on e-marketing are currently set out in the ePrivacy Directive which will be replaced by a new ePrivacy Regulation. While the ePrivacy Regulation was originally intended to be adopted on May 25, 2018 (alongside the GDPR), it is still going through the European legislative process and commentators now expect it to be adopted during the middle or second half of 2019. The current draft of the ePrivacy Regulation imposes strict opt-in e-marketing rules with limited exceptions to business to business communications and significantly increases fining powers to the same levels as GDPR (see above).

We may find it necessary or desirable to join self-regulatory bodies or other privacy-related organizations, particularly relating to biopharmacy and/or scientific research, that require compliance with their rules pertaining to privacy and data security.

The introduction of the GDPR, and any resultant changes in E.U. member states’ national laws and regulations and the ePrivacy Regulation, will increase our compliance obligations and will necessitate the review and implementation of policies and processes relating to our collection and use of data. This increase in compliance obligations could also lead to an increase in compliance costs which may have an adverse impact on our business, financial condition or results of operations.

If any person, including any of our employees, clinical vendors or collaborators or those with whom we share such information, negligently disregards or intentionally breaches our established controls with respect to our clinical subject, clinical investigator or employee data, or otherwise mismanages or misappropriates that data, we could be subject to significant monetary damages, regulatory enforcement actions, fines and/or criminal prosecution in one or more jurisdictions. As above, under the GDPR there are significant new punishments for non-compliance which could result in a penalty of up to 4% of a firm’s global annual revenue. In addition, a data breach could result in negative publicity which could damage our reputation and have an adverse effect on our business, financial condition or results of operations.

We strive to comply with all applicable laws, but they may conflict with each other, and by complying with the laws or regulations of one jurisdiction, we may find that we are violating the laws or regulations of another jurisdiction. Despite our efforts, we may not have fully complied in the past and may not in the future. If we become liable under laws or regulations applicable to us, we could be required to pay significant fines and penalties, our reputation may be harmed and we may be forced to change the way we operate. That could require us to incur significant expenses or to discontinue certain services, which could negatively affect our business.

Even if we are able to commercialize any product candidate, such product candidate may become subject to unfavorable pricing regulations or third-party coverage and reimbursement policies, which would harm our business.

The regulations that govern regulatory approvals, pricing and reimbursement for new drugs and therapeutic biologics vary widely from country to country. Some countries require approval of the sale price of a drug or therapeutic biologic before it can be marketed. In many countries, the pricing review period begins after marketing approval is granted. In some foreign markets, prescription biopharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we might obtain regulatory approval for a product in a particular country, but then be subject to price regulations that delay our commercial launch of the product, possibly for lengthy time periods and negatively impact the revenues we are able to generate from the sale of the product in that country. Adverse pricing limitations may hinder our ability to recoup our investment in one or more product candidates, even if our product candidates obtain regulatory approval.

Our ability to commercialize any products successfully also will depend in part on the extent to which coverage and reimbursement for these products and related treatments will be available from government authorities, private health insurers and other organizations. Even if we succeed in bringing one or more products to the market, these products may not be considered cost-effective, and the amount reimbursed for any products may be insufficient to allow us to sell our products on a competitive basis. Because our programs are in the early stages of development, we are unable at this time to determine their cost effectiveness or the likely level or method of reimbursement. Increasingly, the third-party payors who reimburse patients or healthcare providers, such as government and private insurance plans, are requiring that drug companies provide them with predetermined discounts from list prices, and are seeking to reduce the prices charged or the amounts reimbursed for biopharmaceutical products. If the price we are able to charge for any products we develop, or the reimbursement provided for such products, is inadequate in light of our development and other costs, our return on investment could be adversely affected. There may be significant delays in obtaining reimbursement for newly-approved drugs or therapeutic biologics, and coverage may be more limited than the purposes for which the drug or therapeutic biologic is approved by the FDA or similar regulatory authorities outside of the United States. Moreover, eligibility for reimbursement does not imply that any drug or therapeutic biologic will be reimbursed in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution. Interim reimbursement levels for new drugs or therapeutic biologics, if applicable, may also not be sufficient to cover our costs and may not be made permanent. Reimbursement rates may be based on payments allowed for lower-cost drugs or therapeutic biologics that are already reimbursed, may be incorporated into existing payments for other services and may reflect budgetary constraints or imperfections in Medicare data. Net prices for drugs or therapeutic biologics may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of drugs or therapeutic biologics from countries where they may be sold at lower prices than in the U.S. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement rates. Our inability to promptly obtain coverage and adequate reimbursement rates from both government-funded and private payors for new drugs or therapeutic biologics that we develop and for which we obtain regulatory approval could have a material and adverse effect on our operating results, our ability to raise capital needed to commercialize products and our financial condition.

A Breakthrough Therapy Designation by the FDA for any of our product candidates may not lead to a faster development or regulatory review or approval process, and it does not increase the likelihood that our product candidates will receive marketing approval.

We may seek a Breakthrough Therapy Designation for some of our product candidates. A breakthrough therapy is defined as a product that is intended, alone or in combination with one or more other products, 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. For products that have been designated as breakthrough therapies, interaction and communication between the FDA and the sponsor of the trial can help to identify the most efficient path for clinical development while minimizing the number of patients placed in ineffective control regimens. Products designated as breakthrough therapies by the FDA can also be eligible for accelerated approval.

Designation as a breakthrough therapy is within the discretion of the FDA. Accordingly, even if we believe one of our product candidates meets the criteria for designation as a breakthrough therapy, the FDA may disagree and instead determine not to make such designation. In any event, the receipt of a Breakthrough Therapy Designation for a product candidate may not result in a faster development process, review or approval compared to products considered for approval under conventional FDA procedures and does not assure ultimate approval by the FDA. In addition, even if one or more of our product candidates qualify as breakthrough therapies, the FDA may later decide that the products no longer meet the conditions for qualification and rescind the breakthrough designation.

A Fast Track Designation by the FDA for any of our product candidates may not actually lead to a faster development or regulatory review or approval process.

We may seek Fast Track Designation for some of our product candidates. If a product is intended for the treatment of a serious or life-threatening condition and the product demonstrates the potential to address unmet medical needs for this condition, the product sponsor may apply for Fast Track Designation. The FDA has broad discretion whether or not to grant this designation, so even if we believe a particular product candidate is eligible for this designation, we cannot assure you that the FDA would decide to grant it. Even if we do receive Fast Track Designation, we may not experience a faster development process, review or approval compared to conventional FDA procedures. The FDA may withdraw Fast Track Designation if it believes that the designation is no longer supported by data from our clinical development program.

We may seek Orphan Drug Designation for some of our product candidates, and we may be unsuccessful or may be unable to maintain the benefits associated with Orphan Drug Designation, including the potential for market exclusivity.

As part of our business strategy, we may seek Orphan Drug Designation for our product candidates, and we may be unsuccessful. Regulatory authorities in some jurisdictions, including the United States and Europe, may designate drugs and therapeutic biologics for relatively small patient populations as orphan drugs. Under the Orphan Drug Act, the FDA may designate a drug or therapeutic biologic as an orphan drug if it is a drug or therapeutic biologic intended to treat a rare disease or condition, which is generally defined as a patient population of fewer than 200,000 individuals annually in the United States, or a patient population greater than 200,000 in the United States where there is no reasonable expectation that the cost of developing the drug or therapeutic biologic will be recovered from sales in the United States. In the United States, Orphan Drug Designation entitles a party to financial incentives such as opportunities for grant funding toward clinical trial costs, tax advantages and user-fee waivers. In addition, if a product that has Orphan Drug Designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan drug exclusivity, which means that the FDA may not approve any other applications, including a full NDA or BLA, to market the same product 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 where the manufacturer is unable to assure sufficient product quantity.

Even if we obtain Orphan Drug Designation for our product candidates in specific indications, we may not be the first to obtain marketing approval of these product candidates for the orphan-designated indication due to the uncertainties associated with developing pharmaceutical products. In addition, exclusive marketing rights in the United States may be limited if we seek approval for an indication broader than the orphan-designated indication or may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition. Further, even if we obtain orphan drug exclusivity for a product, that exclusivity may not effectively protect the product from competition because different drugs or therapeutic biologics with different active moieties can be approved for the same condition. Even after an orphan product is approved, the FDA can subsequently approve the same drug or therapeutic biologic with the same active moiety for the same condition if the FDA concludes that the later drug or therapeutic biologic 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 therapeutic biologic nor gives the drug or therapeutic biologic any advantage in the regulatory review or approval process. In addition, while we may seek Orphan Drug Designation for our product candidates, we may never receive such designations.

Tax reform legislation passed in 2017 reduced the amount of the qualified clinical research costs for a designated orphan product that a sponsor may claim as a credit from 50% to 25%. Thus, further limiting the advantage and may impact our future business strategy of seeking the Orphan Drug Designation.

Risks Related to Ownership of Our Common Stock

Our quarterly operating results may fluctuate significantly or may fall below the expectations of investors or securities analysts, each of which may cause our stock price to fluctuate or decline.

We expect our operating results to be subject to quarterly fluctuations. Our net loss and other operating results will be affected by numerous factors, including:

- variations in the level of expense related to the ongoing development of our Probody platform, our product candidates or future development programs;
-

results of clinical trials, or the addition or termination of clinical trials or funding support by us, or existing or future collaborators or licensing partners;

- our execution of any additional collaboration, licensing or similar arrangements, and the timing of payments we may make or receive under existing or future arrangements or the termination or modification of any such existing or future arrangements;
- developments or disputes concerning patents or other proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our products;
- any intellectual property infringement lawsuit or opposition, interference or cancellation proceeding in which we may become involved;
- additions and departures of key personnel;

- strategic decisions by us or our competitors, such as acquisitions, divestitures, spin-offs, joint ventures, strategic investments or changes in business strategy;
- if any of our product candidates receives regulatory approval, the terms of such approval and market acceptance and demand for such product candidates;
- regulatory developments affecting our product candidates or those of our competitors; and
- changes in general market and economic conditions.

If our quarterly operating results fall below the expectations of investors or securities analysts, the price of our common stock could decline substantially. Furthermore, any quarterly fluctuations in our operating results may, in turn, cause the price of our stock to fluctuate substantially. We believe that quarterly comparisons of our financial results are not necessarily meaningful and should not be relied upon as an indication of our future performance.

Our stock price may be volatile and purchasers of our common stock could incur substantial losses.

Our stock price is volatile. Since our initial public offering ("IPO"), our stock had high and low sales prices in the range of $9.01 and $35.00 per share. The market price for our common stock may be influenced by many factors, including the other risks described in this section titled "Risk Factors" and the following:

- results of clinical trials and preclinical studies of our product candidates, or those of our competitors or our collaborators;
- regulatory or legal developments in the U.S. and other countries, especially changes in laws or regulations applicable to our products;
- the success of competitive products or technologies;
- introductions and announcements of new products by us, our future commercialization partners, or our competitors, and the timing of these introductions or announcements;
- actions taken by regulatory agencies with respect to our products, clinical studies, manufacturing process or sales and marketing terms;
- actual or anticipated variations in our financial results or those of companies that are perceived to be similar to us;
- the success of our efforts to acquire or in-license additional technologies, products or product candidates;
- developments concerning any future collaborations, including but not limited to those with our sources of manufacturing supply and our commercialization partners;
- market conditions in the pharmaceutical and biotechnology sectors;
- announcements by us or our competitors of significant acquisitions, strategic collaborations, joint ventures or capital commitments;
- developments or disputes concerning patents or other proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our products;
- our ability or inability to raise additional capital and the terms on which we raise it;
- the recruitment or departure of key personnel;
- changes in the structure of healthcare payment systems;
- actual or anticipated changes in earnings estimates or changes in stock market analyst recommendations regarding our common stock, other comparable companies or our industry generally;
- our failure or the failure of our competitors to meet analysts' projections or guidance that we or our competitors may give to the market;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- announcement and expectation of additional financing efforts;
- speculation in the press or investment community;
- trading volume of our common stock;

- sales of our common stock by us or our stockholders;
- the concentrated ownership of our common stock;
- changes in accounting principles;
- terrorist acts, acts of war or periods of widespread civil unrest;
- natural disasters and other calamities; and
- general economic, industry and market conditions.

In addition, the stock markets in general, and the markets for pharmaceutical, biopharmaceutical and biotechnology stocks in particular, have experienced extreme volatility that has been often unrelated to the operating performance of the issuer. These broad market and industry factors may seriously harm the market price of our common stock, regardless of our operating performance.

The future issuance of equity or of debt securities that are convertible into equity will dilute our share capital.

We may choose to raise additional capital in the future, depending on market conditions, strategic considerations and operational requirements. To the extent that additional capital is raised through the issuance of shares or other securities convertible into shares, our stockholders will be diluted. Future issuances of our common stock or other equity securities, or the perception that such sales may occur, could adversely affect the trading price of our common stock and impair our ability to raise capital through future offerings of shares or equity securities. No prediction can be made as to the effect, if any, that future sales of common stock or the availability of common stock for future sales will have on the trading price of our common stock.

The employment agreements with our executive officers may require us to pay severance benefits to officers in connection with termination of employment or upon a change of control of us, which could harm our financial condition.

Each of our executive officers is entitled to receive a lump sum payment equal to nine months or one year of his or her base salary as well as continued medical and dental coverage for a period of nine months or one year following his or her termination of employment due to good reason or without cause. In the event of a change in control and a termination of employment without cause or due to good reason, each of our executive officers would similarly receive nine months or one year of his or her base salary as well as continued medical and dental coverage for a period of nine months or one year, as well as an additional lump sum payment equal to three-fourths or 100% of his or her target annual bonus for the calendar year in which his or her employment is terminated and full vesting of his or her outstanding option awards. The accelerated vesting of options could result in dilution to our existing stockholders and harm the market price of our common stock. Furthermore, the payment of these severance benefits could harm our financial condition. In addition, these potential severance payments may discourage or prevent third parties from seeking a business combination with us.

An active market for our common stock may not be maintained.

Prior to our IPO in October 2015, there had been no public market for shares of our common stock. Our stock began trading on The Nasdaq Global Select Market in 2015, and we can provide no assurance that we will be able to maintain an active trading market on The Nasdaq Global Select Market or any other exchange in the future. If an active market for our common stock is not maintained, it may be difficult for our stockholders to sell shares without depressing the market price for the shares or at all. 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 adverse or misleading opinions regarding our stock, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that industry or securities analysts publish about us or our business. If 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 target 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.

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 based on publicly available filings made with the SEC and their respective affiliates beneficially owned approximately 44.9% of our outstanding common 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 our stockholders may feel are in their best interest.

Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our amended and restated certificate of incorporation and our amended and restated bylaws may delay or prevent an acquisition of us or a change in our management. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors. Because our board of directors is responsible for appointing the members of our management team, these provisions could in turn affect any attempt by our stockholders to replace current members of our management team. These provisions include:

- a prohibition on actions by our stockholders by written consent;
- a requirement that special meetings of stockholders, which our company is not obligated to call more than once per calendar year, be called only by the chairman of our board of directors, our chief executive officer, our board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors, or, subject to certain conditions, by our secretary at the request of the stockholders holding of record, in the aggregate, shares entitled to cast not less than ten percent of the votes at a meeting of the stockholders (assuming all shares entitled to vote at such meeting were present and voted);
- advance notice requirements for election to our board of directors and for proposing matters that can be acted upon at stockholder meetings;
- division of our board of directors into three classes, serving staggered terms of three years each; and
- the authority of the board of directors to issue preferred stock with such terms as the board of directors may determine.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, as amended, which prohibits a person who owns in excess of 15 percent of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15 percent of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner. These provisions would apply even if the proposed merger or acquisition could be considered beneficial by some stockholders.

We incur increased costs as a result of operating as a public company, and our management is required to devote substantial time to new compliance initiatives and corporate governance practices.

As a public company, we incur significant legal, accounting and other expenses. The Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of The Nasdaq Global Select Market and other applicable securities rules and regulations impose various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance

practices. Our management and other personnel need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations increase our legal and financial compliance costs and make some activities more time consuming and costly. For example, we expect that these rules and regulations may make it more difficult and more expensive for us to obtain director and officer liability insurance, which in turn could make it more difficult for us to attract and retain qualified members of our board of directors. However, these rules and regulations are often subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices.

If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act of 2002 in a timely manner or with adequate compliance, we may be subject to sanctions by regulatory authorities.

Section 404 of the Sarbanes-Oxley Act of 2002 requires that we evaluate and determine the effectiveness of our internal controls over financial reporting and provide a management report on the internal control over financial reporting. 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 evaluate our internal controls systems to allow management to report on the effectiveness of the operation of our internal controls. Based on our market capitalization at June 30, 2018, we ceased to be an emerging growth company at December 31, 2018 and, accordingly, are now required to have an opinion from our independent registered public accounting firm on the effectiveness of our internal controls over financial reporting for our 2018 Annual Report and future annual reports.

However, if we are not able to comply with the requirements of Section 404 in a timely manner, or if we or our independent registered public accounting firm identify deficiencies in our internal controls that are deemed to be material weaknesses, we could be subject to sanctions or investigations by The Nasdaq Global Select Market, the SEC or other regulatory authorities, which would entail expenditure of additional financial and management resources and could materially adversely affect our stock price. Deficient internal controls could also cause us to fail to meet our reporting obligations or cause investors to lose confidence in our reported financial information, which could have a negative effect on our stock price.

Because we do not anticipate paying any cash dividends on our capital stock in the foreseeable future, capital appreciation, if any, will be your sole source of gain.

We have never declared or paid cash dividends on our capital stock. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future.

We may incur significant costs from class action litigation due to our expected stock volatility.

Our stock price may fluctuate for many reasons, including as a result of public announcements regarding the progress of our development efforts or the development efforts of future collaborators or competitors, the addition or departure of our key personnel, variations in our quarterly operating results and changes in market valuations of biopharmaceutical and biotechnology companies.

This risk is especially relevant to us because biopharmaceutical and biotechnology companies have experienced significant stock price volatility in recent years. When the market price of a stock has been volatile as our stock price may be, holders of that stock have occasionally brought securities class action litigation against the company that issued the stock. If any of our stockholders were to bring a lawsuit of this type against us, even if the lawsuit is without merit, we could incur substantial costs defending the lawsuit. The lawsuit could also divert the time and attention of our management.

Our amended and restated bylaws designate the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated bylaws provide that, subject to limited exceptions, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, any action asserting a claim against us arising pursuant to any provision of the Delaware General

Corporation Law, as amended, our amended and restated certificate of incorporation or our amended and restated bylaws, any action to interpret, apply, enforce or determine the validity of our amended and restated certificate of incorporation or our amended and restated bylaws or any other action asserting a claim against us that is governed by the internal affairs doctrine. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and to have consented to the provisions of our amended and restated certificate of incorporation described above. This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and employees. Alternatively, if a court were to find these provisions of our amended and restated certificate of incorporation inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business and financial condition.

Item 1B. Unresolved Staff Comments

None

Item 2. Properties

Our principal executive office is currently located in South San Francisco, California, and consists of approximately 76,000 square feet of office and research and development space, all of which is located in a single building, under a lease that expires in October 2026. We believe that our existing facilities are sufficient for our current needs.

Item 3. Legal Proceedings

We are not currently a party to any material litigation or 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 "CTMX" since our initial public offering in October 2015. Prior to that time, there was no public market for our common stock.

Holders of Record

As of January 31, 2019, there were approximately 37 stockholders of record of our common stock. The actual number of stockholders is greater than this number of record holders, and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers and other nominees. This number of holders of record also does not include stockholders whose shares may be held in trust by other entities.

Dividend Policy

We currently intend to retain future earnings, if any, for use in operation of our business and to fund future growth. We have never declared or paid any cash dividends on our capital stock and do not anticipate paying any cash dividends in the foreseeable future. Payment of cash dividends, if any, in the future will be at the discretion of our board of directors and will depend on then-existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem relevant.

Stock Performance Graph

The following graph shows the total stockholder's return on an investment of $100 in cash at market close on October 8, 2015 (the first day of trading of our common stock), through December 31, 2018 for (i) our common stock, (ii) the Nasdaq Composite Index and (iii) the Nasdaq Biotechnology Index. Pursuant to applicable Securities and Exchange Commission rules, all values assume reinvestment of pre-tax amount of all dividends; however, no dividends have been declared on our common stock to date. The stockholder return shown on the graph below is not necessarily indicative of future performance, and we do not make or endorse any predictions as to future stockholder return. This graph shall not be deemed "soliciting material" or be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934 as amended (the "Exchange Act"), or otherwise subject to the liabilities under that Section, and shall not be deemed to be incorporated by reference into any of our filings 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.

$100 investment in stock or index	October 8, 2015	December 31, 2015	December 31, 2016	December 31, 2017	December 31, 2018
CytomX (CTMX)	$ 100.00	$ 161.78	$ 85.19	$ 163.64	$ 117.05
Nasdaq Composite Index (IXIC)	$ 100.00	$ 104.09	$ 111.90	$ 143.50	$ 137.92
Nasdaq Biotech Index (^NBI)	$ 100.00	$ 110.25	$ 86.34	$ 104.52	$ 94.77

Securities Authorized for Issuance Under Equity Compensation Plans

The information required by this Item regarding equity compensation plans is incorporated by reference to the information set forth in PART III. Item 12 of this Annual Report on Form 10-K.

Use of Proceeds from Registered Securities

None.

Recent Sales of Unregistered Equity Securities

None.

Issuer Purchases of Equity Securities

None.

Item 6. Selected Financial Data

You should read the following selected financial data together with the information under “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our financial statements and related notes included in this Form 10-K. The statement of operations data for each of the years ended December 31, 2018, 2017 and 2016 and the balance sheet data as of December 31, 2018 and 2017 are derived from our audited financial statements included elsewhere in this Form 10-K. The statement of operations data for each of the years ended December 31, 2015 and 2014 and the selected balance sheet data as of December 31, 2016, 2015 and 2014 are derived from our audited financial statements which are not included in this Annual Report on Form 10-K. Our historical results of any prior periods are not necessary indicative of results to be expected in any future period.

We adopted the Accounting Standards Codification 606, Revenue from Contracts with Customers (“ASC 606”), effective January 1, 2018 on a modified retrospective basis. As such, the prior period amounts were not restated and continue to be presented in accordance with Accounting Standards Codification 605, Revenue Recognition (“ASC 605”).

Statement of Operations Data:

	Year Ended December 31,				
(in thousands, except share and per share data)	2018	2017	2016	2015	2014
Revenues	$59,502	$71,623	$12,845	$5,941	$2,751
Revenues from related parties	—	—	2,198	1,771	2,326
Total revenues	59,502	71,623	15,043	7,712	5,077
Operating expenses:					
Research and development	103,866	92,277	54,755	28,357	28,302
General and administrative	33,510	25,605	19,874	12,558	6,540
Total operating expenses	137,376	117,882	74,629	40,915	34,842
Loss from operations	(77,874)	(46,259)	(59,586)	(33,203)	(29,765)
Interest income	7,641	2,674	736	1,315	7
Interest expense	—	—	—	(1,732)	(487)
Other income (expense), net	(68)	(27)	(69)	(1,744)	(55)
Loss before income taxes	(70,301)	(43,612)	(58,919)	(35,364)	(30,300)
Provision for (benefit from) income taxes	14,303	(513)	(19)	10	10
Net loss	(84,604)	(43,099)	(58,900)	(35,374)	(30,310)
Accretion to redemption value and cumulative dividends on preferred stock	—	—	—	(6,705)	(4,566)
Net loss attributable to common stockholders	$(84,604)	$(43,099)	$(58,900)	$(42,079)	$(34,876)
Net loss per share attributable to common stockholders, basic and diluted	$(2.03)	$(1.16)	$(1.63)	$(4.90)	$(35.25)
Shares used to compute net loss per share attributable to common stockholders, basic and diluted	41,664,382	37,166,830	36,234,732	8,595,247	989,453
Other comprehensive loss:					
Changes in unrealized gain (losses) on investments	1	(67)	49	(76)	—
Comprehensive loss	$(84,603)	$(43,166)	$(58,851)	$(35,450)	$(30,310)

Balance Sheet Data:

(in thousands)	As of December 31, 2018	2017	2016	2015	2014
Balance Sheet Data:					
Cash, cash equivalents and short term investments	$436,127	$374,110	$181,938	$186,711	$64,396
Working capital	347,567	327,454	152,380	174,015	55,690
Total assets	457,108	397,644	199,128	197,215	73,062
Total long-term debt, current and non-current	—	—	—	—	2,987
Redeemable convertible preferred stock	—	—	—	—	76,236
Convertible preferred stock	—	—	—	—	474
Accumulated deficit	(314,981)	(219,465)	(176,366)	(117,466)	(78,138)
Total stockholders' equity (deficit)	130,883	69,896	78,479	126,068	(78,541)

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion should be read in conjunction with the attached financial statements and notes thereto. This Annual Report on Form 10-K, including the following sections, contains forward-looking statements within the meaning of the federal securities laws. These statements are subject to risks and uncertainties that could cause actual results and events to differ materially from those expressed or implied by such forward-looking statements. For a detailed discussion of these risks and uncertainties, see the "Risk Factors" section in Item 1A of this Annual Report on Form 10-K. We caution the reader not to place undue reliance on these forward-looking statements, which reflect management's analysis only as of the date of this Form 10-K. We undertake no obligation to update forward-looking statements, which reflect events or circumstances occurring after the date of this Form 10-K.

Overview

We are a clinical-stage, oncology-focused biopharmaceutical company with a vision of transforming lives with safer, more effective therapies. We are pioneering a novel class of investigational antibody therapeutics, based on our Probody™ technology platform, for the treatment of cancer. The Probody therapeutic approach is designed to more specifically target antibody therapeutics to the tumor microenvironment and minimize drug activity in healthy tissue and in circulation. We believe this approach has the potential to make meaningful enhancements to the combined efficacy and safety profile of antibody therapeutics, known as the "therapeutic window" and also to enable new targeted therapies. We believe that Probody therapeutics have the potential to create or widen the therapeutic window for certain antibody therapeutics, allowing for the development of new approaches to the treatment of cancer. We are utilizing our Probody Platform to develop a pipeline of potential best-in-class immunotherapies against clinically-validated targets and potential first-in-class therapeutics against novel, difficult to drug targets. Furthermore, we believe the Probody therapeutic approach has the potential to enable safer, more effective combination therapy for cancer.

Our most advanced product candidate is CX-072, a wholly owned Probody therapeutic targeting programmed cell death ligand 1 ("PD-L1"), a clinically and commercially validated immuno-oncology target. CX-072 is designed to uncouple the anti-cancer activity of PD-L1 inhibitors from the associated autoimmune toxicities by inhibiting PD-L1 in the tumor microenvironment with minimal engagement in healthy tissue. We are currently evaluating CX-072 in a Phase 1/2 study that we call PROCLAIM-CX-072. This study is designed to assess the safety, activity, and translational biology of CX-072 as a single agent and in combination with other anticancer therapies. We disclosed initial clinical proof of concept data on CX-072 at various oncology conferences in 2018. In February 2019, we disclosed additional clinical safety and efficacy data on CX-072 at a Research and Development Day hosted by CytomX management ("CytomX R&D Day").

Our second most advanced product candidate is CX-2009, a wholly owned Probody Drug Conjugate directed against CD166, a novel drug target. Probody Drug Conjugates are unique, CytomX-designed Probody therapeutic versions of a class of drugs called Antibody Drug Conjugates (ADCs), which are antibodies that have been conjugated to a small molecule cytotoxic agent via a labile chemical linker. Because our Probody therapeutics are designed to minimize binding of potent anti-cancer therapy to normal tissues, we believe we can address a new class of targets with attractive molecular features that were previously unsuitable because of high expression on normal tissues. CD166 is an example of this kind of target. CD166 is highly and homogenously expressed in multiple different tumors types, which makes it an attractive target for a Probody drug conjugate therapeutic; however, the high expression of CD166 on normal tissues makes this a difficult target to drug with a traditional ADC. CX-2009 is currently in the dose escalation portion of a Phase 1/2 study. In February 2019, we disclosed initial clinical data on CX-2009 at the CytomX R&D Day.

In addition to our wholly owned programs, we have entered into several strategic collaborations with leading oncology-focused pharmaceutical companies, such as AbbVie Inc., through its subsidiary AbbVie Ireland Unlimited

Company (“AbbVie”), Amgen, Inc. (“Amgen”) and Bristol-Myers Squibb Company (“BMS”). The most advanced program from our partnerships is a BMS-986249, a CTLA-4 Probody therapeutic, which BMS is currently advancing through the dose escalation phase of a Phase 1/2 clinical trial. We are also treating patients in a Phase 1/2 clinical study for CX-2029, a PDC targeting the highly expressed target, CD71 that we have partnered with AbbVie. We have also extended our Probody platform to the T-cell engaging bispecific modality. Our most advanced program in that modality is an Epidermal Growth Factor Receptor-CD3 (“EGFR-CD3”) T-cell bispecific, which is currently in lead optimization stage, and which we are developing in partnership with Amgen.

We currently have three product candidates enrolling patients in clinical trials that we are conducting and one product candidate enrolling patients in clinical trials which our partner, BMS, is conducting, but we do not have any product candidates approved for sale, and we continue to incur significant research and development and general administrative expenses related to our operations. We are not profitable and have incurred losses in each year since our founding in 2008. Our net loss was $84.6 million, $43.1 million and $58.9 million for 2018, 2017 and 2016, respectively. As of December 31, 2018 and 2017 we had an accumulated deficit of $315.0 million and $219.5 million, respectively. We expect to continue to incur significant losses for the foreseeable future.

Regulatory agencies, including the FDA, regulate many aspects of a product candidate's life cycle, including research and development and preclinical and clinical testing. We will need to commit significant time, resources, and funding to develop our wholly owned and partnered product candidates in clinical trials, including CX-072, CX-2009 and CX-2029 as well as any additional product candidates for which we initiate clinical trials in 2019 and beyond. We are unable to provide the nature, timing, and estimated costs of the efforts necessary to complete the development of our product candidates because, among other reasons, of regulatory uncertainty, manufacturing limitations and the pace of enrollment of our clinical trials, which is a function of many factors, including the availability and proximity of patients with the relevant condition.

We currently have no manufacturing capabilities and do not intend to establish any such capabilities in the near term. As such, we are dependent on third parties to supply our product candidates according to our specifications, in sufficient quantities, on time, in compliance with appropriate regulatory standards and at competitive prices.

Components of Results of Operations

Revenue

Our revenue to date has been primarily derived from non-refundable license payments, milestone payments and reimbursements for research and development expenses under our research, collaboration, and license agreements. We recognize revenue from upfront payments over the term of our estimated period of performance under the agreement using a cost-based input method or a common measure of progress for the entire performance obligation. In addition to receiving upfront payments, we may also be entitled to milestone and other contingent payments upon achieving predefined objectives. Revenue from milestones and other contingent payments, when it is probable that there will not be a significant revenue reversal, is also recognized over the performance period based on a similar method. Reimbursements from BMS and Pfizer for research and development costs incurred under our research, collaboration and license agreements with them are classified as revenue.

For the foreseeable future, we do not expect to generate any revenue from the sale of products unless and until such time as our product candidates have advanced through clinical development and obtained regulatory approval. We expect that any revenue we generate in the foreseeable future will fluctuate from year to year as a result of the timing and amount of milestones and other payments from our collaboration agreements with AbbVie, Amgen, BMS, ImmunoGen and any other collaboration partners, and as a result of the fluctuations in the research and development expenses we incur in the performance of assigned activities under these agreements.

AbbVie Ireland Unlimited Company ("AbbVie"), one of our collaboration partners, entered into a license agreement with Seattle Genetics, Inc. ("SGEN") to license certain intellectual property rights. As part of our collaboration agreement with AbbVie, we pay SGEN sublicense fees. These sublicense fees are treated as reductions to the transaction price and combined with the performance obligation to which they relate. Milestone payments, when considered probable of being reached and when a significant revenue reversal would not be probable of occurring, are also recorded net of the associated sublicense fees and included in the transaction price.

On January 1, 2018, we adopted Accounting Standards Update, or ASU, No. 2014-09, Revenue from Contracts with Customers (Topic 606) using the modified retrospective transition method. See further discussion under " Critical Accounting Policies and Estimates – Revenue Recognition."

Research and Development Expenses

Our research and development expenses consist primarily of costs incurred to conduct research, such as the discovery and development of our product candidates, clinical development including activities with third parties, such as CROs and CMOs, the manufacture of drug products used in clinical trials, as well as the development of product candidates pursuant to our research, collaboration and license agreements. Research and development expenses include personnel costs, including stock-based compensation expense, contractor services, laboratory materials and supplies, depreciation and maintenance of research equipment, and an allocation of related facilities costs. We expense research and development costs as incurred.

We expect our research and development expenses to increase substantially in absolute dollars in the future as we advance our product candidates through clinical trials, initiate additional clinical trials, and pursue regulatory approval of our product candidates. For example, we commenced enrollment of our Phase 1/2 clinical trial of CX-072, our candidate directed against PD-L1, for cancer and treated our first patient in January 2017, and our Phase 1/2 clinical trial of CX-2009, our PDC candidate directed against CD-166, for cancer and treated our first patient in June 2017. In June 2018, we commenced enrollment of our Phase 1/2 clinical trial for CX-2029, our CD71 Probody Drug Conjugate being developed in collaboration with AbbVie. The process of conducting the necessary clinical research to obtain regulatory approval is costly and time-consuming. The actual probability of success for our product candidates may be affected by a variety of factors including: the safety and efficacy of our product candidates, early clinical data, investment in our clinical program, the ability of collaborators to successfully develop our licensed product candidates, competition, manufacturing

capability and commercial viability. We may never succeed in achieving regulatory approval for any of our product candidates. 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 product candidates.

General and Administrative Expenses

General and administrative expenses include personnel costs, expenses for outside professional services and other allocated expenses. Personnel costs consist of salaries, bonuses, benefits and stock-based compensation. Outside professional services consist of legal, accounting and audit services and other consulting fees. Allocated expenses consist of rent expense related to our office and research and development facility. We expect to incur additional expenses as a result of operating as a public company, including expenses related to compliance with the rules and regulations of the SEC and the Sarbanes-Oxley Act of 2002 and those of any national securities exchange on which our securities are traded, additional insurance expenses, investor relations activities and other administrative and professional services. We also expect to increase our administrative headcount to operate as a public company and as we advance our product candidates through clinical development, which will also increase our general and administrative expenses.

Interest Income

Interest income primarily consists of interest income from our cash equivalents and short-term investments, and accretion of discounts or amortization of premiums on our short-term investments.

Other Income (Expense), Net

Other income (expense), net consists primarily of changes to currency exchange rates.

Provision for (Benefit from) Income Taxes

Income taxes are recorded in accordance with ASC 740, Accounting for Income Taxes, or ASC 740, which provides for deferred taxes using an asset and liability approach. We recognize deferred tax assets and liabilities for the expected future tax consequences of events that have been included in our financial statements or tax returns. We determine our deferred tax assets and liabilities based on differences between the financial reporting and tax bases of assets and liabilities, which are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. Valuation allowances are provided, if based upon the weight of available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

We also account for uncertain tax positions in accordance with the provisions of ASC 740. When uncertain tax positions exist, we recognize the tax benefit of tax positions to the extent that the benefit will more likely than not be realized. The determination as to whether the tax benefit will more likely than not be realized is based upon the technical merits of the tax position as well as consideration of the available facts and circumstances.

On December 22, 2017, the U.S. enacted the Tax Cuts and Jobs Act (“Tax Act”), which includes significant changes to the U.S. corporate tax system. Effective January 1, 2018, the Tax Act reduced the U.S. federal corporate tax rate from 35% to 21%, and transitioned from a worldwide tax system to a territorial tax system, and eliminated or reduced

certain domestic deductions among other changes. The Tax Act introduced new provisions including the Global Intangible Low-Taxed Income (“GILTI”), Foreign Derived Intangible Income (“FDII”), Base Erosion Anti-Abuse Tax (“BEAT"), expanded bonus depreciation and changed deductions for executive compensation and interest expense. See "Part II. Item 8. Financial Statements and Supplementary Data, Note 14. Income Taxes" in the accompanying Notes to the consolidated financial statements for more information regarding the impact of the Tax Act.

Comparison of Years Ended December 31, 2018 and 2017

Revenue

	Year Ended December 31,		
	2018	2017	Change
	(in thousands)		
Revenue	$59,502	$71,623	$(12,121)

Revenue decreased by $12.1 million during the year ended December 31, 2018 compared to the corresponding period in 2017. The following table summarizes our revenue by collaboration partner during the respective periods:

	Year Ended December 31,		
	2018	2017	Change
	(in thousands)		
AbbVie	$18,997	$19,434	$(437)
Amgen	4,899	1,311	3,588
BMS	32,780	36,492	(3,712)
ImmunoGen	1,471	12,503	(11,032)
Pfizer	1,355	1,883	(528)
Total Revenue	$59,502	$71,623	$(12,121)

The variances in revenue for 2018 compared to 2017 were partially due to the adoption of ASC 606.

Under ASC 605, total revenue for 2018 would have been $66.0 million, a decrease of $5.6 million from $71.6 million in 2017, primarily due to a $3.0 million net decrease in milestone payments, as well as a $2.6 million decrease in the recognition of deferred revenues in 2018.

- In 2017, a total of $24.0 million in milestone payments were recognized, including $14.0 million (net of the payment of an associated license fee of $1.0 million to Seattle Genetics ("SGEN") under the Seattle Genetics Agreement) received from AbbVie for meeting the criteria to begin the CD71 GLP toxicology studies under the AbbVie Agreements and $10.0 million received from BMS related to the IND filing for BMS-986249 in 2017.
- In 2018, a $21.0 million milestone payment (net of the payment of an associated sublicense fee of $4.0 million to SGEN) was received from AbbVie for the achievement of the successful IND filing criteria related to CX-2029.
- The $2.6 million decrease in recognition of deferred revenue under ASC 605 was attributable to a decrease of $11.8 million related to Immunogen, partially offset by a $6.2 million increase and a $3.1 million increase related to BMS and Amgen, respectively.

The difference between the amount of revenue recognized under ASC 606 and the amount that would have been recognized under ASC 605 was primarily a result of the difference in how revenue is recognized related to the $21.0 million (net of the payment of an associated sublicense fee of $4.0 million to SGEN) CD71 milestone payment. Under ASC 606, the milestone payment is included in the transaction price and recognized over time based on the total estimated percentage completed to-date. Under ASC 605, the entire $21.0 million would have been recognized upon satisfaction of the successful IND filing criteria.

The decrease in revenue from AbbVie of $0.4 million for 2018 compared to 2017 was primarily due to the recognition of $14.0 million (net of the payment of an associated license fee of $1.0 million to SGEN) in milestone revenue as a result of completion of certain milestones under the CD71 Agreement during the third quarter of 2017, which was

partially offset by the recognition of $11.7 million of revenue based on the percentage completed to-date on the project of the $21.0 million milestone payment received(net of the payment of an associated sublicense fee of $4.0 million to SGEN) and added to the transaction price in May 2018 for the achievement of the IND filing success criteria under the CD71 Agreement; and an increase of $1.9 million in revenue resulting from the change in the method of revenue recognition for the CD71 Agreement from straight-line under ASC 605 to percentage-of-completion under ASC 606, which we adopted on January 1, 2018.

Revenue from Amgen under the Amgen Agreement entered into in September 2017 increased by $3.6 million for 2018 compared to 2017. The increase in revenue was primarily due to a full year of revenue recognized for 2018 as compared to a partial year's revenue recognition for this agreement starting in October 2017. In the fourth quarter of 2018, the joint steering committee ("JSC") officially terminated any further work on two molecules in the Amgen EGFR project due to unacceptable test results. The current plan is to evaluate other molecules as part of the candidate identification phase of the project, and as a result, there has been a change in estimate of the projected costs and an extended research service period to seven years. As such, the revenue growth in 2018 was not as large as it may have been before this change in estimate in late 2018.

The decrease in revenue from BMS of $3.7 million for 2018 compared to 2017 was primarily due to a $10.0 million milestone payment related to the IND filing for BMS-986249 by BMS in 2017, a decrease of $1.3 million in amortization of certain deferred revenue resulting from an increase in the estimated length of the research terms during late April 2017, which caused average monthly amortization in 2018 to be less than that reported in 2017, and a decrease in service revenue of $0.3 million for 2018 compared to that in 2017. These factors that contributed to larger revenue in 2017 were partially offset by an increase of $7.9 million in amortization of deferred revenue for 2018 related to the $200.0 million upfront payment we received in the second quarter of 2017 as a result of Amendment Number 1 to Extend Collaboration and License Agreement ("BMS Amendment) entered into in March 2017.

The decrease in revenue from ImmunoGen of $11.0 million for 2018 compared to 2017 was the result of the recognition of $6.5 million in revenue in 2017 related to the delivery of the ImmunoGen 2017 License to ImmunoGen in connection with the Immunogen Research Agreement, as well as the recognition of $5.9 million of revenue during 2017 resulting from an amendment to the ImmunoGen Research Agreement extending the research term to June 2018, which was partially offset by an increase of $1.4 million in revenue in 2018 due to the related extension of the research term to June 2018.

The decrease in revenue from Pfizer of $0.5 million for 2018 compared to 2017 was as a result of Pfizer terminating our Research Collaboration, Option and License Agreement in March 2018.

Research and Development Expenses

	Year Ended December 31,		
	2018	2017	Change
	(in thousands)		
Research and development	$103,866	$92,277	$11,589

Research and development expenses increased by $11.6 million during 2018 compared to 2017. The increase was primarily attributable to the following:

- an increase of $10.0 million in lab services and $12.3 million in clinical trial expenses related to CX-072, CX-2009 and CX-2029 Phase 1/2 clinical development and the ramp up for IND filing and clinical trial preparation for CX-188,
- an increase of $10.5 million in personnel related expenses and a $1.2 million allocation of information technology and facilities-related expenses resulting from an increase in headcount,
- an increase of $0.9 million in lab supplies and
- an increase of $0.7 million in consulting expenses.

These increases were partially offset by:

- a $10.7 million of non-cash research and development expense recognized in 2017 related to the estimated fair value of the CytomX Product under the Amgen Agreement,
-

a $10.0 million sublicense fee payment made to UCSB in 2017, which was triggered by the $200 million upfront payment made by BMS in connection with our expanded collaboration,

- a $2.1 million sublicense fee payable to UCSB recognized as a result of the Amgen Agreement in 2017 and
- a $1.0 million sublicense payment to ImmunoGen upon the commencement of enrollment of Phase 1/2 and first patient dosing in the clinical trial for CX-2009 during the second quarter of 2017.

The following table summarizes our research and development expenses by program incurred during the respective periods:

	Year Ended December 31,		
	2018	2017	Change
External costs incurred by product candidate (target):	(in thousands)		
CX-072 (PD-L1)	$19,393	$9,290	$10,103
CX-2009 (CD166)	16,615	8,533	8,082
CX-2029 (CD71)	10,798	9,550	1,248
Other wholly owned and partnered programs	10,261	21,099	(10,838)
General research and development expenses	10,547	18,976	(8,429)
	67,614	67,448	166
Internal Costs	36,252	24,829	11,423
Total research and development expenses	$103,866	$92,277	$11,589

The decrease in "Other wholly owned and partnered programs" for 2018 compared to 2017 was primarily due to $10.7 million of research and development expense recognized during 2017 related to the estimated fair value of the CytomX Product under the Amgen Agreement. The decrease in general research and development expenses for 2018 compared to 2017 was primarily a payment of $10.0 million in sublicense fee under the UCSB Agreement in 2017. The increase in other categories of external costs for 2018 was due primarily to increases in laboratory contracts and services and clinical trial expenses related to CX-072, CX-2009 and CX-2029 Phase 1/2 clinical development and the ramp up for IND filing and clinical trial preparation for CX-188. The increase in internal costs for 2018 was primarily due to increase in personnel-related expenses and allocation of information technology and facilities-related expenses resulting from an increase in headcount.

General and Administrative Expenses

	Year Ended December 31,		
	2018	2017	Change
	(in thousands)		
General and administrative	$33,510	$25,605	$7,905

General and administrative expenses increased by $7.9 million during 2018 compared to 2017. The increase was attributable to an increase of $5.6 million in personnel-related expenses primarily due to an increase in headcount, and an increase of $2.3 million in subscription services and consulting or services expenses related to audit, strategic planning, tax compliance, legal compliance and facilities.

Interest Income(Expense) and Other Income (Expense), Net

	Year Ended December 31,		
	2018	2017	Change
	(in thousands)		
Interest income	$7,641	$2,674	$4,967
Other income (expense), net	(68)	$(27)	(41)
Total interest and other income (expense)	$7,573	$2,647	$4,926

Interest Income

Interest income increased by $5.0 million for 2018 compared to 2017. The increase was primarily attributable to an increase in interest earned on our short-term investments due to an overall increase in our cash and cash equivalents position resulting from the common stock offering completed in July 2018.

Other Income (Expense), Net

Other income (expense), net increased by $41,000 in expense was primarily due to increased loss in currency exchange resulting from unfavorable movements in the US dollar relative to Euros.

Provision for (Benefit from) Income Taxes

	Year Ended December 31,		
	2018	2017	Change
	(in thousands)		
Provision for (benefit from) income taxes	$14,303	$(513)	$14,816

Provision for income tax expense increased to $14.3 million in 2018 from a tax benefit of $0.5 million in 2017. The income tax expense was generated as a result of a temporary difference in the recognition of revenue under tax and U.S. GAAP authoritative guidance, primarily due to revenue recognition for tax purposes in 2018 of the upfront payments received pursuant to the BMS Amendment entered into in March 2017, and the Amgen Agreement entered into in September 2017, prior to revenue recognition for U.S. GAAP purposes. These upfront payments will be recognized over the related research and development service periods under U.S. GAAP for book purposes and the associated deferred tax assets due to the timing differences are subject to a valuation allowance. In addition, the ownership changes under Section 382 of the IRC in 2017 limited the use of available net operating losses and research tax credits against our 2018 taxable income.

Comparison of Years Ended December 31, 2017 and 2016

Revenue

	Year Ended December 31,		
	2017	2016	Change
	(in thousands)		
Revenue	$71,623	$15,043	$56,580

Revenue increased $56.6 million during the year ended December 31, 2017 compared to the corresponding period in 2016. The following table summarizes our revenue by collaboration partner during the respective periods:

	Year Ended December 31,		
	2017	2016	Change
	(in thousands)		
AbbVie	$19,434	$3,268	$16,166
Amgen	1,311	—	1,311
BMS	36,492	9,577	26,915
ImmunoGen	12,503	—	12,503
Pfizer	1,883	2,198	(315)
Total Revenue	$71,623	$15,043	$56,580

The increase in revenue from AbbVie of $16.2 million for the year ended December 31, 2017 compared to the corresponding period in 2016 was due to recognition of $14.0 million, net of the associated sublicense fee, from the milestone payment we received as a result of our achievement of certain milestones required to be met to begin GLP toxicology studies under the AbbVie Agreements, and an increase of $2.2 million, net of the related deferred costs, related to the recognition of the upfront payment we received in April 2016.

We entered into the Amgen Agreement in September 2017 and we recognized $1.3 million of upfront payments in 2017.

The increase in revenue from BMS of $26.9 million for the year ended December 31, 2017 compared to the corresponding period in 2016 was due to an increase of $17.1 million related to the recognition of an upfront payment we received in connection with the expansion of our collaboration, an increase of $2.1 million related to the recognition of payments made in connection with the selection of its fourth target under our collaboration and license agreement with BMS and the acceleration of the research timeline triggered by BMS's selection of a fourth target under the BMS Agreement, and a milestone payment of $10.0 million related to the IND filing for BMS-986249 by BMS in 2017. These increases were partially offset by a milestone payment of $2.0 million payment received in 2016 for the selection of BMS-986249 clinical candidate, and a decrease of $0.3 million related to research and development services provided to BMS.

The increase in revenue from ImmunoGen of $12.5 million for the year ended December 31, 2017 compared to the corresponding period in 2016 was a result of the recognition of $6.6 million for the delivery of the ImmunoGen 2017 License to ImmunoGen in connection with the ImmunoGen Research Agreement and the recognition of $5.9 million resulting from an amendment to the ImmunoGen Research Amendment. See Note 9 - Research and Collaboration Agreements under Item 8 of this Annual Report on Form 10-K for more details.

The decrease in revenue from Pfizer of $0.3 million for the year ended December 31, 2017 compared to the corresponding period in 2016 was due to a reduction in the research and development services we provided to Pfizer. In March 2018, Pfizer gave notice terminating our collaboration in its entirety. As a result of such termination, we are no longer eligible to receive any future payments from our collaboration with Pfizer.

Research and Development Expenses

	Year Ended December 31,		
	2017	2016	Change
	(in thousands)		
Research and development	$92,277	$54,755	$37,522

Research and development expenses increased $37.5 million during the year ended December 31, 2017 compared to the corresponding period in 2016. The increase was primarily attributable to the following:

- a non-cash charge of $10.7 million of in-process research and development expense recognized related to the Amgen Agreement;
- $10.0 million sublicense payment made to UCSB triggered by the $200.0 million upfront payment made by BMS in connection with our expanded collaboration;
- $2.1 million of UCSB sublicense fees accrued as a result of the Amgen agreement;
- $1.0 million of UCSB sublicense fees recognized for our achievement of certain milestones required to be met to begin GLP toxicology studies under the AbbVie Agreement and the IND filing for BMS-986249 by BMS;
- an increase of $8.5 million in pharmacology studies and clinical trial expenses resulting from the advancement of CX-072, CX-2009 and CX-2029 in 2017;
- an increase of $5.3 million in personnel-related expenses and allocation of IT and facilities-related expenses due to an increase in headcount;
- an increase of $1.7 million in consulting expenses due to the commencement of clinical trials in 2017;
- an increase of $0.6 million related to expenses incurred in acquiring a patent; and
- an increase of $0.5 million in stock-based compensation resulting from increased headcount and an increase in the value of our stock.

These increases were partially offset by:

- a decrease of $2.1 million in manufacturing expenses for our CX-072 and CX-2009 programs due to manufacturing activities occurring in 2016 in preparation for clinical trials in 2017;
- a decrease in laboratory supply expenses of $0.4 million; and
- a decrease in program management expenses of $0.4 million.

The following table summarizes our research and development expenses by program incurred during the respective periods:

	Year Ended December 31,		
	2017	2016	Change
External costs incurred by product candidate (target):	(in thousands)		
CX-072 (PD-L1)	$9,290	$8,917	$373
CX-2009 (CD166)	8,533	10,695	(2,162)
CX-2029 (CD71)	9,550	3,220	6,330
Other wholly owned and partnered programs	21,099	3,840	17,259
General research and development expenses	18,976	9,382	9,594
	67,448	36,054	31,394
Internal Costs	24,829	18,701	6,128
Total research and development expenses	$92,277	$54,755	$37,522

General and Administrative Expenses