

MACROGENICS INC  
Form 10-K  
February 29, 2016

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, 2015

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 001-36112

MACROGENICS, INC.  
(Exact name of registrant)

Delaware 06-1591613  
(State of organization) (I.R.S. Employer Identification Number)

9640 Medical Center Drive, Rockville, Maryland 20850  
(Address of principal executive offices and zip code)

(301) 251-5172  
(Registrant's telephone number)

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

Title of Each Class	Name of Each Exchange on Which Registered
Common stock, par value \$0.01 per share	The NASDAQ Stock Market LLC

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.  
Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Exchange Act.  
Yes  No

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

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Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).  
Yes    No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein and will not be contained, to the best of the 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 or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer   R   Accelerated filer   Non-accelerated filer   Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).  
Yes    No

The aggregate market value of the registrant's common stock, par value \$0.01 per share, held by non-affiliates of the registrant on June 30, 2015, the last business day of the registrant's most recently completed second fiscal quarter, was approximately \$1.05 billion based on the closing price of the registrant's common stock on the NASDAQ Global Select Market on that date. Exclusion of shares held by any person should not be construed to indicate that such person possesses the power, direct or indirect, to direct or cause the direction of management or policies of the registrant, or that such person is controlled by or under common control with the registrant.

The number of shares of the registrant's common stock outstanding on February 22, 2016 was 34,526,106.

#### DOCUMENTS INCORPORATED BY REFERENCE

Portions of MacroGenics, Inc.'s definitive proxy statement for the 2016 annual meeting of stockholders are incorporated by reference into Part III of this Annual Report.

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## FORWARD-LOOKING STATEMENTS

This report includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements include statements that may relate to our plans, objectives, goals, strategies, future events, future revenues or performance, capital expenditures, financing needs and other information that is not historical information. Many of these statements appear, in particular, under the headings "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations". Forward-looking statements can often be identified by the use of terminology such as "subject to", "believe", "anticipate", "plan", "expect", "intend", "estimate", "project", "may", "will", "should", "would", "could", "can", the negatives thereof, variations thereon and similar expressions, or by discussions of strategy.

All forward-looking statements, including, without limitation, our examination of historical operating trends, are based upon our current expectations and various assumptions. We believe there is a reasonable basis for our expectations and beliefs, but they are inherently uncertain. We may not realize our expectations, and our beliefs may not prove correct. Actual results could differ materially from those described or implied by such forward-looking statements. The following uncertainties and factors, among others (including those set forth under "Risk Factors"), could affect future performance and cause actual results to differ materially from those matters expressed in or implied by forward-looking statements:

- our plans to develop and commercialize our product candidates;
- our ongoing and planned clinical trials;
- the timing of and our ability to obtain and maintain regulatory approvals for our product candidates;
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- our ability to enter into new collaborations or to identify additional products or product candidates with significant commercial potential that are consistent with our commercial objectives;
- the rate and degree of market acceptance and clinical utility of our products;
- our commercialization, marketing and manufacturing capabilities and strategy;
- significant competition in our industry;
- costs of litigation and the failure to successfully defend lawsuits and other claims against us;
- economic, political and other risks associated with our international operations;
- our ability to receive research funding and achieve anticipated milestones under our collaborations;
- our ability to protect and enforce patents and other intellectual property;
- costs of compliance and our failure to comply with new and existing governmental regulations including, but not limited to, tax regulations;
- loss or retirement of key members of management;

failure to successfully execute our growth strategy, including any delays in our planned future growth; and

- our failure to maintain effective internal controls.

Consequently, forward-looking statements speak only as of the date that they are made and should be regarded solely as our current plans, estimates and beliefs. You should not place undue reliance on forward-looking statements. We cannot guarantee future results, events, levels of activity, performance or achievements. Except as required by law, we do not undertake and specifically decline any obligation to update, republish or revise forward-looking statements to reflect future events or circumstances or to reflect the occurrences of unanticipated events.

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## PART I

### ITEM 1. BUSINESS

Except as otherwise indicated herein or as the context otherwise requires, references in this annual report on Form 10-K to "MacroGenics," the "company," "we," "us" and "our" refer to MacroGenics, Inc. and its consolidated subsidiaries. MacroGenics, the MacroGenics logo, DART, Trident and the phrase "Breakthrough Biologics, Life-Changing Medicines" are our trademarks or registered trademarks. The other trademarks, trade names and service marks appearing in this report are the property of their respective owners.

#### Overview

We are a biopharmaceutical company focused on discovering and developing innovative antibody-based therapeutics for the treatment of cancer primarily by modulating the human immune system, as well as various autoimmune disorders and infectious diseases. We currently have a pipeline of product candidates in human clinical testing, primarily as treatments for different types of cancers, which have been created primarily using our proprietary technology platforms. We believe our programs have the potential to have a meaningful effect on treating patients' unmet medical needs as monotherapy or, in some cases, in combination with other therapeutic agents.

Our most advanced clinical product candidate is margetuximab, a monoclonal antibody directed against human epidermal growth factor receptor 2, or HER2, that has been enhanced using our proprietary "Fc Optimization" platform described in greater detail below. The HER2 protein is expressed by certain breast, gastroesophageal, bladder and other cancers. We have commenced a Phase 3 clinical trial studying margetuximab in patients with HER2 positive metastatic breast cancer that has progressed despite treatment with other HER2-directed therapeutic agents. We anticipate that a successful outcome from this Phase 3 clinical trial would allow us to seek approval of the product from the U.S. Food and Drug Administration, or FDA. We are also conducting a Phase 1b/2 clinical trial by treating patients with HER2-positive gastroesophageal cancer with margetuximab in combination with pembrolizumab, an immune checkpoint inhibitor molecule that plays a critical role in modulation of the immune system's response to cancer.

We are also developing several product candidates targeting B7-H3, a protein in the B7 family of immune regulator proteins. B7-H3 is widely expressed by a number of different tumor types and may play a key role in regulating the immune response to various types of cancer. There are no currently approved therapeutic agents directed against B7-H3. We have two clinical product candidates directed against B7-H3, enoblituzumab and MGD009, and we also have ongoing research efforts underway to advance an antibody-drug conjugate, or ADC, directed against B7-H3. Our most advanced candidate in this franchise, enoblituzumab, is a monoclonal antibody that has also been enhanced using our Fc Optimization platform. Enoblituzumab is being evaluated clinically in three studies – as monotherapy, in combination with pembrolizumab and in combination with ipilimumab, another immune system checkpoint inhibitor – in each case, across multiple tumor types.

MGD009 is one of five molecules developed using our proprietary Dual-Affinity Re-Targeting, or DART, platform, which is described in greater detail below. Unlike standard antibodies, DART molecules can be directed against two different biological targets and therefore lend themselves to a variety of different applications. MGD009, for example, is directed to both B7-H3 expressed on tumor cells as well as CD3, a protein expressed by normal T cells, which are specialized white blood cells in the human immune system. In pre-clinical models, MGD009 has re-directed T cells to reduce or eliminate B7-H3 expressing tumors. We are currently conducting a Phase 1 clinical trial with MGD009 in patients with B7-H3 positive tumors.

Three additional DART molecules, MGD006, MGD007 and MGD011, are also currently in Phase 1 clinical testing and use the same approach of targeting CD3 and a specific tumor antigen known to be expressed on certain cancers. MGD006 is being tested in patients with relapsed and refractory acute myeloid leukemia (AML) and myelodysplastic syndrome (MDS) and MGD007 is being tested in patients with colorectal cancer. Our collaboration partner, Les Laboratoires Servier and Institut de Recherches Servier, or, collectively, Servier, has development and commercialization rights outside North America, Japan, Korea and India for MGD006 and has an option to gain similar rights with regards to MGD007. The clinical program for MGD011 is being advanced by our collaboration

partner, Janssen Biotech, Inc., or Janssen, and is being studied in a variety of B cell hematological malignancies. These four DART molecules that redirect T cells against cancer targets are manufactured using a conventional antibody platform without the complexity of having to genetically modify T cells from individual patients, as would be required by approaches such as chimeric antigen receptor (CAR) T cells.

Our fifth clinical-stage DART molecule, MGD010, has a different mechanism of action than the other DART molecules currently in development. MGD010 targets two proteins expressed by B cells, which are specialized white blood cells that play a role in modulating the human immune system's inflammatory response. We believe that MGD010 may be able to reduce the harmful inflammatory effects seen in a variety of autoimmune and inflammatory disorders by modulating the function of human B cells while avoiding their depletion. MGD010 is currently being studied in a Phase 1a clinical trial with normal, healthy volunteers.

We continue to invest in our clinical-stage programs, advance additional pre-clinical product candidates, primarily using our proprietary technology platforms, and expand the potential of our platforms using our antibody and protein engineering expertise. We develop new therapeutic product candidates internally using our proprietary platforms and also in partnership with other biopharmaceutical companies, when such relationships are advantageous for strategic or financial reasons. These arrangements have allowed us to expand and accelerate the breadth of our product candidates and also have generated a significant portion of the funding we have received to date. We also have our own manufacturing facility, primarily for generation of earlier-stage clinical trial material, and have been investing in expanding our manufacturing capacity to meet later-stage clinical and commercial requirements.

We estimate that in 2015, 2014 and 2013, we spent approximately \$98.3 million, \$70.2 million and \$46.6 million on research and development activities, respectively.

#### Our Strategy

##### Primary Objectives

Our goal is to be a fully integrated biotechnology company leading in the discovery, development and commercialization of breakthrough biologics for the treatment of patients with cancer, as well as various autoimmune disorders and infectious diseases.

Key elements of our strategy are as follows:

Therapeutic focus, science driven. We create therapeutic biological products primarily to treat various types of cancers, including both solid tumors and hematological malignancies. Our proprietary DART and Fc Optimization technology platforms are particularly useful for targeting and harnessing specific elements of the human immune system, allowing us to design molecules that (1) directly target cancer cells and enhance the ability of the immune system to destroy those cells, (2) re-direct effector cells to attack tumors or (3) affect mechanisms that regulate the immune response to cancer, either by stimulating pathways that enhance this response or by blocking pathways that inhibit this response, including checkpoint molecules. This field of scientific discovery, broadly known as immuno-oncology, has been developing rapidly in the last few years, and most therapeutic products to date are largely focused on affecting individual biological pathways. We believe that cancers are sufficiently complex that effective treatments must simultaneously affect more than one pathway. We believe that we are well-positioned, particularly through the adaptability of our DART platform, to be able to create and develop therapeutic molecules designed to simultaneously target more than one pathway.

This same flexibility in our platforms allows us to create therapeutic molecules that may be useful for other unmet medical needs beyond cancer, such as for autoimmune disorders and infectious diseases. Our core strategic focus is on development of cancer therapeutics, but we may also opportunistically pursue such possibilities when they arise.

Fully integrated with a deep pipeline. Our objective is to be a fully-integrated biotechnology company, and we intend to continue to grow and establish all necessary functions from early-stage research through commercialization in at least the United States. At our current stage of development as a company, we have established early-stage discovery, process development, clinical development and clinical-stage manufacturing functions, and we intend to build commercial manufacturing as well as U.S.-based sales and marketing infrastructure as our development pipeline matures.

We believe we have a broad portfolio of product candidates and we are not dependent upon the success of any one of them for the overall success of the company. We continue to augment our pipeline through the discovery and development of new product candidates, primarily through utilization of our internal scientific expertise and strategically seeking external collaborations that can augment our own skills. In 2014 and 2015, we advanced five programs into clinical development. Our goal is to continue to advance one or more programs into clinical development per year to ensure a robust pipeline and to replace product candidates that fail to progress.

**Leveraging partnerships.** Throughout our company's history, we have entered into collaborations with other biopharmaceutical companies and intend to continue to do so. We enter into collaborations when there is a strategic advantage to us to do so and when we believe the financial terms of the collaboration are favorable for meeting our short-term and long-term strategic objectives. We are not dependent upon any one of these collaborations, but in many cases we have the rights to significant financial payments if the product candidates that are the subjects of the collaborations achieve development and sales milestones. We have also used these collaborations to provide funding for research, to maintain a broader portfolio of product candidates, and to obtain rights to expand in the future, for example by securing co-promotion and profit-sharing rights under certain circumstances.

**Investments in talent and culture.** One of our most valuable assets is the quality of our employee base. We invest significant effort in selecting and retaining high caliber, talented individuals who reflect our values of teamwork, initiative, innovation, corporate responsibility and integrity. As we continue to grow, we continue to seek and develop employees who are strongly committed to delivering life-changing medicines for unmet medical needs through a collaborative work environment.

#### Core Therapeutic Areas We Target

##### Cancer

Cancer is a broad group of diseases in which cells divide and grow in an uncontrolled fashion, forming malignancies that can invade other parts of the body. In normal tissues, the rates of new cell growth and cell death are tightly regulated and kept in balance. In cancerous tissues, this balance is disrupted as a result of mutations, causing unregulated cell growth that leads to tumor formation and growth. While tumors can grow slowly or rapidly, the dividing cells will nevertheless accumulate and the normal organization of the tissue will become disrupted. Cancers subsequently can spread throughout the body by processes known as invasion and metastasis. Once cancer spreads to sites beyond the primary tumor, it may be incurable. Cancer cells that arise in the lymphatic system and bone marrow are referred to as hematological malignancies. Cancer cells that arise in other tissues or organs are referred to as solid tumors. Cancer can arise in virtually any part of the body, with the most common types arising in the prostate gland, breast, lung, colon and skin. We believe that our platforms position us very well strategically to actively develop approaches for the treatment of both solid tumors and hematologic malignancies.

Cancer is the second leading cause of death in the United States, exceeded only by heart disease, and accounts for almost one of every four deaths. The American Cancer Society estimates that in 2016 there will be approximately 1.7 million new cases of cancer and approximately 590,000 deaths from cancer. The National Institutes of Health estimates that based on growth and aging of the U.S. population, medical expenditures for cancer in the year 2020 are projected to reach at least \$158 billion (in 2010 dollars), representing an increase of 27% over 2010.

##### Autoimmune Disorders

Autoimmune disorders, including rheumatoid arthritis, Crohn's disease, systemic lupus erythematosus and multiple sclerosis, collectively affect more than 20 million people in the United States. Autoimmune disorders involve self-reactivity and destruction by T cells, B cells and antibodies due to a lack of self-tolerance. Anti-inflammatory therapies, such as tumor necrosis factor inhibitors, have been able to improve diseases like rheumatoid arthritis. However, in addition to T cells, more evidence indicates that B cells play an important role in many common autoimmune and allergic disorders by initiating and amplifying the pathological disease processes. Current B cell targeted therapies either cause depletion of B cells, thus limiting their applicability due to the potential for infections (e.g., rituximab), or exhibit a delayed onset of action and limited efficacy across patient populations (e.g., belimumab).



### Infectious Diseases

There are a wide variety of infectious diseases, and the epidemiology for each varies significantly with the type of pathogen and patients who are affected. However, in order to avoid being recognized as foreign by the human immune system, many infectious agents have found ways to evade detection. In this way, they may behave similarly, at a biological level, to certain types of cancer. Accordingly, our expertise in designing protein-based therapeutics that are designed to activate the human immune system to eliminate foreign substances may have applicability to various types of infectious diseases, and we explore those possibilities opportunistically.

### Our Product Candidates

The table below depicts the current status of product candidates that are in or near human clinical development and for which we retain all or some commercial rights:

### Oncology

Margetuximab is an antibody that targets human epidermal growth factor receptor 2, or HER2-expressing tumors, including certain types of breast and gastroesophageal cancers. HER2 is critical for the growth of many types of tumors. Using our Fc Optimization platform, we have engineered the constant region, or Fc region, of margetuximab to increase its ability to kill tumor cells through an Fc-dependent mechanism, including antibody dependent cell-mediated cytotoxicity, or ADCC. Our Phase 1 data for margetuximab demonstrated that anti-tumor activity had been observed at a range of doses tested, including the lowest dose level of margetuximab, even in patients who were heavily pre-treated (frequently with other anti-HER2 agents). In 2015, we commenced a Phase 3 clinical trial with margetuximab, which we call SOPHIA, in patients with metastatic breast cancer expressing HER2 at the 3+ level by immunohistochemistry (IHC) or 2+ level by IHC with gene amplification who have failed therapy with other HER2-directed therapeutic agents. We also have commenced an exploratory Phase 1b/2 clinical trial combining margetuximab with pembrolizumab in patients with HER2-positive gastric or gastroesophageal junction cancer, and we are currently enrolling a Phase 2a clinical trial in patients with lower levels of HER2 expression.

Enoblituzumab (which we also refer to as MGA271) is an antibody that targets B7-H3. We engineered enoblituzumab to utilize the same Fc Optimization enhancements that we incorporated in margetuximab to target B7-H3 that is over-expressed on differentiated tumor cells, cancer stem cells and supporting tumor vasculature and underlying tissues. We are currently evaluating enoblituzumab in an ongoing Phase 1 clinical trial as monotherapy in multiple dose expansion cohorts, including patients with melanoma (who have failed prior therapy with checkpoint inhibitors), renal cell carcinoma, triple-negative breast carcinoma, squamous cell carcinoma of the head and neck and a cohort of patients with lung or bladder carcinoma that have particularly intense expression of B7-H3. In 2015, we also initiated two Phase 1 clinical trials, one combining enoblituzumab with ipilimumab and a second combining enoblituzumab with pembrolizumab.

MGD006 is a DART molecule that targets both CD123 and CD3. CD123, the Interleukin-3 receptor alpha chain, is expressed on leukemia and leukemic stem cells, but only at very low levels or not at all on normal hematopoietic stem cells. T cells, which express CD3, can destroy tumor cells. In pre-clinical studies, we have demonstrated the ability of MGD006 to recruit, activate, and expand T cell populations to eliminate leukemia cells. We are currently enrolling patients in the United States in a Phase 1 clinical trial of MGD006 in patients with AML or MDS and are in the process of expanding the trial to patients in Europe. Under the terms of our collaboration with Servier, Servier has the exclusive right to develop and commercialize MGD006 in all countries outside North America, Japan, Korea and India, and MacroGenics retains exclusive rights in those countries.

MGD007 is a DART molecule that targets both the glycoprotein A33 (gpA33) and CD3, and has an Fc domain, which is designed to provide extended pharmacokinetic properties and convenient intermittent dosing. gpA33 is expressed on gastrointestinal tumors, including more than 95% of human colon cancers. We have demonstrated that

this molecule is able to mediate T cell killing of gpA33-expressing cancer cells and cancer stem cells in pre-clinical experiments. We are currently enrolling patients suffering from colorectal cancer in a Phase 1 clinical trial of MGD007. Under the terms of our collaboration with Servier, Servier has an option to obtain exclusive rights to develop and commercialize MGD007 in all countries outside North America, Japan, Korea and India. If the option is exercised, MacroGenics would still retain exclusive rights in those countries.

MGD011 is a DART molecule that targets both CD19 and CD3 and is being developed for the treatment of B cell hematological malignancies. CD19, a lymphocyte-specific marker expressed from early B-lymphocyte development through mature memory B cells, is highly represented in B cell malignancies. This makes it attractive for targeted interventions. MGD011 is designed to redirect T cells, via their CD3 component, to eliminate CD19-expressing cells found in many hematological malignancies. MGD011 has been engineered to address half-life challenges posed by other programs targeting CD19 and CD3. Like MGD007, this product candidate has an Fc domain, which allows for extended pharmacokinetic properties and convenient dosing at a once-a-week or longer interval. Under our collaboration and license agreement, Janssen is leading the development of this product candidate, subject to our options to co-promote the product in the United States and Canada and to invest in later-stage development in exchange for a United States and Canada profit-share. Janssen initiated human clinical trials in 2015 for a variety of B cell hematological malignancies, including diffuse-large B cell lymphoma, follicular lymphoma, mantle-cell lymphoma, chronic lymphocytic leukemia and acute lymphoblastic leukemia.

MGD009 is the second molecule in our B7-H3 franchise. This DART molecule recognizes B7-H3 and CD3, and has an Fc domain, which is designed to provide extended pharmacokinetic properties. We have demonstrated that this molecule is able to mediate T cell killing of cancer cells in pre-clinical experiments. We are currently enrolling patients in a Phase 1 clinical trial of MGD009 in patients across a variety of different solid tumors.

MGD013 is a pre-clinical DART molecule that is intended to enable the co-blockade of two immune checkpoint molecules, PD-1 and LAG-3, which are co-expressed on T cells, with a single agent. MGD013 recognizes both PD-1 and LAG-3 on T cells and has a serum half-life consistent with that of monoclonal antibodies. We anticipate that MGD013 could be used for the treatment of a wide range of cancers, including both solid tumors and hematological malignancies.

#### Autoimmune Disorders

MGD010 is a DART molecule designed to address limitations of existing B cell-targeted therapies by binding to the CD32B and CD79B proteins found on human B cells. In pre-clinical studies, this DART molecule modulated the function of human B cells without B cell depletion. In normal conditions, B cells utilize CD32B as one of the key checkpoints or negative regulators to ensure that tolerance to self is maintained and autoimmune disease does not occur. MGD010 is designed to further exploit this mechanism by triggering this inhibitory "immune checkpoint" loop. We believe this molecule preferentially blocks those B cells that are activated to produce the pathogenic antibodies that promote the autoimmune process. MGD010 is currently being evaluated in a Phase 1a clinical trial with normal healthy volunteers. Under the terms of a collaboration agreement with respect to MGD010, Takeda Pharmaceutical Company Limited, or Takeda, has the option to further develop the program after completion of Phase 1a clinical development and, if that option is exercised, we would retain the right to co-promote the product in the United States and to invest in Phase 3 development in exchange for a North America profit-share.

Teplizumab is an anti-CD3 monoclonal antibody being developed for the treatment of type 1 diabetes. Teplizumab has been engineered to alter the function of the T cells that mediate the destruction of the insulin-producing beta cells of the islets of the pancreas. Teplizumab potentially represents an advance in the treatment of type 1 diabetes by addressing the underlying disorder, rather than treating the symptoms through insulin replacement therapy.

Teplizumab is currently being evaluated in a Phase 2 clinical trial, called At-Risk, for the prevention or delay of onset of type 1 diabetes in patients determined to be at very high risk for developing the disease. This clinical trial is being sponsored by the National Institute of Diabetes and Digestive and Kidney Diseases. We are actively seeking a collaborator for further development of teplizumab.

#### Infectious Diseases

MGD014 is a DART molecule that targets the envelope protein of human immunodeficiency virus, or HIV-infected cells (Env) and CD3-expressing T cells. We are developing MGD014 under contract number HHSN272201500032C awarded to us in September 2015 by the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health. MGD014 is our first DART molecule targeting an infectious agent that is planned for clinical testing. The work under this contract will build on pre-clinical studies published in 2015 demonstrating that DART molecules targeting the Env and T cells, via their CD3 component, are able to redirect the immune system's T cells to kill HIV-infected cells. DART molecules could be used independently or become a key part of a "shock-and-kill" strategy in conjunction with HIV latency-reversing agents currently under development.

#### Our Platforms and Technology Expertise

We apply our understanding of disease biology, immune-mediated mechanisms and next generation antibody technologies to design specifically targeted antibody-based product candidates based on our DART and Fc Optimization platforms. Through these platforms and utilization of our proprietary cancer stem-like cell, or CSLC, technology, we have designed antibody-based product candidates that have the potential to improve on standard treatments by having one or more of the following attributes: (1) multiple specificities; (2) increased abilities to interact with the body's immune system to fight tumors; (3) capacity to bind more avidly to antigen targets; (4) increased potency; (5) reduced immunogenicity or (6) the ability to target cancer cells that are resistant to standard treatments. Moreover, these technology platforms are complementary and can be combined.

#### DART Platform: Our Proprietary Approach to Engineer Bi-Specific Antibodies

We use our DART platform to create derivatives of antibodies with the ability to bind to two distinct targets instead of a single one found in traditional monoclonal antibodies. DART product candidates are therefore bi-specific. An example of a bi-specific molecule is illustrated below:

Because cancer cells have developed ways to escape the immune system, we have created DART molecules, which are alternative antibody-like structures with more potent immune properties than the parent antibody molecules from which they are derived. The two variable regions of an antibody are mono-specific and are able to target only a single type structural component of an antigen. For many years, researchers have sought to create recombinant molecules that are capable of targeting two antigens or epitopes (i.e., specific part of an antigen bound by the antibody) within the same molecule. The challenges in creating such molecules have been the instability of the resulting bi-specific molecules and their inherently short half-lives, as well as the inefficiencies in manufacturing these compounds. We believe our DART platform has overcome these engineering challenges by incorporating proprietary covalent di-sulfide linkages and particular amino acid sequences that efficiently pair the chains of the DART molecule. This is designed to provide a structure with enhanced manufacturability, long-term structural stability and the ability to tailor the half-lives of the DART molecules to their clinical needs. This engineered antibody-like protein has a compact and stable structure and enables the targeting of two different antigens with a single recombinant molecule.

The DART platform has been specifically engineered to accommodate virtually any variable region sequence with predictable expression, folding and antigen recognition. To date, we have produced over 100 different DART molecules and have completed numerous in vitro and in vivo proof-of-principle studies on many of these molecules. We believe our DART platform may provide a significant advantage over current biological interventions in cancer, autoimmune disorders and infectious disease by enabling a range of modalities, including those described below.

- Redirected T cell activation and killing. In this version of the DART molecule, we are enabling the cancer-fighting properties of the immune effector cells, such as T lymphocytes to: (1) recognize and bind to structures expressed on a cancer cell (e.g., CD123, the first specificity in the example on the right), (2) enable the recruitment of all types of cytotoxic, or cell killing, T cells, irrespective of their ability to recognize cancer cells (e.g., CD3, a common component of the T cell antigen receptor, is the second specificity in the example on the right) and (3) trigger T cell activation, expansion, and cell killing mechanisms to destroy a cancer cell. The outcome is that any of the body's T cells, in theory, could be recruited to destroy a cancer cell and thus, are not limited to the small numbers of specific T cells that might have been generated in response to cancer to kill tumor cells. Furthermore, since any T cell could be recruited for this killing process, only small amounts of a DART molecule

are required to trigger this potent immune response. Additionally, the compact structure of the DART protein makes it well suited for maintaining cell-to-cell contact, which we believe contributes to the high level of target cell killing. Similarly, DART molecules targeting CD3 and a viral antigen can be used to recruit T cells to eliminate cells infected by a virus, such as HIV-infected cells.

- **Modulation of receptor signaling.** In another configuration of the DART molecule, we have taken advantage of the two different specificities engineered in a DART structure to bind not only to particular cells involved in autoimmune processes, such as autoimmune B cells, but also to usurp the immune checkpoint signaling pathways programmed within the cells to impede the pathogenic autoimmune responses. Our MGD010 product candidate targets both CD32B, a co-inhibitory molecule, and CD79B, part of the B cell antigen receptor complex, two proteins expressed on the immune system's B cells. Using a single DART molecule, we attempt to promote the interaction of these two receptors, a step required to interrupt the B cell activation and immune response that single antibodies directed against CD32B, CD79B or both cannot accomplish independently.

- **Simultaneous targeting of multiple co-inhibitory receptors or checkpoints, such as those involved in inhibiting T cell responses and B cell responses.** The immune system generally prevents the development of autoimmune phenomena by regulating activated immune cells that have responded to non-self or foreign antigens. This negative feedback loop is triggered by the interactions of co-inhibitory receptors, or checkpoint molecules, expressed on the immune cells with ligands expressed by other cells, such as antigen-presenting cells. This phenomenon is exploited by cancer, whereby tumor cells express checkpoint ligands that block the development of an immune response against the tumor. Antibodies that block the interaction of checkpoint molecules with their ligands have been shown to significantly improve the clinical outcomes of patients with advanced cancers. Because of the diversity of immune checkpoint pathways, blockade of a single axis, while clinically significant, as shown in the case of the blockade of the PD-1/PD-L1 axis with pembrolizumab or nivolumab, will not benefit all patients. In fact, combinations of checkpoint inhibitors, such as nivolumab and ipilimumab, a CTLA-4 blocker, have resulted in significantly enhanced benefit compared to ipilimumab alone. We believe that DART molecules targeting two immunoregulatory pathways, such as two checkpoints in a single molecule, could afford the clinical benefit of the combination together with the potential for synergistic activity, as well as significant advantages in manufacturing, simplified clinical development, and enhanced patient convenience.

- **Agonistic receptor signaling.** Ligands can initiate cell signaling by clustering their cell surface receptors, a process also known as receptor dimerization or oligomerization. The DART platform lends itself well to triggering signals via direct, ligand-independent oligomerization of cell surface receptors. An example of such an application is the surface oligomerization by DART molecules directed against the death receptor 5 or DR5, a molecule known to be expressed by tumors whose signal can trigger death of the cancer cell by a process termed apoptosis. Crucial to this effect is our ability to design high valency, or multivalent, DART molecules, capable of binding multiple binding sites,

In addition to the ability to tailor a DART molecule's valency, we have the capacity to modify the strength by which the binding sites attach to their targets and the molecule's half-life in the blood circulation after delivery to a patient. Furthermore, when an Fc domain is coupled with a DART molecule, additional changes can be included that can modulate the DART molecule's engagement with different immune cells.

We have developed proof-of-concept pre-clinical data and are developing specific product candidates using this technology, including MGD006, MGD007, MGD010, MGD011 and MGD009, among others. We have been able to produce DART molecules in both bacterial and mammalian expression systems.

At our R&D Day in October 2015, we presented our Trident platform, which reflects the continuing evolution of the multi-specific antibody-based targeting expertise we developed in creating our DART platform. Built on the DART module, the tri-specific Trident platform incorporates in an Ig-like format an additional domain capable of engaging an independent antigen. With the inclusion of a third targeting arm, Trident molecules enable a broader range of mechanisms of action than bi-specific targeting, allowing, for instance, the engagement of multiple antigens on a

single or on different cells or enabling enhanced target selectivity by modulating the avidity of one of two antigens.

#### Fc Optimization Platform: Our Proprietary Approach to Enhance Immune-Mediated Cancer Cell Killing

To enhance the body's immune ability, we developed our Fc Optimization platform which introduces certain mutations into the Fc region of an antibody and is able to modulate antibody interaction with immune effector cells. Such interaction enhances the body's immune ability to mediate the killing of cancer cells through ADCC.

ADCC

The Fc region mediates the function of IgG antibodies by binding to different activating and inhibitory receptors, referred to as FcγRs, on immune effector cells found within the innate immune system. By engineering Fc regions to bind with an increased affinity to the activating FcγRs and with a reduced affinity to the inhibitory FcγRs, we have been able to impart a more effective immune response and improve effector functions, such as ADCC. This is another example in which small changes in antibody structure can confer improvements on normal immune processes. We have established a proprietary platform to engineer, screen, identify and test antibodies' Fc regions with customizable activity. In particular, we have licenses to use transgenic mice that express human FcγRs. These mice can be used for in vivo testing of antibodies that incorporate Fc domain variants, including those antibodies intended for cancer therapy.

To date, we have successfully incorporated our Fc variants in two of our clinical-stage antibody product candidates, margetuximab and enoblituzumab. We have pre-clinical data demonstrating that these Fc variants have substantially improved the activity of these antibodies.

#### Cancer Stem-like Cell Technology: Our Proprietary Approach to Discover Cancer Targets

Our CSLC technology provides new approaches to discover and identify cancer targets that are not susceptible to current cancer therapies. We have generated over 2,700 monoclonal antibodies that we have screened by IHC for lower-binding to normal, non-malignant tissues. Cancer stem cells represent important potential targets in oncology drug development because they are theorized to be the basis for tumor re-growth, metastasis and resistance to much standard chemotherapy.

#### Our Collaborations

We pursue a balanced approach between product candidates that we develop ourselves and those that we develop with our collaborators. Under our current strategic collaborations, we have received significant non-dilutive funding to date and continue to have rights to additional funding upon completion of certain research, achievement of key product development milestones and royalties and other payments upon the commercial sale of products. Each of our collaborations has a unique set of terms and conditions, but in general, they fall into two categories:

**MacroGenics-Created Programs.** We have a number of collaborations relating to product candidates that we have created from our internal research efforts. These include Janssen for MGD011; Servier for MGD006 and MGD007; Takeda for MGD010 and Green Cross Corp., or Green Cross, for margetuximab. In the case of these product candidates, we entered into collaborations because we believed that our partner could further enable development of the program or provide additional capabilities and funding to supplement MacroGenics' investment, or both. We obtained financial terms that we believed were beneficial to us and retained commercial rights for multiple major markets or options to other commercial rights. For example, under the Janssen and Takeda agreements, we have the option to co-promote products in the United States as well as an option to share in profits in the United States (and, under the Janssen agreement, Canada) if we invest in late-stage development. Under the Servier agreement, we retain full commercialization and development rights in the United States, Canada, Mexico, Japan, South Korea and India, and regain worldwide rights if Servier opts not to continue co-developing MGD007. Under the Green Cross agreement, we retain full commercialization rights worldwide except for South Korea.

**Joint Research Programs.** We have several programs under which collaborators have sought to utilize some aspect of our protein engineering platforms with new product concepts that are jointly directed, sometimes employing a collaborator's own proprietary technology. These collaborations give us the ability to expand the breadth of our potential products, develop greater scientific expertise and obtain additional funding for research. Pfizer, Inc. and Boehringer Ingelheim GmbH, or Boehringer, are currently advancing projects in their own pipelines based on these

types of programs, and Gilead Sciences, Inc., or Gilead, and Takeda also have the potential to request development of new product candidates under these types of programs. With these collaborators, we have more limited development or commercial rights related to the product candidates that may emerge from joint research programs.

#### Intellectual Property

We strive to protect the proprietary technologies that we believe are important to our business, including seeking and maintaining patents intended to protect, for example, the composition of matter of our product candidates, their methods of use, the technology platforms used to generate them, related technologies and/or other aspects of the inventions that are important to our business. We also rely on trade secrets, confidentiality and invention assignment agreements and careful monitoring of our proprietary information to protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection.

Our success will depend significantly on our ability to obtain and maintain patent and other proprietary protection for commercially important technology, inventions and know-how related to our business. In addition, there is cost and risk to our business in defending and enforcing our patents, maintaining our licenses to use intellectual property owned by third parties and preserving the confidentiality of our trade secrets and operating without infringing the valid and enforceable patents and other proprietary rights of third parties. We also rely on know-how, continuing technological innovation and in-licensing opportunities to develop, strengthen and maintain our proprietary positions. We currently use multiple industry-standard patent monitoring systems to monitor new United States Patent and Trademark Office, or USPTO, filings for any applications by third parties that may infringe on our patents.

The patent positions of biopharmaceutical companies like us are generally uncertain and involve complex legal, scientific and factual questions. In addition, the coverage claimed in a patent application can be significantly reduced before the patent is issued, and its scope can be reinterpreted by the courts after issuance. Consequently, we do not know whether any of our product candidates will be protectable or remain protected by enforceable patents. We cannot predict whether the patent applications we are currently pursuing will issue as patents in any particular jurisdiction or whether the claims of any issued patents will provide sufficient proprietary protection from competitors. Any patents that we hold may be challenged, narrowed, circumvented or invalidated by third parties. A third party may hold patents or other intellectual property rights that are important to or necessary for the development of our product candidates or use of our technology platforms. It may be necessary for us to use the patented or proprietary technology of third parties to commercialize our product candidates, in which case we would be required to obtain a license from these third parties on commercially reasonable terms, or our business could be harmed, possibly materially. For example, certain patents held by third parties cover Fc engineering methods and mutations in Fc regions to enhance the binding of Fc regions to Fc receptors on immune cells. Although we believe that these patents are invalid, if they cover margetuximab or enoblituzumab and we are unable to invalidate them, or if licenses for them are not available on commercially reasonable terms, our business could be harmed, perhaps materially.

Because patent applications in the United States and certain other jurisdictions can be maintained in secrecy for 18 months or potentially even longer, and because publication of discoveries in the scientific or patent literature often lags behind actual discoveries, we cannot be certain of the priority of inventions covered by pending patent applications. Moreover, we may have to participate in interference proceedings declared by the USPTO to determine priority of invention. In the ordinary course of business we participate in post-grant challenge proceedings, such as oppositions, that challenge the patentability of third party patents. Such proceedings could result in substantial cost, even if the eventual outcome is favorable to us.

#### Pipeline Patent Protection

As of December 31, 2015, we held 78 patents in the United States with 60 patent applications pending and 202 patents in other countries of the world with 206 patent applications pending. In addition to patents and patent applications generally providing protection for various aspects of our Fc Optimization, DART, Trident and Cancer Stem-Like Cell platforms, we have patent and patent applications for the composition of matter of each of our clinical pipeline product candidates and, in some cases, we also have other patents and patent application related to various aspects of the technology underlying these product candidates or their methods of use.

Patent terms may be adjusted or extended, as described in greater detail below, in certain circumstances. However, assuming no adjustments or extensions, the primary composition of matter patent for each of our clinical pipeline product candidates is expected to expire in the following timeframes:

Product Candidate Expiration Date

margetuximab	2029
enoblituzumab	2031
MGD006	2034*
MGD007	2034*
MGD009	2036*
MGD011	2035*
MGD010	2034*

\* pending

Patent Term Extension and Reference Product Exclusivity

The Hatch-Waxman Act permits a patent term extension for FDA-approved drugs, including biological products, of up to five years beyond the expiration of the patent. The length of the patent term extension is related to the length of time the drug is under regulatory review. Patent extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval and only one patent applicable to an approved drug may be extended. Similar provisions are available in Europe and other jurisdictions to extend the term of a patent that covers an approved drug. In the future, if and when our pharmaceutical product candidates receive FDA approval, we expect to apply for patent term extensions on patents covering those products. We intend to seek patent term extensions to any of our issued patents in any jurisdiction where these are available, however there is no guarantee that the applicable authorities, including the FDA in the United States, will agree with our assessment of whether such extensions should be granted, and even if granted, the length of such extensions.

The Patient Protection and Affordable Care Act, as amended by the Healthcare and Education Affordability Reconciliation Act, collectively the ACA, created a regulatory scheme authorizing the FDA to approve biosimilars via an abbreviated licensure pathway. In many cases, this allows biosimilars to be brought to market without conducting the full suite of clinical trials typically required of originators. Under the ACA, a manufacturer may submit an application for licensure of a biologic product that is "biosimilar to" or "interchangeable with" a previously approved biological product or "reference product." The "biosimilar" application must include specific information demonstrating biosimilarity based on data derived from: (1) analytical studies, (2) animal studies, and (3) a clinical study or studies that are sufficient to demonstrate safety, purity, and potency in one or more appropriate conditions of use for which the reference product is licensed, except that FDA may waive some of these requirements for a given application. Under this new statutory scheme, an application for a biosimilar product may not be submitted to the FDA until four years after the date of first licensure. The FDA may not approve a biosimilar product until 12 years from the date on which the reference product was first licensed. The law does not change the duration of patents granted on biological products. Even if a product is considered to be a reference product eligible for exclusivity, another company could market a competing version of that product if the FDA approves a full BLA for such product containing the sponsor's own pre-clinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of their product. Furthermore, recent legislation has proposed that the 12 year exclusivity period for each a reference product may be reduced to seven years.

Trade Secrets

We also rely on trade secret protection for our confidential and proprietary information. Although we take steps to protect our proprietary information and trade secrets, including through contractual means with our employees and consultants, third parties may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose our technology. Thus, we may not be able to meaningfully protect our trade secrets. It is our policy to require our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors to execute confidentiality agreements upon the commencement of employment or consulting relationships with us. These agreements provide that all confidential information concerning our business or financial affairs developed or made known to the individual during the course of the individual's relationship with us is to be kept confidential and not disclosed to third parties except in specific circumstances. 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 the work or services they render under such agreements or grant us an option to negotiate a license to use such inventions.

#### In-Licensed Intellectual Property

We have entered into patent and know-how license agreements that grant us the rights to use certain technologies related to biological manufacturing for our clinical product candidates. We anticipate using these technologies for future product candidates. These licensors have businesses dedicated to licensing this type of technology and we anticipate that licenses to use these technologies for our future products will be available. The licenses typically include yearly maintenance payments and sales royalties, and may also include upfront payments or milestone payments.

#### Manufacturing

We currently manufacture our drug substance for our clinical trials at our manufacturing facility located in Rockville, Maryland. For our antibody product candidates, we have supplemented our drug substance manufacturing capacity through an arrangement with CMC Biologics, Inc., or CMC, a contract manufacturing organization, and plan to commercially produce margetuximab at CMC assuming the success of the Phase 3 SOPHIA clinical trial on the expected timeline. We have leased a building in Rockville, Maryland, at which we intend to build a suite to increase our internal capacity to manufacture more drug substance lots, at larger scale and in full compliance with current Good Manufacturing Practices (cGMP) to be able to sell commercial product. In addition, we currently rely on and will continue to rely on contract fill-finish service providers, primarily Ajinomoto Althea, Inc. and Baxter Healthcare Corporation, to fulfill our fill-finish needs for our current and future product candidates.

Most of the principal materials we use in our manufacturing operations are available from more than one source. However, we obtain certain raw materials principally from only one source. In the event one of these suppliers was unable to provide the materials or product, we generally seek to maintain sufficient inventory to supply the market until an alternative source of supply can be implemented. However, in the event of an extended failure of a supplier, it is possible that we could experience an interruption in supply until we established new sources or, in some cases, implemented alternative processes.

Production processes for biological therapeutic products are complex, highly regulated, and vary widely from product to product. Shifting or adding manufacturing capacity can be a very lengthy process requiring significant capital expenditures, process modifications, and regulatory approvals. Accordingly, if we were to experience extended plant shutdowns at one of our own facilities, extended failure of a contract supplier or contract manufacturing organization, or extraordinary unplanned increases in demand, we could experience an interruption in supply of certain products or product shortages until production could be resumed or expanded.

#### Commercialization

We cannot market or promote a new product until a marketing application has been approved by the FDA. We currently have no approved products in the United States. We have not yet established a sales, marketing or product distribution infrastructure. We believe that it will be possible for us to access the United States oncology market through a specialty sales force. Subject to receiving marketing authorization in the United States, we expect to commence commercialization via our then-in-place sales and marketing organizations. We believe that these organizations will be able to serve the oncology community in treating the patient populations for which our oncology product candidates are being developed. Outside the United States, we expect to enter into arrangements with third-party commercial partners for any of our product candidates that obtain marketing approval.

#### Competition

There are a large number of companies developing or marketing treatments for cancer and autoimmune disorders, including many major pharmaceutical and biotechnology companies. These treatments consist both of small molecule drug products, as well as biologic therapeutics that work by using next-generation antibody technology platforms to address specific cancer targets. In particular, margetuximab is directed against HER2 and several companies have cancer therapeutics directed against HER2 marketed or in development, such as F. Hoffmann-La Roche Ltd., particularly through its affiliate, Genentech, Inc., as well as Puma Biotechnology, Inc., Merrimack Pharmaceuticals, Inc. and Oncothyreon Inc. Market competition may limit the utilization of margetuximab as a therapeutic, even if market approval and adequate reimbursement is obtained, and competition among development-stage programs for



patients enrolling in clinical trials for HER2-directed therapies may delay expected timelines for our clinical trials. In addition, the immuno-oncology field is competitively crowded, with treatments currently approved and on the market or in development for various tumor types and patient populations from a variety of different companies such as Bristol Myers Squibb Company, F. Hoffmann-La Roche Ltd. and Merck & Co., Inc. Several companies are also developing therapeutics that work by targeting multiple specificities using a single recombinant molecule. Amgen Inc. has obtained marketing approval for at least one product that works by targeting antigens both on immune effector cell populations and those expressed on certain cancer cells, and has other product candidates in development that use this mechanism. In addition, other companies are developing new treatments for cancer and autoimmune diseases that enhance the Fc regions of antibodies to create more potent antibodies, including F. Hoffmann-La Roche Ltd. and Xencor, Inc.

Many of our competitors have significantly greater financial, manufacturing, marketing, drug development, technical and human resources than we do. Mergers and acquisitions in the pharmaceutical, biotechnology and diagnostic industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These competitors also compete with us in recruiting and retaining top qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

The key competitive factors affecting the success of all of our therapeutic product candidates, if approved, are likely to be their efficacy, safety, dosing convenience, price, the effectiveness of companion diagnostics in guiding the use of related therapeutics, the level of generic or biosimilar competition and the availability of reimbursement from government and other third-party payors. In addition, the standard of medical care provided to cancer patients continues to evolve as more scientific and medical information becomes available. These changes in medical care relate to pharmaceutical products, but are also affected by other factors, and such changes can positively or negatively affect the prospects of our product candidates as well as those of our competitors.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are more effective, have fewer or less severe effects, are more convenient or are less expensive than any products that we may develop. Our competitors also may obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. In addition, our ability to compete may be affected in many cases by insurers or other third party payors seeking to encourage the use of biosimilar products. Biosimilar products are expected to become available over the coming years. For example, certain products that are trastuzumab biosimilars may be approved in the U.S. prior to margetuximab, if approved.

The most common methods of treating patients with cancer are surgery, radiation and drug therapy. There are a variety of available drug therapies marketed for cancer. Many of these approved drugs are well established therapies and are widely accepted by physicians, patients and third party payors. In many cases, these drugs are administered in combination to enhance efficacy. While our product candidates may compete with many existing drug and other therapies, to the extent they are ultimately used in combination with or as an adjunct to these therapies, our product candidates will not be competitive with them.

#### Government Regulation and Product Approval

Government authorities in the United States, at the federal, state and local level, and in other countries extensively regulate, among other things, the research, development, testing, manufacture, packaging, storage, recordkeeping, labeling, advertising, promotion, distribution, marketing, import and export of pharmaceutical products such as those we are developing. The processes for obtaining regulatory approvals in the United States and in foreign countries, along with subsequent compliance with applicable statutes and regulations, require the expenditure of substantial time and financial resources.

#### FDA Regulation

All of our current product candidates are subject to regulation in the United States by the FDA as biological products, or biologics. The FDA subjects biologics to extensive pre- and post-market regulation. The Public Health Service Act, the Federal Food, Drug, and Cosmetic Act and other federal and state statutes and regulations, govern, among other things, the research, development, testing, manufacture, storage, recordkeeping, approval, labeling, promotion and marketing, distribution, post-approval monitoring and reporting, sampling, and import and export of biologics. Failure

to comply with applicable U.S. requirements may subject a company to a variety of administrative or judicial sanctions, such as FDA refusal to approve pending Biologics License Applications, or BLAs, withdrawal of approvals, clinical holds, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties, or criminal penalties.

**Pre-clinical Studies.** Drug development in our industry is complex, challenging and risky; failure rates are high. Product development cycles are long - approximately 10 to 15 years from discovery to market. A potential new biological product must undergo many years of pre-clinical and clinical testing to establish it is pure, potent and safe. Pre-clinical studies include laboratory evaluation of product chemistry, formulation and toxicity, pharmacology, as well as animal trials to assess the characteristics and potential safety and efficacy of the product. The conduct of the pre-clinical tests must comply with federal regulations and requirements including FDA's good laboratory practice (GLP) regulations and USDA's regulations implementing the Animal Welfare Act. After laboratory analysis and pre-clinical testing in animals, we file an Investigational New Drug Application (IND) with FDA to begin human testing. An IND sponsor must submit the results of the pre-clinical tests, together with manufacturing information, analytical data, any available clinical data or literature, and a proposed clinical trial protocol, among other things, to the FDA as part of an IND application. Certain pre-clinical tests, such as animal tests of reproductive toxicity and carcinogenicity, may continue even after the IND is submitted. An IND automatically becomes effective 30 days after receipt by the FDA, unless before that time the FDA raises concerns or questions related to one or more proposed clinical trials and places the clinical trial on a clinical hold or agrees on an alternate approach with us. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. As a result, submission of an IND may not result in the FDA allowing clinical trials to commence.

**Clinical Development.** Clinical trials involve the administration of the investigational new drug to human subjects (healthy volunteers or patients) under the supervision of a qualified investigator. Clinical trials must be conducted: (i) in compliance with all applicable federal regulations and guidance, including those pertaining to good clinical practice, or GCP, standards that are meant to protect the rights, safety, and welfare of human subjects and to define the roles of clinical trial sponsors, investigators, and monitors; as well as (ii) under protocols detailing, among other things, the objectives of the trial, the parameters to be used in monitoring safety, and the effectiveness criteria to be evaluated. Each protocol involving testing of a new drug in the United States (whether in patients or healthy volunteers) must be included in the IND submission, and FDA must be notified of subsequent protocol amendments. In addition, the protocol must be reviewed and approved by an institutional review board (IRB), and all study subjects must provide informed consent prior to participating in the study. Typically, each institution participating in the clinical trial will require review of the protocol before any clinical trial commences at that institution. Information about certain clinical trials must be submitted within specific timeframes to the National Institutes of Health, or NIH, for public dissemination on their ClinicalTrials.gov website. Progress reports detailing the results of the clinical trials must be submitted at least annually to the FDA and there are additional, more frequent reporting requirements for suspected unexpected serious adverse events.

A study sponsor might choose to discontinue a clinical trial or a clinical development program for a variety of reasons. The FDA may impose a temporary or permanent clinical hold, or other sanctions, if it believes that the clinical trial either is not being conducted in accordance with FDA requirements or presents an unacceptable risk to the clinical trial subjects. An IRB may also require the clinical trial at the site to be halted, either temporarily or permanently, for failure to comply with the IRB's requirements, or may impose other conditions.

Clinical trials to support BLAs for marketing approval are typically conducted in three pre-approval phases, but the phases may overlap or be combined, particularly in testing for oncology indications. In Phase 1, testing is conducted in a small group of subjects who may be patients with the target disease or condition or healthy volunteers, to evaluate its safety, determine a safe dosage range, and identify side effects. In Phase 2, the drug is given to a larger group of subjects with the target condition to further evaluate its safety and gather preliminary evidence of efficacy. Phase 3 studies typically last multiple years for oncology indications. In Phase 3, the drug is given to a large group of subjects with the target disease or condition (several hundred to several thousand), often at multiple geographical sites, to confirm its effectiveness, monitor side effects, and collect data to support drug approval. In some cases, FDA may require post-market studies, known as Phase 4 studies, to be conducted as a condition of approval in order to gather additional information on the drug's effect in various populations and any side effects associated with long-term use. Depending on the risks posed by the drugs, other post-market requirements may be imposed. Only a small percentage

of investigational drugs complete all three phases and obtain marketing approval.

Product Approval. After completion of the required clinical testing, a BLA can be prepared and submitted to the FDA. FDA approval of the BLA is required before marketing of the product may begin in the United States. The BLA must include the results of pre-clinical, clinical and other testing and a compilation of data relating to the product's chemistry, manufacture and controls. The cost of preparing and submitting a BLA is substantial. Under federal law, the submission of most BLAs is additionally subject to a substantial application user fee, and annual product and establishment user fees also apply. These fees are typically increased annually.

The FDA has 60 days from its receipt of a BLA to determine whether the application will be accepted for filing based on the FDA's threshold determination that it is sufficiently complete to permit substantive review. Once the submission is accepted for filing, the FDA begins a substantive review, and the review period under the Prescription Drug User Fee Act begins. The standard for reviewing a BLA is whether the product is safe, pure and potent, which has been interpreted to include that the product is safe and effective and has a favorable benefit-risk profile. FDA's current performance goals call for FDA to complete review of 90 percent of standard (non-priority) BLAs within 10 months of receipt and within six months for priority BLAs, which is 12 months and eight months, respectively, if the 60-day review of the initial application is included in the timeline.

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 outside clinicians and other experts, for review, evaluation and a recommendation as to whether sufficient data exist in the application to support product approval. The FDA is not bound by the recommendation of an advisory committee, but it generally follows such recommendations.

Before approving a BLA, the FDA will typically inspect one or more clinical sites to assure compliance with GCP. Additionally, the FDA will typically inspect the facility or the facilities at which the drug is manufactured. FDA will not approve the product unless compliance with current good manufacturing practices (cGMPs) is satisfactory. FDA also reviews the proposed labeling submitted with the BLA and typically requires changes in the labeling text.

After the FDA evaluates the BLA and the manufacturing and testing facilities, it issues either an approval letter or a complete response letter. Complete response letters generally outline the deficiencies in the submission and delineate the additional testing or information needed in order for the FDA to reconsider the application. If and when those deficiencies have been addressed to the FDA's satisfaction in a resubmission of the BLA, the FDA will issue an approval letter. The FDA has committed to reviewing 90 percent of resubmissions within two or six months from receipt depending on the type of information included.

An approval letter authorizes commercial marketing of the drug for the approved indication or indications and the other conditions of use set out in the approved prescribing information. Once granted, product approvals may be withdrawn if compliance with regulatory standards is not maintained or problems are identified following initial marketing.

As a condition of BLA approval, the FDA may require substantial post-approval testing and surveillance to monitor the drug's safety or efficacy and may impose other conditions, including labeling restrictions that can materially affect the potential market and profitability of the product. As a condition of approval, or after approval, the FDA also may require submission of a risk evaluation and mitigation strategy, or REMS, to mitigate any identified or suspected serious risks. The REMS may include medication guides, physician communication plans, assessment plans, and elements to assure safe use, such as restricted distribution methods, patient registries, or other risk minimization tools.

Other U.S. Post-Marketing Regulatory Requirements. Once a BLA is approved, a product will be subject to certain post-approval requirements, including those relating to advertising, promotion, adverse event reporting, recordkeeping, and cGMPs, as well as registration, listing, and inspection. There also are continuing, annual user fee requirements for any marketed products and the establishments at which such products are manufactured, as well as new application fees for supplemental applications with clinical data.

FDA regulates the content and format of prescription drug labeling, advertising, and promotion, including direct-to-consumer advertising and promotional Internet communications. FDA also establishes parameters for permissible non-promotional communications between industry and the medical community, including industry-supported scientific and educational activities. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion for uses not consistent with the approved labeling, and a company that is found to have improperly promoted off-label uses or otherwise not to have met applicable promotion rules may be subject to significant liability under both the FDCA and other statutes, including the False Claims Act. See "Other Healthcare

Laws and Compliance Requirements" below for more information.

All aspects of pharmaceutical manufacture must conform to cGMPs after approval. Drug manufacturers and certain of their subcontractors are required to register their establishments with FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA during which the FDA inspects manufacturing facilities to assess compliance with cGMPs. Changes to the manufacturing process are strictly regulated and often require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMPs and impose reporting and documentation requirements upon the sponsor and any third-party manufacturers that the sponsor may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in the areas of production and quality control to maintain compliance with cGMPs.

Products may be marketed only for the approved indications and in accordance with the provisions of the approved labeling. Changes to some of the conditions established in an approved application, including changes in indications, labeling, product formulation or manufacturing processes or facilities, require submission and FDA approval of a new BLA or BLA supplement, in some cases before the change may be implemented. A BLA supplement for a new indication typically requires clinical data similar to that in the original application, and the FDA uses the same procedures and actions in reviewing BLA supplements as it does in reviewing BLAs.

Manufacturers are subject to requirements for adverse event reporting and submission of periodic reports following FDA approval of a BLA. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, or failure of Phase 4 studies to meet their specified endpoints, may result in revisions to the approved labeling to add new safety information, the need to conduct additional post-market studies or clinical trials to assess new safety risks, imposition of distribution or other restrictions under a REMS program, or recall of the product and withdrawal of the BLA.

Noncompliance with postmarket requirements can result in one or more of the following consequences:

- Restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- Warning letters;
- Holds on post-approval clinical trials;
- Refusal of the FDA to approve pending BLAs or supplements to approved BLAs, or suspension or revocation of product license approvals;
- Product seizure or detention, or refusal to permit the import or export of products; or
- Injunctions or the imposition of civil or criminal penalties.

In addition, the distribution of prescription pharmaceutical products is subject to the Prescription Drug Marketing Act, or PDMA, which regulates the distribution of drugs and drug samples at the federal level, and sets minimum standards for the registration and regulation of drug distributors by the states. Both the PDMA and state laws limit the distribution of prescription pharmaceutical product samples and impose requirements to ensure accountability in distribution.

**Approval of Biosimilars.** The ACA authorized the FDA to approve biosimilars via a separate, abbreviated pathway. In many cases, this allows biosimilars to be brought to market without conducting the full suite of clinical trials typically required of originators. The law establishes a period of 12 years of data exclusivity for reference products in order to preserve incentives for future innovation and outlines statutory criteria for science-based biosimilar approval standards that take into account patient safety considerations. Under this framework, data exclusivity protects the data in the innovator's regulatory application by prohibiting others, for a period of 12 years, from granting FDA approval based in part on reliance on or reference to the innovator's data in their application to the FDA. The law does not change the duration of patents granted on biological products.

#### Other Healthcare Laws and Compliance Requirements

In the United States, our activities are potentially subject to regulation by federal, state, and local authorities in addition to the FDA, including the Centers for Medicare and Medicaid Services, other divisions of the U.S.

Department of Health and Human Services (e.g., the Office of Inspector General), the U.S. Department of Justice and individual U.S. Attorney offices within the Department of Justice, and state and local governments.

For example, certain financial interactions with healthcare professionals may be subject to the anti-kickback and fraud and abuse provisions of the Social Security Act and the False Claims Act, and in addition our activities may be

affected by the privacy regulations issued under the Health Insurance Portability and Accountability Act, as amended, and similar state laws.

#### International Regulation

In addition to regulations in the United States, a variety of foreign regulations govern clinical trials, commercial sales, distribution of product candidates and other areas outlined above. These regulations can vary between jurisdictions and can be more onerous than regulations in the United States. Penalties for violating such regulations also exist in these jurisdictions. The approval process varies from country to country and the time to approval may be longer or shorter than that required for FDA approval.

#### Pharmaceutical Coverage, Pricing, and Reimbursement

In the United States and other countries, sales of any future products for which we receive regulatory approval for commercial sale will depend in part on the availability of adequate reimbursement from third-party payors, including government health administrative authorities, managed care providers, private health insurers, and other organizations. Third-party payors are increasingly examining the medical necessity and cost effectiveness of medical products and services in addition to safety and efficacy and, accordingly, significant uncertainty exists as to the reimbursement status of newly approved therapeutics. Third-party reimbursement adequate to enable us to realize an appropriate return on our investment in research and product development may not be available for our products.

Drug prices have become a subject of increased focus in recent years. Although there are currently no direct government price controls over private sector purchases in the U.S., federal law requires pharmaceutical manufacturers to pay prescribed rebates on certain Medicaid-reimbursed drugs to enable them to be eligible for reimbursement under certain public healthcare programs such as Medicaid and Medicare Part B. Various states have adopted further mechanisms that seek to control drug prices, including by disfavoring certain higher priced drugs or by seeking supplemental rebates from manufacturers. Managed care has also become a potent force in the market place that increases downward pressure on the prices of pharmaceutical products.

Public and private healthcare payers control costs and influence drug pricing through a variety of mechanisms, including through negotiating discounts with the manufacturers and through the use of tiered formularies and other mechanisms that provide preferential access to certain drugs over others within a therapeutic class. Payers also set other criteria to govern the uses of a drug that will be deemed medically appropriate and therefore reimbursed or otherwise covered.

#### Facilities

Our headquarters are currently located in Rockville, Maryland, where we occupy office and laboratory space under two leases that each expire on January 31, 2020, and each of those leases may be extended for a five-year term. Our manufacturing facility is also located in Rockville under lease from the same landlord. The lease for a portion of that facility expires on March 31, 2018 and may be extended for a five-year term, and the lease for the remainder of that facility expires on December 31, 2019. In 2016, we plan to relocate our headquarters to another location in Rockville, Maryland, under the terms of a lease that will expire in 2023 and may be extended for up to two additional seven-year terms. This new facility will allow for the consolidation of more of our operations as well as provide space for expansion of our manufacturing capacity. Our leases for our current headquarters will continue and we plan to use them for additional staff and may sublease excess capacity to the extent available.

We also lease office and laboratory space in South San Francisco under a lease that expires on February 28, 2018.

#### Employees

As of February 22, 2016, we had 269 full-time employees, 226 of whom were primarily engaged in research and development activities and 56 of whom had an M.D. or Ph.D. degree.

#### Legal Proceedings

From time to time we may be involved in various disputes and litigation matters that arise in the ordinary course of business. We are not currently a party to any material legal proceedings.

#### Available Information

Our website address is [www.macrogenics.com](http://www.macrogenics.com). We post links to our website to the following filings as soon as reasonably practicable after they are electronically filed with or furnished to the Securities and Exchange Commission, or the SEC: Annual Reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements, and any amendments to those reports filed or furnished pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended. All such filings are available through our website free of charge. Our

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filings may also be read and copied at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549. Information on the operation of the Public Reference Room may be obtained by calling the SEC at 1-800-SEC-0330. The SEC also maintains an internet site at [www.sec.gov](http://www.sec.gov) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

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ITEM 1A. RISK FACTORS

Our business and results of operations are subject to numerous risks, uncertainties and other factors that you should be aware of, some of which are described below.

Any of the risks, uncertainties and other factors described below could have a materially adverse effect on our business, financial condition or results of operations and could cause the trading price of our common stock to decline substantially.

**Risks Related to Our Business and the Development and Commercialization of Our Product Candidates.**

All of our product candidates are in pre-clinical or clinical development. Clinical drug development is expensive, time consuming and uncertain and we may ultimately not be able to obtain regulatory approvals for the commercialization of some or all of our product candidates.

The research, testing, manufacturing, labeling, approval, selling, marketing and distribution of drug products are subject to extensive regulation by the U.S. Food and Drug Administration, or FDA, and non-U.S. regulatory authorities, which regulations differ from country to country. We are not permitted to market our product candidates in the United States or in other countries until we receive approval of a Biologics License Application, or BLA, from the FDA or marketing approval from applicable regulatory authorities outside the United States. Our product candidates are in various stages of development and are subject to the risks of failure inherent in drug development. We have not submitted an application for or received marketing approval for any of our product candidates. We have limited experience in conducting and managing the clinical trials necessary to obtain regulatory approvals, including approval by the FDA. Obtaining approval of a BLA can be a lengthy, expensive and uncertain process. In addition, failure to comply with FDA and non-U.S. regulatory requirements may, either before or after product approval, if any, subject our company to administrative or judicially imposed sanctions, including:

- restrictions on our ability to conduct clinical trials, including full or partial clinical holds on ongoing or planned trials;
- restrictions on the products, manufacturers or manufacturing process;
- warning letters;
- civil and criminal penalties;
- injunctions;
- suspension or withdrawal of regulatory approvals;
- product seizures, detentions or import bans;
- voluntary or mandatory product recalls and publicity requirements;
- total or partial suspension of production;
- imposition of restrictions on operations, including costly new manufacturing requirements; and
- refusal to approve pending BLAs or supplements to approved BLAs or analogous marketing approvals outside the United States.

The FDA and foreign regulatory authorities also have substantial discretion in the drug approval process. The number of pre-clinical studies and clinical trials that will be required for regulatory approval varies depending on the product candidate, the disease or condition that the product candidate is designed to address, and the regulations applicable to any particular drug candidate. Regulatory agencies can delay, limit or deny approval of a product candidate for many reasons, including:

- a product candidate may not be deemed safe or effective;
- the results may not confirm the positive results from earlier pre-clinical studies or clinical trials;
- regulatory agencies may not find the data from pre-clinical studies and clinical trials sufficient;
- regulatory agencies might not approve or might require changes to our manufacturing processes or facilities; or
- regulatory agencies may change their approval policies or adopt new regulations.

Any delay in obtaining or failure to obtain required approvals could materially adversely affect our ability to generate revenue from the particular product candidate, which likely would result in significant harm to our financial position and adversely impact our stock price. Furthermore, any regulatory approval to market a product may be subject to limitations on the indicated uses for which we may market the product. These limitations may limit the size of the market for the product.

If clinical trials for our product candidates are prolonged, delayed or stopped, we may be unable to obtain regulatory approval and commercialize our product candidates on a timely basis, which would require us to incur additional costs and delay our receipt of any product revenue.

We are currently enrolling patients in clinical trials for margetuximab, enoblituzumab, MGD006, MGD007, MGD009 and MGD010 and anticipate initiating or continuing clinical trials for these product candidates and others in 2016. In addition, our collaborators are currently enrolling patients in clinical trials for MGD011 and teplizumab. The commencement of new clinical trials could be substantially delayed or prevented by several factors, including: further discussions with the FDA or other regulatory agencies regarding the scope or design of our clinical trials; the limited number of, and competition for, suitable sites to conduct our clinical trials, many of which may already be engaged in other clinical trial programs, including some that may be for the same indication as our product candidates;

any delay or failure to obtain regulatory approval or agreement to commence a clinical trial in any of the countries where enrollment is planned;

inability to obtain sufficient funds required for a clinical trial;

clinical holds on, or other regulatory objections to, a new or ongoing clinical trial;

delay or failure to manufacture sufficient supplies of the product candidate for our clinical trials;

delay or failure to reach agreement on acceptable clinical trial agreement terms or clinical trial protocols with prospective sites or clinical research organizations, CROs, the terms of which can be subject to extensive negotiation and may vary significantly among different sites or CROs; and

delay or failure to obtain institutional review board, or IRB, approval to conduct a clinical trial at a prospective site.

The completion of our clinical trials could also be substantially delayed or prevented by several factors, including:

slower than expected rates of patient recruitment and enrollment;

failure of patients to complete the clinical trial;

unforeseen safety issues, including severe or unexpected drug-related adverse effects experienced by patients, including possible deaths;

lack of efficacy during clinical trials;

termination of our clinical trials by one or more clinical trial sites;

inability or unwillingness of patients or clinical investigators to follow our clinical trial protocols;

inability to monitor patients adequately during or after treatment by us and/or our CROs; and

the need to repeat or terminate clinical trials as a result of inconclusive or negative results or unforeseen complications in testing.

Changes in regulatory requirements and guidance may also occur and we may need to significantly amend clinical trial protocols to reflect these changes with appropriate regulatory authorities. Amendments may require us to renegotiate terms with CROs or resubmit clinical trial protocols to IRBs for re-examination, which may impact the costs, timing or successful completion of a clinical trial. Our clinical trials may be suspended or terminated at any time by the FDA, other regulatory authorities, the IRB overseeing the clinical trial at issue, any of our clinical trial sites with respect to that site, or us, due to a number of factors, including:

failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols;

unforeseen safety issues or any determination that a clinical trial presents unacceptable health risks;

lack of adequate funding to continue the clinical trial due to unforeseen costs or other business decisions; and

upon a breach or pursuant to the terms of any agreement with, or for any other reason by, current or future collaborators that have responsibility for the clinical development of any of our product candidates.

Any failure or significant delay in completing clinical trials for our product candidates would adversely affect our ability to obtain regulatory approval and our commercial prospects and ability to generate product revenue will be diminished.

The results of previous clinical trials may not be predictive of future results, and the results of our current and planned clinical trials may not satisfy the requirements of the FDA or non-U.S. regulatory authorities.

Clinical failure can occur at any stage of clinical development. Clinical trials may produce negative or inconclusive results, and we or any of our current and future collaborators may decide, or regulators may require us, to conduct additional clinical or pre-clinical testing. Success in early clinical trials does not mean that future larger registration clinical trials will be successful because product candidates in later-stage clinical trials may fail to demonstrate sufficient safety and efficacy to the satisfaction of the FDA and non-U.S. regulatory authorities despite having progressed through initial clinical trials. A number of companies in the pharmaceutical industry, including those with



greater resources and experience than us, have suffered significant setbacks in advanced clinical trials, even after obtaining promising results in earlier clinical trials.

Further, our product candidates may not be approved even if they achieve their primary endpoints in Phase 3 clinical trials or registration trials. The FDA or other non-U.S. regulatory authorities may disagree with our trial design and our interpretation of data from pre-clinical studies and clinical trials. In addition, any of these regulatory authorities may change requirements for the approval of a product candidate even after reviewing and providing comments or advice on a protocol for a pivotal Phase 3 clinical trial. In addition, any of these regulatory authorities may also approve a product candidate for fewer or more limited indications than we request or may grant approval contingent on the performance of costly post-marketing clinical trials. The FDA or other non-U.S. regulatory authorities may not approve the labeling claims that we believe would be necessary or desirable for the successful commercialization of our product candidates.

We use new technologies in the development of our product candidates and the FDA and other regulatory authorities have not approved products that utilize these technologies.

Our products in development are based on new technologies, such as Fc Optimization, DART and Trident molecules and CSLCs. Given the novelty of our technologies, we intend to work closely with FDA and other regulatory authorities to perform the requisite scientific analyses and evaluation of our methods to obtain regulatory approval for our product candidates. It is possible that the validation process may take time and resources, require independent third-party analyses or not be accepted by the FDA and other regulatory authorities. For some of our product candidates that are based on these technology platforms, the regulatory approval path and requirements may not be clear or evolve as more data becomes available for this product candidates, which could add significant delay and expense. Delays or failure to obtain regulatory approval of any of the product candidates that we develop would adversely affect our business.

We may not be successful in our efforts to use and expand our technology platforms to build a pipeline of product candidates. We may expend our limited resources to pursue a particular product candidate or indication and fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success.

A key element of our strategy is to use and expand our technology platforms to build a pipeline of product candidates and progress these product candidates through clinical development for the treatment of a variety of different types of diseases. Although our research and development efforts to date have resulted in a pipeline of product candidates directed at various cancers, as well as autoimmune disorders and infectious diseases, we may not be able to develop product candidates that are safe and effective. Even if we are successful in continuing to build our pipeline, the potential product candidates that we identify may not be suitable for clinical development, including as a result of being shown to have harmful side effects or other characteristics that indicate that they are unlikely to be products that will receive marketing approval and achieve market acceptance. If we do not continue to successfully develop and begin to commercialize product candidates, we will face difficulty in obtaining product revenues in future periods, which could result in significant harm to our financial position and adversely affect our stock price.

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

Even if we obtain FDA approval of any of our product candidates, we may never obtain approval or commercialize our products outside of the United States, which would limit our ability to realize their full market potential.

In order to market any products outside of the United States, we must establish and comply with numerous and varying regulatory requirements of other countries regarding safety and efficacy. Clinical trials conducted in one country may not be accepted by regulatory authorities in other countries, and regulatory approval in one country does

not mean that regulatory approval will be obtained in any other country. Approval procedures vary among countries and may require additional pre-clinical studies or clinical trials or additional administrative review periods, which could result in significant delays, difficulties and costs for us. In addition, our failure to obtain regulatory approval in any country may delay or have negative effects on the process for regulatory approval in other countries. We do not have any product candidates approved for sale in any jurisdiction, including international markets, and we do not have experience in obtaining regulatory approval in international markets. If we fail to comply with regulatory requirements in international markets or to obtain and maintain required approvals, our target market will be reduced and our ability to realize the full market potential of our products will be harmed.

Our product candidates may have undesirable side effects which may delay or prevent marketing approval, or, if approval is received, require them to be taken off the market, require them to include safety warnings or otherwise limit their sales.

Although all of our product candidates have undergone or will undergo safety testing, not all adverse effects of drugs can be predicted or anticipated. Unforeseen side effects from any of our product candidates could arise either during clinical development or, if approved by regulatory authorities, after the approved product has been marketed. All of our product candidates are still in clinical or pre-clinical development. While our clinical trials for our initial product candidates to date have demonstrated a favorable safety profile, the results from future trials may not support this conclusion. The results of future clinical or pre-clinical trials may show that our product candidates cause undesirable or unacceptable side effects, which could interrupt, delay or halt clinical trials, and result in delay of, or failure to obtain, marketing approval from the FDA and other regulatory authorities, or result in marketing approval from the FDA and other regulatory authorities with restrictive label warnings or potential product liability claims. If any of our product candidates receives marketing approval and we or others later identify undesirable or unacceptable side effects caused by such products:

- regulatory authorities may require us to take our approved product off the market;

• regulatory authorities may require the addition of labeling statements, specific warnings, a contraindication or field alerts to physicians and pharmacies;

• we may be required to change the way the product is administered, impose other risk-management measures, conduct additional clinical trials or change the labeling of the product;

• we may be subject to limitations on how we may promote the product;

• sales of the product may decrease significantly;

• we may be subject to litigation or product liability claims; and

• our reputation may suffer.

Any of these events could prevent us, our collaborators or our potential future partners from achieving or maintaining market acceptance of the affected product or could substantially increase commercialization costs and expenses, which in turn could delay or prevent us from generating significant revenue from the sale of our products.

Even if approved, if any of our product candidates do not achieve broad market acceptance among physicians, patients, the medical community, and third-party payors our revenue generated from their sales will be limited. The commercial success of our product candidates will depend upon their acceptance among physicians, patients and the medical community. The degree of market acceptance of our product candidates will depend on a number of factors, including:

• limitations or warnings contained in the approved labeling for a product candidate;

• changes in the standard of care for the targeted indications for any of our product candidates;

• limitations in the approved clinical indications for our product candidates;

• demonstrated clinical safety and efficacy compared to other products;

• lack of significant adverse side effects;

• sales, marketing and distribution support;

• availability and extent of reimbursement from managed care plans and other third-party payors;

• timing of market introduction and perceived effectiveness of competitive products;

• the degree of cost-effectiveness of our product candidates;

• availability of alternative therapies at similar or lower cost, including generic and over-the-counter products;

- the extent to which the product candidate is approved for inclusion on formularies of hospitals and managed care organizations;
- whether the product is designated under physician treatment guidelines as a first-line therapy or as a second- or third-line therapy for particular diseases;
- adverse publicity about our product candidates or favorable publicity about competitive products;
- convenience and ease of administration of our products; and
- potential product liability claims.

If any of our product candidates are approved, but do not achieve an adequate level of acceptance by physicians, patients and the medical community, we may not generate sufficient revenue from these products, and we may not become or remain profitable. In addition, efforts to educate the medical community and third-party payors on the benefits of our product candidates may require significant resources and may never be successful.

The manufacture of our product candidates is complex, and we may encounter difficulties in production. If we encounter any such difficulties, our ability to supply our product candidates for clinical trials or, if approved, for commercial sale could be delayed or halted entirely.

The process of manufacturing our product candidates is extremely susceptible to product loss due to contamination, equipment failure or improper installation or operation of equipment, vendor or operator error, contamination and inconsistency in yields, variability in product characteristics, and difficulties in scaling the production process. Even minor deviations from normal manufacturing processes could result in reduced production yields, product defects and other supply disruptions. If microbial, viral or other contaminations are discovered in our product candidates or in the manufacturing facilities in which our product candidates are made, such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination. Any adverse developments affecting manufacturing operations for our product candidates, if any are approved, may result in shipment delays, inventory shortages, lot failures, product withdrawals or recalls, or other interruptions in the supply of our products. We may also have to take inventory write-offs and incur other charges and expenses for products that fail to meet specifications, undertake costly remediation efforts or seek more costly manufacturing alternatives.

Our manufacturing facilities are subject to significant government regulations and approvals, which are often costly and could result in adverse consequences to our business if we fail to comply with the regulations or maintain the approvals.

We must comply with the FDA's current Good Manufacturing Practice, or cGMP, requirements, as set out in statute, regulations and guidance. We may encounter difficulties in achieving quality control and quality assurance and may experience shortages in qualified personnel. We are subject to inspections by the FDA and comparable agencies in other jurisdictions to confirm compliance with applicable regulatory requirements. See "Other U.S. Post-Marketing Regulatory Requirements" above for additional information. Any failure to follow cGMP or other regulatory requirements or delay, interruption or other issues that arise in the manufacture, fill-finish, packaging, or storage of our product candidates as a result of a failure of our facilities or the facilities or operations of third parties to comply with regulatory requirements or pass any regulatory authority inspection could significantly impair our ability to develop and commercialize our product candidates, including leading to significant delays in the availability of drug product for our clinical trials or the termination or hold on a clinical trial, or the delay or prevention of a filing or approval of marketing applications for our product candidates. Significant noncompliance could also result in the imposition of sanctions, including fines, injunctions, civil penalties, failure of regulatory authorities to grant marketing approvals for our product candidates, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of products, operating restrictions and criminal prosecutions, any of which could damage our reputation. If we are not able to maintain regulatory compliance, we may not be permitted to market our product candidates and/or may be subject to product recalls, seizures, injunctions, or criminal prosecution.

We currently have no marketing, sales or distribution infrastructure. If we are unable to develop sales, marketing and distribution capabilities on our own or through collaborations, we will not be successful in commercializing our product candidates.

We currently have no marketing, sales and distribution infrastructure and we have limited sales and marketing experience within our organization. If any of our product candidates are approved, we intend to establish a sales and marketing organization with technical expertise and supporting distribution capabilities to commercialize our product

candidates in the United States and, potentially, to outsource this function to a third party outside of the United States. Both of these options would be expensive and time consuming. These costs may be incurred in advance of any approval of our product candidates. In addition, we may not be able to engage a sales force in the United States that is sufficient in size or has adequate expertise in the medical markets that we intend to target. Any failure or delay in the development of our internal sales, marketing and distribution capabilities would adversely impact the commercialization of our products.

With respect to certain of our existing and future product candidates, we have entered into collaboration or other licensing arrangements with third party collaborators that have direct sales forces and established distribution systems. To the extent that we enter into additional collaboration agreements, our product revenue may be lower than if we directly marketed or sold any approved products. In addition, any revenue we receive will depend in whole or in part upon the efforts of these third party collaborators, which may not be successful and are generally not within our control. If we are unable to enter into additional arrangements on acceptable terms or at all, we may not be able to successfully commercialize certain approved products. If we are not successful in commercializing approved products, either on our own or through collaborations with one or more third parties, our future product revenue will suffer and we may incur significant additional losses.

We face significant competition and if our competitors develop and market products that are more effective, safer or less expensive than our product candidates, our commercial opportunities will be negatively impacted.

The life sciences industry is highly competitive and subject to rapid and significant technological change. We are currently developing therapeutics that will compete with other drugs and therapies that currently exist or are being developed. Products we may develop in the future are also likely to face competition from other drugs and therapies, some of which we may not currently be aware. We have competitors both in the United States and internationally, including major multinational pharmaceutical companies, established biotechnology companies, specialty pharmaceutical companies, universities and other research institutions. Many of our competitors have significantly greater financial, manufacturing, marketing, drug development, technical and human resources than we do. Large pharmaceutical companies, in particular, have extensive experience in clinical testing, obtaining regulatory approvals, recruiting patients and manufacturing pharmaceutical products. These companies also have significantly greater research and marketing capabilities than we do and may also have products that have been approved or are in late stages of development, and collaborative arrangements in our target markets with leading companies and research institutions. Established pharmaceutical companies may also invest heavily to accelerate discovery and development of novel compounds or to in-license novel compounds that could make the product candidates that we develop obsolete. As a result of all of these factors, our competitors may succeed in obtaining patent protection and/or FDA approval or discovering, developing and commercializing products in our field before we do.

Specifically, there are a large number of companies developing or marketing treatments for cancer and autoimmune disorders, including many major pharmaceutical and biotechnology companies. These treatments consist both of small molecule drug products, as well as biologic therapeutics that work by using next-generation antibody technology platforms to address specific cancer targets. In addition, several companies are developing therapeutics that work by targeting multiple specificities using a single recombinant molecule. See "Competition" above for additional information.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe effects, are more convenient or are less expensive than any products that we may develop. Our competitors also may obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. In addition, our ability to compete may be affected in many cases by insurers or other third party payors seeking to encourage the use of biosimilar products. Biosimilar products are expected to become available over the coming years. For example, certain HER2 biosimilar products are approved in certain countries and others may be approved prior to margetuximab. Even if our product candidates achieve marketing approval, they may be priced at a significant premium over competitive biosimilar products if any have been approved by then.

Smaller and other early stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These third parties compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and patient registration for

clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs. In addition, the biopharmaceutical industry is characterized by rapid technological change. If we fail to stay at the forefront of technological change, we may be unable to compete effectively. Technological advances or products developed by our competitors may render our technologies or product candidates obsolete, less competitive or not economical.

Reimbursement decisions by third-party payors may have an adverse effect on pricing and market acceptance. If there is not sufficient reimbursement for our products, it is less likely that our products will be widely used.

Even if our product candidates are approved for sale by the appropriate regulatory authorities, market acceptance and sales of these products will depend on reimbursement policies and may be affected by future healthcare reform measures. Government authorities and third-party payors, such as private health insurers and health maintenance organizations, decide which drugs they will reimburse and establish payment levels and, in some cases, utilization management strategies, such as tiered formularies and prior authorization. We cannot be certain that reimbursement will be available for any products that we develop or that the reimbursement level will be adequate to allow us to operate profitably. Also, we cannot be certain that reimbursement policies will not reduce the demand for, or the price paid for, our products. If reimbursement is not available or is available on a limited basis, or if the reimbursement amount is inadequate, we may not be able to successfully commercialize any of our approved products.

The United States and several foreign jurisdictions are considering, or have already enacted, a number of legislative and regulatory proposals to change the healthcare system in ways that could affect our ability to sell any of our future approved products profitably. Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and/or expanding access to healthcare. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives, including the Patient Protection and Affordable Care Act, as amended by the Healthcare and Education Affordability Reconciliation Act, collectively the ACA, which became law in 2010. While it is difficult to assess the impact of the ACA in isolation, either in general or on our business specifically, it is widely thought that the ACA increases downward pressure on pharmaceutical reimbursement, which could negatively affect market acceptance of, and the price we may charge for, any products we develop that receive regulatory approval. We expect to experience pricing pressures in connection with the sale of any products that we develop, due to the trend toward managed healthcare, the increasing influence of health maintenance organizations and additional legislative proposals.

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

We face an inherent risk of product liability lawsuits related to the testing of our product candidates in seriously ill patients, and will face an even greater risk if product candidates are approved by regulatory authorities and introduced commercially. Product liability claims may be brought against us or our collaborators by participants enrolled in our clinical trials, patients, health care providers or others using, administering or selling any of our future approved products. If we cannot successfully defend ourselves against any such claims, we may incur substantial liabilities. Regardless of their merit or eventual outcome, liability claims may result in:

- decreased demand for our future approved products;
- injury to our reputation;
- withdrawal of clinical trial participants;
- termination of clinical trial sites or entire trial programs;
- increased regulatory scrutiny;
- significant litigation costs;
- substantial monetary awards to or costly settlement with patients or other claimants;
- product recalls or a change in the indications for which they may be used;
- loss of revenue;
- diversion of management and scientific resources from our business operations; and
- the inability to commercialize our product candidates.

If any of our product candidates are approved for commercial sale, we will be highly dependent upon consumer perceptions of us and the safety and quality of our products. We could be adversely affected if we are subject to negative publicity. We could also be adversely affected if any of our products or any similar products distributed by other companies prove to be, or are asserted to be, harmful to patients. Because of our dependence upon consumer

perceptions, any adverse publicity associated with illness or other adverse effects resulting from patients' use or misuse of our products or any similar products distributed by other companies could have a material adverse impact on our financial condition or results of operations.

We currently hold \$20 million in product liability insurance coverage in the aggregate, with a per incident limit of \$20 million, which may not be adequate to cover all liabilities that we may incur. We may need to increase our insurance coverage when we begin the commercialization of our product candidates. Insurance coverage is becoming increasingly expensive. As a result, we may be unable to maintain or obtain sufficient insurance at a reasonable cost to protect us against losses that could have a material adverse effect on our business. A successful product liability claim or series of claims brought against us, particularly if judgments exceed any insurance coverage we may have, could decrease our cash resources and adversely affect our business, financial condition and results of operation.

The contract with the National Institute of Allergy and Infectious Diseases (NIAID) makes us a government contractor. Laws and regulations affecting government contracts may make it more costly and difficult for us to successfully conduct our business.

We must comply with numerous laws and regulations relating to the procurement, formation, administration and performance of government contracts. Failure to comply with these laws could result in significant civil and criminal penalties. Among the most significant government contracting regulations that may affect our business are: the Federal Acquisition Regulation, or FAR, and NIH-NIAID-specific regulations supplemental to the FAR, which comprehensively regulate the procurement, formation, administration and performance of government contracts; business ethics and public integrity obligations, which govern conflicts of interest and the hiring of former government employees, restrict the granting of gratuities and funding of lobbying activities and incorporate other requirements such as the Anti-Kickback Act, the Procurement Integrity Act, and the False Claims Act; export and import control laws and regulations; and laws, regulations and executive orders restricting the use and dissemination of sensitive information we may receive pursuant to our performance of the government contract. U.S. government agencies routinely audit and investigate government contractors for compliance with applicable laws and standards. If we are audited, such audit could result in disallowance of expected cost reimbursement, or if such audit were to uncover improper or illegal activities, we could be subject to civil and criminal penalties, administrative sanctions, including suspension or debarment from government contracting and significant reputational harm.

#### Risks Related to Our Financial Position and Need for Additional Capital

We have incurred significant losses since inception and anticipate that we will continue to incur losses for the foreseeable future. We have no products approved for commercial sale, and to date we have not generated any revenue or profit from product sales. We may never achieve or sustain profitability.

We are a clinical-stage biopharmaceutical company. We have incurred significant losses since our inception. As of December 31, 2015, our accumulated deficit was approximately \$234.2 million. We expect to continue to incur losses for the foreseeable future, and we expect these losses to increase as we continue our research and development of, and seek regulatory approvals for, our product candidates, prepare for and begin to commercialize any approved products, and add infrastructure and personnel to support our product development efforts and operations as a public company. The net losses and negative cash flows incurred to date, together with expected future losses, have had, and likely will continue to have, an adverse effect on our stockholders' deficit and working capital. The amount of future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue.

Because of the numerous risks and uncertainties associated with pharmaceutical product development, we are unable to accurately predict the timing or amount of increased expenses or when, or if, we will be able to achieve profitability. For example, our expenses could increase if we are required by the FDA to perform trials in addition to those that we currently expect to perform, or if there are any delays in completing our currently planned clinical trials or in the development of any of our product candidates.

To become and remain profitable, we must succeed in developing and commercializing products with significant market potential. This will require us to be successful in a range of challenging activities for which we are only in the preliminary stages, including developing product candidates, obtaining regulatory approval for them, and

manufacturing, marketing and selling those products for which we may obtain regulatory approval. We may never succeed in these activities and may never generate revenue from product sales that is significant enough to achieve profitability. Even if we achieve profitability in the future, we may not be able to sustain profitability in subsequent periods. Our failure to become or remain profitable would depress our market value and could impair our ability to raise capital, expand our business, develop other product candidates, or continue our operations. A decline in the value of our company could also cause you to lose all or part of your investment.

We will require substantial additional funding, which may not be available to us on acceptable terms, or at all, and, if not available, may require us to delay, scale back, or cease our product development programs or operations.

We are advancing our product candidates through clinical development. Developing pharmaceutical products, including conducting pre-clinical studies and clinical trials, is expensive. In order to obtain such regulatory approval, we will be required to conduct clinical trials for each indication for each of our product candidates. We will continue to require additional funding beyond what was raised in our public offerings and through our collaborations and license agreements to complete the development and commercialization of our product candidates and to continue to advance the development of our other product candidates, and such funding may not be available on acceptable terms or at all. Although it is difficult to predict our funding requirements, based upon our current operating plan, we anticipate that our cash and cash equivalents as of December 31, 2015, combined with the proceeds from collaboration payments we anticipate receiving, will enable us to fund our operations into 2018, assuming all of our collaboration programs advance as currently contemplated. Because successful development of our product candidates is uncertain, we are unable to estimate the actual funds we will require to complete research and development and to commercialize our product candidates.

Our future funding requirements will depend on many factors, including but not limited to:

- the number and characteristics of other product candidates and indications that we pursue;

- the scope, progress, timing, cost and results of research, pre-clinical development, and clinical trials;

- the costs, timing and outcome of seeking and obtaining FDA and non-U.S. regulatory approvals;

- the costs associated with manufacturing our product candidates and establishing sales, marketing, and distribution capabilities;

- our ability to maintain, expand, and defend the scope of our intellectual property portfolio, including the amount and

- timing of any payments we may be required to make in connection with the licensing, filing, defense and enforcement of any patents or other intellectual property rights;

- our need and ability to hire additional management, scientific, and medical personnel;

- the effect of competing products that may limit market penetration of our product candidates;

- our need to implement additional internal systems and infrastructure, including financial and reporting systems; and

- the economic and other terms, timing of and success of our existing collaborations, and any collaboration, licensing,

- or other arrangements into which we may enter in the future, including the timing of receipt of any milestone or royalty payments under these agreements.

Until we can generate a sufficient amount of product revenue to finance our cash requirements, which we may never do, we expect to finance future cash needs primarily through a combination of public or private equity offerings, debt financings, strategic collaborations, and grant funding. If sufficient funds on acceptable terms are not available when needed, or at all, we could be forced to significantly reduce operating expenses and delay, scale back or eliminate one or more of our development programs or our business operations.

Raising additional capital may cause dilution to our stockholders, restrict our operations or require us to relinquish substantial rights.

To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of these new securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing, if available at all, may involve agreements that include covenants limiting or restricting our ability to take specific actions such as incurring additional debt, making capital expenditures, or declaring dividends. If we raise additional funds through collaborations, strategic alliances, or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, product candidates, or future revenue streams, or grant licenses on terms that are not favorable to us. We cannot assure you that we will be able to obtain additional funding if and when necessary. If we are unable to obtain adequate financing

on a timely basis, we could be required to delay, scale back or eliminate one or more of our development programs or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

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

Our ability to utilize our federal net operating losses, or NOLs, and federal tax credits is currently limited, and may be limited further, under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended. The limitations apply if an ownership change, as defined by Section 382, occurs. Generally, an ownership change occurs when certain shareholders increase their aggregate ownership by more than 50 percentage points over their lowest ownership percentage in a testing period, which is typically three years or since the last ownership change. We are already subject to Section 382 limitations due to acquisitions we made in 2002 and 2008. As of December 31, 2015, we had federal and state NOL carryforwards of \$165.6 million and research and development tax credit carryforwards of \$29.3 million available. Future changes in stock ownership may also trigger an ownership change and, consequently, another Section 382 limitation. Any limitation may result in expiration of a portion of the net operating loss or tax credit carryforwards before utilization which would reduce our gross deferred income tax assets and corresponding valuation allowance. As a result, if we earn net taxable income, our ability to use our pre-change net operating loss carryforwards and tax credit carryforwards to reduce United States federal income tax may be subject to limitations, which could potentially result in increased future cash tax liability to us.

#### Risks Related to Our Dependence on Third Parties

Our existing therapeutic collaborations are important to our business, and future collaborations may also be important to us. If we are unable to maintain any of these collaborations, or if these collaborations are not successful, our business could be adversely affected.

We have limited capabilities for drug development and do not yet have any capability for sales, marketing or distribution. We have entered into collaborations with other companies that we believe can provide such capabilities, including our collaboration and license agreements with Janssen Biotech, Inc., or Janssen, Takeda Pharmaceutical Company Ltd., or Takeda, Les Laboratoires Servier and Institut de Recherches Servier, or collectively Servier, Gilead Sciences, Inc., or Gilead, Boehringer Ingelheim GmbH, or Boehringer, Pfizer, Inc., or Pfizer, and Green Cross Corp., or Green Cross. These collaborations also have provided us with important funding for our development programs and technology platforms and we expect to receive additional funding under these collaborations in the future. Our existing therapeutic collaborations, and any future collaborations we enter into, may pose a number of risks, including the following:

- collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations;
- collaborators may not perform their obligations as expected;
- collaborators may not pursue development and commercialization of any product candidates that achieve regulatory approval or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the collaborators' strategic focus or available funding, or external factors, such as an acquisition, that divert resources or create competing priorities;
- 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;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our products or product candidates 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;
- product candidates discovered in collaboration with us may be viewed by our collaborators as competitive with their own product candidates or products, which may cause collaborators to cease to devote resources to the commercialization of our product candidates;
- a collaborator with marketing and distribution rights to one or more of our product candidates that achieve regulatory approval may not commit sufficient resources to the marketing and distribution of such product or products;
- disagreements with collaborators, including disagreements over proprietary rights, contract interpretation or the preferred course of development, might cause delays or termination of the research, development or



commercialization of product candidates, might lead to additional responsibilities for us with respect to product candidates, or might result in litigation or arbitration, any of which would be time-consuming and expensive; 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 potential litigation;

collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability; and

collaborations may be terminated for the convenience of the collaborator and, if terminated, we could be required to raise additional capital to pursue further development or commercialization of the applicable product candidates. For example, each of our collaboration and license agreements with Janssen, Takeda, Servier, Gilead, and Boehringer may be terminated for convenience upon the completion of a specified notice period.

If our therapeutic collaborations do not result in the successful development and commercialization of products or if one of our collaborators terminates its agreement with us, we may not receive any future research funding or milestone or royalty payments under the collaboration. If we do not receive the funding we expect under these agreements, our development of our technology platforms and product candidates could be delayed and we may need additional resources to develop product candidates and our technology platforms. All of the risks relating to product development, regulatory approval and commercialization described in this report also apply to the activities of our program collaborators.

Additionally, subject to its contractual obligations to us, if one of our collaborators is involved in a business combination, the collaborator might deemphasize or terminate the development or commercialization of any product candidate licensed to it by us. If one of our collaborators terminates its agreement with us, we may find it more difficult to attract new collaborators.

For some of our product candidates, we may in the future determine to collaborate with additional pharmaceutical and biotechnology companies for development and potential commercialization of therapeutic products. We face significant competition in seeking appropriate collaborators. Our ability to reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors. These factors may include the design or results of clinical trials, the likelihood of approval by the FDA or similar regulatory authorities outside the United States, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, the potential of competing products, the existence of uncertainty with respect to our ownership of technology, which can exist if there is a challenge to such ownership without regard to the merits of the challenge and industry and market conditions generally. The collaborator may also consider alternative product candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us for our product candidate.

Collaborations are complex and time-consuming to negotiate and document. In addition, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future collaborators. If we are unable to reach agreements with suitable collaborators on a timely basis, on acceptable terms, or at all, we may have to curtail the development of a product candidate, reduce or delay one or more of our other development programs, delay its potential commercialization or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to fund and undertake development or commercialization activities on our own, we may need to obtain additional expertise and additional capital, which may not be available to us on acceptable terms or at all. If we fail to enter into collaborations and do not have sufficient funds or expertise to undertake the necessary development and commercialization activities, we may not be able to further develop our product candidates or bring them to market or continue to develop our technology platforms and our business may be materially and adversely affected.

We may also be restricted under existing collaboration agreements from entering into future agreements on certain terms with potential collaborators. Aside from our agreement with Green Cross, subject to certain specified exceptions, each of our existing therapeutic collaborations contains a restriction on our engaging in activities that are

the subject of the collaboration with third parties for specified periods of time.

Independent clinical investigators and CROs that we engage to conduct our clinical trials may not devote sufficient time or attention to our clinical trials or be able to repeat their past success.

We expect to continue to depend on independent clinical investigators and CROs to conduct our clinical trials. CROs may also assist us in the collection and analysis of data. There is a limited number of third-party service providers that specialize or have the expertise required to achieve our business objectives. Identifying, qualifying and managing performance of third-party service providers can be difficult, time consuming and cause delays in our development programs. These investigators and CROs will not be our employees and we will not be able to control, other than by contract, the amount of resources, including time, which they devote to our product candidates and clinical trials. If independent investigators or CROs fail to devote sufficient resources to the development of our product candidates, or if their performance is substandard, it may delay or compromise the prospects for approval and commercialization of any product candidates that we develop. In addition, the use of third-party service providers requires us to disclose our proprietary information to these parties, which could increase the risk that this information will be misappropriated. Further, the FDA requires that we comply with standards, commonly referred to as current Good Clinical Practice, or GCP, for conducting, recording and reporting clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial subjects are protected. Failure of clinical investigators or CROs to meet their obligations to us or comply with GCP procedures could adversely affect the clinical development of our product candidates and harm our business.

Failure of our third-party contractors to successfully develop and commercialize companion diagnostics for use with our product candidates could harm our ability to commercialize our product candidates.

We plan to develop companion diagnostics for our product candidates where appropriate. We expect that, at least in some cases, the FDA and similar regulatory authorities outside the United States may require the development and regulatory approval of a companion diagnostic as a condition to approving our product candidates. We do not have experience or capabilities in developing or commercializing diagnostics and plan to rely in large part on third parties to perform these functions.

In most cases, we will likely outsource the development, production and commercialization of companion diagnostics to third parties. By outsourcing these companion diagnostics to third parties, we become dependent on the efforts of our third party contractors to successfully develop and commercialize these companion diagnostics. Our contractors:

- may not perform their obligations as expected;
- may encounter production difficulties that could constrain the supply of the companion diagnostic;
- may have difficulties gaining acceptance of the use of the companion diagnostic in the clinical community;
- may not commit sufficient resources to the marketing and distribution of such product; and
- may terminate their relationship with us.

If any companion diagnostic for use with one of our product candidates fails to gain market acceptance, our ability to derive revenues from sales of such product candidate could be harmed. If our third party contractors fail to commercialize such companion diagnostic, we may not be able to enter into arrangements with another diagnostic company to obtain supplies of an alternative diagnostic test for use in connection with such product candidate or do so on commercially reasonable terms, which could adversely affect and delay the development or commercialization of such product candidate.

We expect to contract with third parties for the manufacture of our product candidates for clinical testing in the future and expect to continue to do so for commercialization. This reliance on third parties increases the risk that we will not have sufficient quantities of our product candidates or products or such quantities at an acceptable cost, which could delay, prevent or impair our development or commercialization efforts.

We currently have a manufacturing facility located in Rockville, Maryland. We manufacture drug substance at this facility that we use for research and development purposes and for clinical trials of our product candidates. We believe we currently have capacity to produce Phase 2 material for our antibody product candidates and clinical material for our DART therapeutics, but our current facility will be insufficient to support our needs for our Phase 3 clinical trials for our antibody product candidates and for commercial quantities of such candidates. We do not have experience in manufacturing products at commercial scale. We have plans to expand our manufacturing capacity at a newly leased

facility, but that expansion will be time-consuming, costly and will not be ready in time for the anticipated commercial launch of margetuximab, assuming the success of the Phase 3 SOPHIA clinical trial.

We have entered into agreements with contract manufacturing organizations to supplement our clinical supply and internal capacity as we advance our product candidate pipeline. We expect to use third parties for the manufacture of certain of our product candidates for clinical testing, as well as for commercial manufacture of some of our product candidates that receive marketing approval and that are not manufactured by one of our third party collaborators. We plan eventually to enter into long-term supply agreements with several manufacturers for commercial supplies. We may be unable to reach agreement with any of these contract manufacturers, or to identify and reach arrangements on satisfactory terms with other contract manufacturers, to manufacture any of our product candidates. Additionally, the facilities used by any contract manufacturer to manufacture any of our product candidates must be the subject of a satisfactory inspection before the FDA and other regulatory authorities approve a BLA or marketing authorization for the product candidate manufactured at that facility. We will depend on these third-party manufacturing partners for compliance with the FDA's requirements for the manufacture of our finished products. If our manufacturers cannot successfully manufacture material that conforms to our specifications and the FDA and other regulatory authorities' cGMP requirements, our product candidates will not be approved or, if already approved, may be subject to recalls. Reliance on third-party manufacturers entails risks to which we would not be subject if we manufactured the product candidates ourselves, including:

- the possibility of a breach of the manufacturing agreements by the third parties because of factors beyond our control;
- the possibility of termination or nonrenewal of the agreements by the third parties before we are able to arrange for a qualified replacement third-party manufacturer; and
- the possibility that we may not be able to secure a manufacturer or manufacturing capacity in a timely manner and on satisfactory terms in order to meet our manufacturing needs.

Any of these factors could cause the delay of approval or commercialization of our product candidates, cause us to incur higher costs or prevent us from commercializing our product candidates successfully. Furthermore, if any of our product candidates are approved and contract manufacturers fail to deliver the required commercial quantities of finished product on a timely basis and at commercially reasonable prices, and we are unable to find one or more replacement manufacturers capable of production at a substantially equivalent cost, in substantially equivalent volumes and quality and on a timely basis, we would likely be unable to meet demand for our products and could lose potential revenue. It may take several years to establish an alternative source of supply for our product candidates and to have any such new source approved by the FDA or any other relevant regulatory authorities.

We intend to design and build a manufacturing facility that could support future commercial production of our product candidates, if and when any are commercialized. We have no experience in large-scale or commercial manufacturing, and there can be no assurance that we will be able to build our manufacturing facility or, if built, we will be able to manufacture commercial products.

We intend to expand our manufacturing capacity to support future commercial production and have entered into a lease near our current headquarters for this purpose. Although some of our employees have experience in the manufacturing of pharmaceutical products from prior employment at other companies, we as a company have no prior experience in large-scale or commercial manufacturing. Designing and building a manufacturing facility will be time-consuming and expensive, and we may experience delays or cost overruns. In addition, government approvals would be required for us to operate a manufacturing facility and can be time-consuming to obtain. As a manufacturer of pharmaceutical products, we also would be required to demonstrate and maintain compliance with current Good Manufacturing Practices, or cGMPs, which include requirements related to production processes, quality control and assurance and recordkeeping. Furthermore, establishing commercial manufacturing operations may require a reallocation of other resources, particularly the time and attention of our senior management. Any failure or delay in the development of our commercial manufacturing capabilities could adversely impact the commercialization of our product candidates.

#### Risks Related to Our Intellectual Property

Our commercial success depends significantly on our ability to operate without infringing the patents and other proprietary rights of third parties.

Our success will depend in part on our ability to operate without infringing the proprietary rights of third parties. Other entities may have or obtain patents or proprietary rights that could limit our ability to make, use, sell, offer for sale or import our future approved products or impair our competitive position. For example, certain patents held by third parties cover Fc engineering methods and mutations in Fc regions to enhance the binding of Fc regions to Fc receptors on immune cells. Although we believe that these patents are invalid, if they cover margetuximab or enoblituzumab and we are unable to invalidate their patents, or if licenses for them are not available on commercially reasonable terms, our business could be harmed, perhaps materially.

Patents that we may ultimately be found to infringe could be issued to third parties. Third parties may have or obtain valid and enforceable patents or proprietary rights that could block us from developing product candidates using our technology. Our failure to obtain a license to any technology that we require may materially harm our business, financial condition and results of operations. Moreover, our failure to maintain a license to any technology that we require may also materially harm our business, financial condition, and results of operations. Furthermore, we would be exposed to a threat of litigation.

In the pharmaceutical industry, significant litigation and other proceedings regarding patents, patent applications, trademarks and other intellectual property rights have become commonplace. The types of situations in which we may become a party to such litigation or proceedings include:

we or our collaborators may initiate litigation or other proceedings against third parties seeking to invalidate the patents held by those third parties or to obtain a judgment that our products or processes do not infringe those third parties' patents;

if our competitors file patent applications that claim technology also claimed by us or our licensors, we or our licensors may be required to participate in interference or opposition proceedings to determine the priority of invention, which could jeopardize our patent rights and potentially provide a third party with a dominant patent position;

if third parties initiate litigation claiming that our processes or products infringe their patent or other intellectual property rights, we and our collaborators will need to defend against such proceedings; and

if a license to necessary technology is terminated, the licensor may initiate litigation claiming that our processes or products infringe or misappropriate their patent or other intellectual property rights and/or that we breached our obligations under the license agreement, and we and our collaborators would need to defend against such proceedings. These lawsuits would be costly and could affect our results of operations and divert the attention of our management and scientific personnel. There is a risk that a court would decide that we or our collaborators are infringing the third party's patents and would order us or our collaborators to stop the activities covered by the patents. In that event, we or our collaborators may not have a viable alternative to the technology protected by the patent and may need to halt work on the affected product candidate or cease commercialization of an approved product. In addition, there is a risk that a court will order us or our collaborators to pay the other party damages. An adverse outcome in any litigation or other proceeding could subject us to significant liabilities to third parties and require us to cease using the technology that is at issue or to license the technology from third parties. We may not be able to obtain any required licenses on commercially acceptable terms or at all. Any of these outcomes could have a material adverse effect on our business. The pharmaceutical and biotechnology industries have produced a significant number of patents, and it may not always be clear to industry participants, including us, which patents cover various types of products or methods of use. The coverage of patents is subject to interpretation by the courts, and the interpretation is not always uniform or predictable. If we are sued for patent infringement, we would need to demonstrate that our products or methods either do not infringe the patent claims of the relevant patent or that the patent claims are invalid, and we may not be able to do this. Proving invalidity is difficult. For example, in the United States, proving invalidity requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents. Even if we are successful in these proceedings, we may incur substantial costs and divert management's time and attention in pursuing these proceedings, which could have a material adverse effect on us. If we are unable to avoid infringing the patent rights of others, we may be required to seek a license, defend an infringement action or challenge the validity of the patents in court. Patent litigation is costly and time consuming. We may not have sufficient resources to bring these actions to a successful conclusion. In addition, if we do not obtain a license, develop or obtain non-infringing technology, fail to defend an infringement action successfully or have infringed patents declared invalid, we may incur substantial

monetary damages, encounter significant delays in bringing our product candidates to market and be precluded from manufacturing or selling our product candidates.

The cost of any patent litigation or other proceeding, even if resolved in our favor, could be substantial. Some of our competitors may be able to sustain the cost of such litigation and proceedings more effectively than we can because of their substantially greater resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace. Patent litigation and other proceedings may also absorb significant management time.

If we are unable to obtain and enforce patent protection for our product candidates and related technology, our business could be materially harmed.

Issued patents may be challenged, narrowed, invalidated or circumvented. In addition, court decisions may introduce uncertainty in the enforceability or scope of patents owned by biotechnology companies. The legal systems of certain countries do not favor the aggressive enforcement of patents, and the laws of foreign countries may not allow us to protect our inventions with patents to the same extent as the laws of the United States. Because patent applications in the United States and many foreign jurisdictions are typically not published until 18 months after filing, or in some cases not at all, and because publications of discoveries in scientific literature lag behind actual discoveries, we cannot be certain that we were the first to make the inventions claimed in our issued patents or pending patent applications, or that we were the first to file for protection of the inventions set forth in our patents or patent applications. As a result, we may not be able to obtain or maintain protection for certain inventions. Therefore, the enforceability and scope of our patents in the United States and in foreign countries cannot be predicted with certainty and, as a result, any patents that we own or license may not provide sufficient protection against competitors. We may not be able to obtain or maintain patent protection from our pending patent applications, from those we may file in the future, or from those we may license from third parties. Moreover, even if we are able to obtain patent protection, such patent protection may be of insufficient scope to achieve our business objectives.

Our strategy depends on our ability to identify and seek patent protection for our discoveries. This process is expensive and time consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner or in all jurisdictions where protection may be commercially advantageous. Despite our efforts to protect our proprietary rights, unauthorized parties may be able to obtain and use information that we regard as proprietary. The issuance of a patent does not ensure that it is valid or enforceable, so even if we obtain patents, they may not be valid or enforceable against third parties. In addition, the issuance of a patent does not give us the right to practice the patented invention. Third parties may have blocking patents that could prevent us from marketing our own patented product and practicing our own patented technology. Third parties may also seek to market biosimilar versions of any approved products. Alternatively, third parties may seek approval to market their own products similar to or otherwise competitive with our products. In these circumstances, we may need to defend and/or assert our patents, including by filing lawsuits alleging patent infringement. In any of these types of proceedings, a court or agency with jurisdiction may find our patents invalid and/or unenforceable. Even if we have valid and enforceable patents, these patents still may not provide protection against competing products or processes sufficient to achieve our business objectives.

The patent position of pharmaceutical or biotechnology companies, including ours, is generally uncertain and involves complex legal and factual considerations. The standards which the United States Patent and Trademark Office, or USPTO, and its foreign counterparts use to grant patents are not always applied predictably or uniformly and can change. There is also no uniform, worldwide policy regarding the subject matter and scope of claims granted or allowable in pharmaceutical or biotechnology patents. The laws of some foreign countries do not protect proprietary information to the same extent as the laws of the United States, and many companies have encountered significant problems and costs in protecting their proprietary information in these foreign countries. Outside the United States, patent protection must be sought in individual jurisdictions, further adding to the cost and uncertainty of obtaining adequate patent protection outside of the United States. Accordingly, we cannot predict whether additional patents protecting our technology will issue in the United States or in foreign jurisdictions, or whether any patents that do issue will have claims of adequate scope to provide competitive advantage. Moreover, we cannot predict whether third parties will be able to successfully obtain claims or the breadth of such claims. The allowance of broader claims may increase the incidence and cost of patent interference proceedings, opposition proceedings, and/or reexamination proceedings, the risk of infringement litigation, and the vulnerability of the claims to challenge. On the other hand, the

allowance of narrower claims does not eliminate the potential for adversarial proceedings, and may fail to provide a competitive advantage. Our issued patents may not contain claims sufficiently broad to protect us against third parties with similar technologies or products, or provide us with any competitive advantage.

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

Even after they have issued, our patents and any patents which we license may be challenged, narrowed, invalidated or circumvented. If our patents are invalidated or otherwise limited or will expire prior to the commercialization of our product candidates, other companies may be better able to develop products that compete with ours, which could adversely affect our competitive business position, business prospects and financial condition.

The following are examples of litigation and other adversarial proceedings or disputes that we could become a party to involving our patents or patents licensed to us:

- we or our collaborators may initiate litigation or other proceedings against third parties to enforce our patent rights;
- third parties may initiate litigation or other proceedings seeking to invalidate patents owned by or licensed to us or to obtain a declaratory judgment that their product or technology does not infringe our patents or patents licensed to us;
- third parties may initiate opposition or reexamination proceedings challenging the validity or scope of our patent rights, requiring us or our collaborators and/or licensors to participate in such proceedings to defend the validity and scope of our patents;
- there may be a challenge or dispute regarding inventorship or ownership of patents currently identified as being owned by or licensed to us;
- the U.S. Patent and Trademark Office may initiate an interference between patents or patent applications owned by or licensed to us and those of our competitors, requiring us or our collaborators and/or licensors to participate in an interference proceeding to determine the priority of invention, which could jeopardize our patent rights; or
- third parties may seek approval to market biosimilar versions of our future approved products prior to expiration of relevant patents owned by or licensed to us, requiring us to defend our patents, including by filing lawsuits alleging patent infringement.

These lawsuits and proceedings would be costly and could affect our results of operations and divert the attention of our managerial and scientific personnel. There is a risk that a court or administrative body would decide that our patents are invalid or not infringed by a third party's activities, or that the scope of certain issued claims must be further limited. An adverse outcome in a litigation or proceeding involving our own patents could limit our ability to assert our patents against these or other competitors, affect our ability to receive royalties or other licensing consideration from our licensees, and may curtail or preclude our ability to exclude third parties from making, using and selling similar or competitive products. Any of these occurrences could adversely affect our competitive business position, business prospects and financial condition.

The degree of future protection for our proprietary rights is uncertain because legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. For example:

- others may be able to develop a platform that is similar to, or better than, ours in a way that is not covered by the claims of our patents;
- others may be able to make compounds that are similar to our product candidates but that are not covered by the claims of our patents;
- we might not have been the first to make the inventions covered by patents or pending patent applications;
- we might not have been the first to file patent applications for these inventions;
- any patents that we obtain may not provide us with any competitive advantages or may ultimately be found invalid or unenforceable; or
- we may not develop additional proprietary technologies that are patentable.

If we fail to comply with our obligations under our intellectual property licenses with third parties, we could lose license rights that are important to our business.

We are currently party to various intellectual property license agreements. These license agreements impose, and we expect that future license agreements may impose, various diligence, milestone payment, royalty, insurance and other obligations on us. For example, we have entered into patent and know-how license agreements that grant us the right

to use certain technologies related to biological manufacturing to manufacture our clinical product candidates. These licenses typically include an obligation to pay yearly maintenance payments and royalties on sales, and may also include upfront and milestone payments. If we fail to comply with our obligations under the licenses, the licensors may have the right to terminate their respective license agreements, in which event we might not be able to market any product that is covered by the agreements. Termination of the license agreements or reduction or elimination of our licensed rights may result in our having to negotiate new or reinstated licenses with less favorable terms, which could adversely affect our competitive business position and harm our business.

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

In addition to patent protection, we also rely on other proprietary rights, including protection of trade secrets, and other proprietary information. To maintain the confidentiality of trade secrets and proprietary information, we enter into confidentiality agreements with our employees, consultants, collaborators and others upon the commencement of their relationships with us. These agreements require that all confidential information developed by the individual or made known to the individual by us during the course of the individual's relationship with us be kept confidential and not disclosed to third parties. Our agreements with employees and our personnel policies also provide that any inventions conceived by the individual in the course of rendering services to us shall be our exclusive property. However, we may not obtain these agreements in all circumstances, and individuals with whom we have these agreements may not comply with their terms. Thus, despite such agreement, such inventions may become assigned to third parties. In the event of unauthorized use or disclosure of our trade secrets or proprietary information, these agreements, even if obtained, may not provide meaningful protection, particularly for our trade secrets or other confidential information. To the extent that our employees, consultants or contractors use technology or know-how owned by third parties in their work for us, disputes may arise between us and those third parties as to the rights in related inventions. To the extent that an individual who is not obligated to assign rights in intellectual property to us is rightfully an inventor of intellectual property, we may need to obtain an assignment or a license to that intellectual property from that individual, or a third party or from that individual's assignee. Such assignment or license may not be available on commercially reasonable terms or at all.

Adequate remedies may not exist in the event of unauthorized use or disclosure of our proprietary information. The disclosure of our trade secrets would impair our competitive position and may materially harm our business, financial condition and results of operations. Costly and time consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to maintain trade secret protection could adversely affect our competitive business position. In addition, others may independently discover or develop our trade secrets and proprietary information, and the existence of our own trade secrets affords no protection against such independent discovery.

As is common in the biotechnology and pharmaceutical industries, we employ individuals who were previously or concurrently employed at research institutions and/or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. 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, or that patents and applications we have filed to protect inventions of these employees, even those related to one or more of our product candidates, are rightfully owned by their former or concurrent employer. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

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

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents and/or applications will be due to the USPTO and various foreign patent offices at various points over the lifetime of our patents and/or applications. We have systems in place to remind us to pay these fees, and we rely on our outside counsel to pay these fees when due. Additionally, the USPTO and various foreign patent offices require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. We employ reputable law firms and other professionals to help us comply, and in many cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with rules applicable to the particular

jurisdiction. However, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. If such an event were to occur, it could have a material adverse effect on our business. In addition, we are responsible for the payment of patent fees for patent rights that we have licensed from other parties. If any licensor of these patents does not itself elect to make these payments, and we fail to do so, we may be liable to the licensor for any costs and consequences of any resulting loss of patent rights.

If we do not obtain protection under the Hatch-Waxman Amendments and similar foreign legislation for extending the term of patents covering each of our product candidates, our business may be materially harmed.

Depending upon the timing, duration and conditions of FDA marketing approval of our product candidates, one or more 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 Amendments. The Hatch-Waxman Amendments permit a patent term extension of up to five years for a patent covering an approved product as compensation for effective patent term lost during product development and the FDA regulatory review process. However, we may not receive an extension if we fail to apply within applicable deadlines, fail to apply prior to expiration of relevant patents or otherwise fail to satisfy applicable requirements. Moreover, the length of the extension could be less than we request. If we are unable to obtain patent term extension or the term of any such extension is less than we request, the period during which we can enforce our patent rights for that product will be shortened and our competitors may obtain approval to market competing products sooner. As a result, our revenue from applicable products could be reduced, possibly materially.

#### Risks Related to Legal Compliance Matters

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 involves, and may in the future involve, the use of potentially hazardous materials and chemicals. Our operations may produce hazardous waste products. Although we believe that our safety procedures for handling and disposing of these materials comply with the standards mandated by local, state and federal laws and 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 and fire and building codes, including those governing laboratory procedures, exposure to blood-borne pathogens, use and storage of flammable agents and the handling of biohazardous materials. Although we maintain workers' compensation insurance as prescribed by the States of Maryland and California 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. 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.

If we market products in a manner that violates healthcare fraud and abuse laws, or if we violate government price reporting laws, we may be subject to civil or criminal penalties.

In addition to FDA restrictions on marketing of pharmaceutical products, several other types of state and federal healthcare laws commonly referred to as "fraud and abuse" laws have been applied in recent years to restrict certain marketing practices in the pharmaceutical industry. These laws include false claims and anti-kickback statutes. Federal false claims laws prohibit any person from knowingly presenting, or causing to be presented, a false claim for payment to the federal government or knowingly making, or causing to be made, a false statement to get a claim paid. The federal healthcare program anti-kickback statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration to induce, or in return for, purchasing, leasing, ordering or arranging for the purchase, lease or order of any healthcare item or service reimbursable under Medicare, Medicaid or other federally financed healthcare programs. This statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, purchasers and formulary managers on the other. Although there are several statutory exemptions and regulatory safe harbors protecting certain common activities from prosecution, the exemptions and safe harbors are drawn narrowly, and practices that involve remuneration intended to



induce prescribing, purchasing or recommending may be subject to scrutiny if they do not qualify for an exemption or safe harbor. In addition, under the Sunshine Act provisions of the ACA, pharmaceutical manufacturers are subject to federal reporting and disclosure requirements with regard to payments or other transfers of value made to physicians and teaching hospitals. Most states also have statutes or regulations similar to the federal anti-kickback law and federal false claims laws, which may apply to items such as pharmaceutical products and services reimbursed by private insurers. Some state laws also prohibit certain gifts to healthcare providers, require pharmaceutical companies to report payments to healthcare professionals, and/or require companies to adopt compliance programs or codes of conduct. Administrative, civil and criminal sanctions may be imposed under these federal and state laws.

Over the past few years, a number of pharmaceutical and other healthcare companies have been prosecuted under these laws for a variety of promotional and marketing activities, such as: providing free trips, free goods, sham consulting fees and grants and other monetary benefits to prescribers; reporting to pricing services inflated average wholesale prices that were then used by federal programs to set reimbursement rates; engaging in off-label promotion; and submitting inflated best price information to the Medicaid Rebate Program to reduce liability for Medicaid rebates. At such time, if ever, as we market any of our future approved products and these products are paid for by governmental programs, it is possible that some of our business activities could also be subject to challenge under one or more of these "fraud and abuse" laws.

We are subject to the U.S. Foreign Corrupt Practices Act and other anti-corruption laws. If we fail to comply with these laws, we could be subject to civil or criminal penalties, other remedial measures, and legal expenses, which could adversely affect our business, results of operations and financial condition.

Our operations are subject to anti-corruption laws, including the U.S. Foreign Corrupt Practices Act, or FCPA, and other anti-corruption laws that apply in countries where we do business. The FCPA and these other laws generally prohibit us and our employees and intermediaries from bribing, being bribed or making other prohibited payments to government officials or other persons to obtain or retain business or gain some other business advantage. We and our commercial partners operate in a number of jurisdictions that pose a risk of potential FCPA violations, and we participate in collaborations and relationships with third parties whose actions could potentially subject us to liability under the FCPA or other anti-corruption laws. There is no assurance that we will be completely effective in ensuring our compliance with all applicable anti-corruption laws. If we violate provisions of the FCPA or other anti-corruption laws or are subject to an investigation or audit pursuant to these laws, we may be subject to criminal and civil penalties, disgorgement and other sanctions and remedial measures and legal expenses, which could have an adverse impact on our business, financial condition and results of operations.

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

We are exposed to the risk of employee fraud or other misconduct. Misconduct by employees could include intentional failures to comply with FDA regulations, to provide accurate information to the FDA or other agencies, to comply with federal and state health care fraud and abuse laws and regulations, to report financial information or data accurately or to disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the health care industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. Employee misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. We have adopted a code of conduct, but it is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of significant fines or other sanctions.

#### Risks Relating to Employee Matters and Managing Growth

Our future success depends on our ability to retain key executives and to attract, retain and motivate qualified personnel.

We are highly dependent on the research and development, clinical and business development expertise of Scott Koenig, M.D., Ph.D., our President and Chief Executive Officer, as well as the other members of our senior

management, scientific and clinical team. Although we have entered into employment agreements with certain of our executive officers, each of them may terminate their employment with us at any time. The loss of the services of our executive officers or other key employees could impede the achievement of our research, development and commercialization objectives and seriously harm our ability to successfully implement our business strategy. Recruiting and retaining qualified scientific, clinical, manufacturing and sales and marketing personnel will also be critical to our success. In addition, we will need to expand and effectively manage our managerial, operational, financial, development and other resources in order to successfully pursue our research, development and commercialization efforts for our existing and future product candidates. Furthermore, replacing executive officers and key employees may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to successfully develop, gain regulatory approval of and commercialize products. Competition to hire from this limited pool is intense, and we may be unable to hire, train, retain or motivate these key personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. If we are unable to continue to attract and retain high quality personnel, our ability to pursue our growth strategy will be limited.

We will need to grow our organization, and we may experience difficulties in managing this growth, which could disrupt our operations.

As of February 22, 2016, we had 269 full-time employees. As our development and commercialization plans and strategies develop, we expect to expand our employee base for managerial, operational, sales, marketing, financial and other resources. Future growth would impose significant added responsibilities on members of management, including the need to identify, recruit, maintain, motivate and integrate additional employees. Also, our management may need to divert a disproportionate amount of their attention away from our day-to-day activities and devote a substantial amount of time to managing these growth activities. We may not be able to effectively manage the expansion of our operations which may result in weaknesses in our infrastructure, give rise to operational errors, loss of business opportunities, loss of employees and reduced productivity among remaining employees. Our expected growth could require significant capital expenditures and may divert financial resources from other projects, such as the development of existing and additional product candidates. If our management is unable to effectively manage our expected growth, our expenses may increase more than expected, our ability to generate and/or grow revenue could be reduced and we may not be able to implement our business strategy. Our future financial performance and our ability to commercialize our product candidates and compete effectively with others in our industry will depend, in part, on our ability to effectively manage any future growth.

#### Risks Relating to Our Common Stock

Our stock price may be volatile and fluctuate substantially, which may subject us to securities class action litigation. Our stock price is likely to be volatile. The stock market has experienced significant volatility, particularly with respect to pharmaceutical, biotechnology, and other life sciences company stocks. The volatility of pharmaceutical, biotechnology, and other life sciences company stocks often does not relate to the operating performance of the companies represented by the stock.

In the past, when the market price of a stock has been volatile, holders of that stock have instituted securities class action litigation against the company that issued the stock. If any of our stockholders brought a lawsuit against us, we could incur substantial costs defending the lawsuit and divert the time and attention of our management, which could seriously harm our business.

Provisions of our charter, bylaws, third-party agreements and Delaware law may make an acquisition of us or a change in our management more difficult.

Certain provisions of our restated certificate of incorporation and amended and restated bylaws that became effective upon the completion of our IPO could discourage, delay, or prevent a merger, acquisition, or other change in control that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for

your shares. These provisions also could limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. Stockholders who wish to participate in these transactions may not have the opportunity to do so. Furthermore, since our board of directors is responsible for appointing the members of our management team, these provisions could prevent or frustrate attempts by our stockholders to replace or remove our management by making it more difficult for stockholders to replace members of our board of directors. These provisions:

- allow the authorized number of directors to be changed only by resolution of our board of directors;
- establish a classified board of directors, providing that not all members of the board of directors be elected at one time;
- authorize our board of directors to issue without stockholder approval blank check preferred stock that, if issued, could operate as a "poison pill" to dilute the stock ownership of a potential hostile acquirer to prevent an acquisition that is not approved by our board of directors;
- require that stockholder actions must be effected at a duly called stockholder meeting and prohibit stockholder action by written consent;
- establish advance notice requirements for stockholder nominations to our board of directors or for stockholder proposals that can be acted on at stockholder meetings;
- limit who may call stockholder meetings; and
- require the approval of the holders of 75% of the outstanding shares of our capital stock entitled to vote in order to amend certain provisions of our restated certificate of incorporation and restated bylaws.

Furthermore, in the ordinary course of our business, from time to time we discuss and enter into collaborations, licenses and other transactions with various third parties, including other pharmaceutical companies and biotechnology companies. When we deem it appropriate, our agreements with such third parties may include standstill provisions. These standstill provisions, several of which may be in force from time-to-time, typically prohibit such parties from acquiring our securities for a period of time, which may discourage such parties from acquiring MacroGenics even if doing so would be beneficial to our stockholders.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which may, unless certain criteria are met, prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us for a prescribed period of time. This provision could have the effect of delaying or preventing a change of control, whether or not it is desired by or beneficial to our stockholders.

Future issuances of our common stock or rights to purchase common stock pursuant to our equity incentive plans could result in additional dilution of the percentage ownership of our stockholders and could cause our share price to fall.

As of December 31, 2015, we had options to purchase 4,146,064 shares outstanding under our equity compensation plans. We are also authorized to grant equity awards, including stock options, to our employees, directors and consultants, covering up to 1,575,235 shares of our common stock, pursuant to our equity compensation plans. We plan to register the number of shares available for issuance or subject to outstanding awards under our equity compensation plans.

ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 2. PROPERTIES

We lease approximately 200,000 square feet of manufacturing, office and laboratory space in Rockville, Maryland under five leases that have terms that expire between 2018 and 2022 unless renewed. We also lease office and laboratory space in South San Francisco, California under a lease that expires in 2018. We believe that our properties are generally in good condition, well maintained, suitable and adequate to carry on our business. We believe our capital resources are sufficient to lease any additional facilities required to meet our expected growth needs.

ITEM 3. LEGAL PROCEEDINGS

In the ordinary course of business, we are involved in various legal proceedings, including, among others, patent oppositions, patent revocations, patent infringement litigation and other matters incidental to our business. We are not currently a party to any material legal proceedings.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

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## PART II

ITEM MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND  
5. ISSUER PURCHASES OF EQUITY SECURITIES

## Market Information

Our common stock has been listed on the NASDAQ Global Select Market under the symbol "MGNX" since October 10, 2013. Prior to that date, there was no public trading market for our common stock. Shares sold in our initial public offering, or IPO, on October 9, 2013 were priced at \$16.00 per share.

On February 22, 2016, the closing price for our common stock as reported on the NASDAQ Global Select Market was \$17.51. The following table sets forth the high and low intra-day sale prices per share of our common stock as reported on the NASDAQ Global Select Market for the periods indicated.

	High	Low
2015		
First Quarter	\$39.90	\$29.50
Second Quarter	\$38.37	\$26.68
Third Quarter	\$39.90	\$20.29
Fourth Quarter	\$36.11	\$19.67
2014		
First Quarter	\$41.00	\$27.06
Second Quarter	\$31.11	\$17.96
Third Quarter	\$22.90	\$18.25
Fourth Quarter	\$39.90	\$17.31

## Shareholders

As of February 22, 2016, we had 34,526,106 shares of common stock outstanding held by approximately 98 holders of record, which include shares held by a broker, bank or other nominee. We have never declared or paid any cash dividends. We do not anticipate declaring or paying cash dividends for the foreseeable future. Instead, we will retain our earnings, if any, for the future operation and expansion of our business.

## Performance Graph

The following graph compares the performance of our common stock to the performance of the NASDAQ Composite Index (U.S.) and the NASDAQ Biotechnology Index since October 10, 2013 (the first date that shares of our common stock were publicly traded). The comparison assumes a \$100 investment on October 10, 2013 in our common stock, the stocks comprising the NASDAQ Composite Index, and the stocks comprising the NASDAQ Biotechnology Index, and assumes reinvestment of the full amount of all dividends, if any. Historical stockholder return is not necessarily indicative of the performance to be expected for any future periods.

### Comparison of Cumulative Total Return

Among MacroGenics, Inc., the NASDAQ Composite Index and the NASDAQ Biotechnology Index

The performance graph shall not be deemed to be incorporated by reference by means of any general statement incorporating by reference this Form 10-K into any filing under the Securities Act of 1933, as amended or the Exchange Act, except to the extent that we specifically incorporate such information by reference, and shall not otherwise be deemed filed under such acts.

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## ITEM 6. SELECTED FINANCIAL DATA

The consolidated statement of operations and comprehensive income (loss) data for the years ended December 31, 2015, 2014 and 2013 and the consolidated balance sheet data as of December 31, 2015 and 2014 presented below have been derived from our audited consolidated financial statements and footnotes included elsewhere in this Annual Report on Form 10-K. The consolidated statement of operations and comprehensive income (loss) data for the years ended December 31, 2012 and 2011 and the consolidated balance sheet data as of December 31, 2013, 2012 and 2011 have been derived from our audited consolidated financial statements which are not included herein. Historical results are not necessarily indicative of future results. The following data should be read in conjunction with Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and related notes included elsewhere in this Annual Report on Form 10-K.

	Year Ended December 31,				
	2015	2014	2013	2012	2011
	(in thousands, except share and per share data)				
<b>Consolidated Statement of Operations and Comprehensive Income (Loss):</b>					
Total revenues	\$ 100,854	\$ 47,797	\$ 58,035	\$ 63,826	\$ 57,207
Cost and expenses:					
Research and development	98,271	70,186	46,582	45,433	41,089
General and administrative	22,765	15,926	11,087	10,188	10,869
Total costs and expenses	121,036	86,112	57,669	55,621	51,958
Income (loss) from operations	(20,182 )	(38,315 )	366	8,205	5,249
Other income (expense)	42	2	(627 )	157	1,467
Net income (loss)	(20,140 )	(38,313 )	(261 )	8,362	6,716
<b>Other comprehensive income (loss):</b>					
Unrealized loss on investments	(5 )	-	-	-	-
Comprehensive income (loss)	\$(20,145 )	\$(38,313 )	\$(261 )	\$ 8,362	\$ 6,716
<b>Basic and diluted net income (loss) per common share</b>					
	\$(0.63 )	\$(1.40 )	\$(0.04 )	\$ 0.00	\$ 0.00
<b>Basic and diluted weighted average number of common shares</b>					
	31,801,645	27,384,990	6,847,697	1,083,276	1,025,602
<b>As of December 31,</b>					
	2015	2014	2013	2012	2011
	(in thousands)				
<b>Consolidated Balance Sheet Data:</b>					
Cash, cash equivalents and investments	\$ 339,049	\$ 157,591	\$ 116,481	\$ 47,743	\$ 55,218
Total assets	359,269	173,886	125,782	53,747	62,681
Deferred revenue	18,497	30,720	27,403	44,080	54,890
Convertible preferred stock	-	-	-	2,947	2,947
Total stockholders' equity (deficit)	313,337	121,286	78,914	(8,237 )	(17,484)

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion of our financial condition and results of operations should be read together with our selected consolidated financial data and the consolidated financial statements and related notes included elsewhere herein. This discussion contains forward-looking statements that involve risks and uncertainties. As a result of many factors, such as those set forth under the section entitled "Risk Factors", "Forward-Looking Statements" and elsewhere herein, our actual results may differ materially from those anticipated in these forward-looking statements.

Overview

We are a biopharmaceutical company focused on discovering and developing innovative antibody-based therapeutics for the treatment of cancer as well as various autoimmune disorders and infectious diseases. We currently have a pipeline of product candidates in human clinical testing, primarily against different types of cancers, which have been created primarily using our proprietary technology platforms. We believe our programs have the potential to have a meaningful effect on treating patients' unmet medical needs as monotherapy or, in some cases, in combination with other therapeutic agents.

We commenced active operations in 2000, and have since devoted substantially all of our resources to staffing our company, business planning, raising capital, developing our technology platforms, identifying potential product candidates, undertaking pre-clinical studies and conducting clinical trials. We have not generated any revenues from the sale of any products to date. We have financed our operations primarily through the public and private offerings of our securities, collaborations, government grants and government contracts. Although it is difficult to predict our funding requirements, based upon our current operating plan, we anticipate that our cash, cash equivalents and investments as of December 31, 2015, combined with collaboration payments we anticipate receiving, will enable us to fund our operations into 2018, assuming all of our collaboration programs advance as currently contemplated.

Through December 31, 2015, we had an accumulated deficit of \$234.2 million. We expect that over the next several years this deficit will increase as we increase our expenditures in research and development in connection with our ongoing activities with several clinical trials.

Strategic Collaborations and Licenses

We pursue a balanced approach between product candidates that we develop ourselves and those that we develop with our collaborators. Under our current strategic collaborations, we have received significant non-dilutive funding to date and continue to have rights to additional funding upon completion of certain research, achievement of key product development milestones, or royalties and other payments upon the commercial sale of products. Our most significant strategic collaborations include the following:

- Janssen. In December 2014, we entered into a collaboration and license agreement with Janssen for the development and commercialization of MGD011, a product candidate that incorporates our proprietary DART technology to simultaneously target CD19 and CD3 for the potential treatment of B-cell hematological malignancies. We contemporaneously entered into an agreement with Johnson & Johnson Innovation – JJDC, Inc. (JJDC), an affiliate of Janssen, under which JJDC agreed to purchase 1,923,077 new shares of our common stock for proceeds of \$75.0 million. Upon closing, we received a \$50.0 million upfront payment from Janssen as well as the \$75.0 million investment in our common stock. Janssen is leading the development of this product candidate, subject to our options to co-promote the product in the United States and Canada and to invest in later-stage development in exchange for a United States and Canada profit-share. Janssen initiated a human clinical trial in 2015 for a variety of B-cell hematological malignancies, including diffuse-large B cell lymphoma, follicular lymphoma, mantle-cell lymphoma, chronic lymphocytic leukemia and acute lymphoblastic leukemia. The initiation of this trial triggered a



\$10.0 million milestone payment to us. Assuming successful development and commercialization, we could receive up to an additional \$565.0 million in clinical, regulatory and commercialization milestone payments. If commercialized, we would be eligible to receive low double-digit royalties on any global net sales.

Takeda. In May 2014, we entered into a license and option agreement with Takeda for the development and commercialization of MGD010, a product candidate that incorporates our proprietary DART technology to simultaneously engage CD32B and CD79B, which are two B-cell surface proteins. Upon execution of the agreement, Takeda made a non-refundable payment of \$15.0 million to us. Takeda has an option to obtain an exclusive worldwide license for MGD010 following the completion of a pre-defined Phase 1a study, which was initiated in March 2015. Initiation of this study resulted in a \$3.0 million milestone payment from Takeda. If Takeda exercises its option, it will assume responsibility for future development and pay us a license fee of \$15.0 million. Assuming successful development and commercialization of MGD010, we are eligible to receive up to an additional \$468.5 million in development, regulatory and sales milestone payments. If commercialized, we would receive low double-digit to high-teen royalties on any global net sales and have the option to co-promote MGD010 with Takeda in the United States. Finally, we may elect to fund a portion of Phase 3 clinical development in exchange for a North American profit share.

In September 2014, we entered into a research collaboration and license option agreement with Takeda. Under the terms of this agreement, Takeda received an option to obtain an exclusive worldwide license for up to four product candidates and will fund all research and development activities related to the selected programs, including reimbursement of our expenses. Assuming successful development and commercialization by Takeda, we could receive up to approximately \$400.0 million in program initiation, pre-clinical, clinical, regulatory and commercialization milestone payments for each potential product candidate. If commercialized, we would receive low double-digit to high-teen royalties on any global net sales and have the option to co-promote each product candidate with Takeda in the United States. Finally, we may elect to fund a portion of Phase 3 clinical development of each product candidate in exchange for a North American profit share. Takeda terminated its option to license the first program under this research collaboration agreement in 2015 and retains an option for three others.

Servier. In November 2011, we entered into a collaboration agreement with Servier under which we granted Servier an option to obtain an exclusive license to develop and commercialize enoblituzumab in certain countries. In October 2015, Servier notified us that they would not exercise this option and this agreement terminated. Through December 31, 2015, we received a \$20.0 million option grant fee and a \$10.0 million milestone payment under this agreement.

In September 2012, we entered into a license agreement with Servier and granted it options to obtain three separate exclusive licenses to develop and commercialize DART molecules, consisting of those designated by us as MGD006 and MGD007, as well as a third DART molecule, in all countries other than the United States, Canada, Mexico, Japan, South Korea and India. We received a \$20.0 million upfront option fee. In addition, we became eligible to receive up to approximately \$1.0 billion in additional license fees and clinical, development, regulatory and sales milestone payments if Servier exercises all three of its options and successfully develops, obtains regulatory approval for, and commercializes a product under each license. Additionally, assuming exercise of its options, Servier may share Phase 2 and Phase 3 development costs and would be obligated to pay us low double-digit to mid-teen royalties on product sales in its territories.

In February 2014, Servier exercised its option to develop and commercialize MGD006, for which we received a \$15.0 million license option fee. We also received two \$5.0 million milestone payments from Servier in connection with the IND applications for MGD006 and MGD007 clearing the 30-day review period by the U.S. Food and Drug Administration (FDA).

Boehringer. In October 2010, we entered into an agreement with Boehringer Ingelheim International GmbH (Boehringer) to discover, develop and commercialize multiple DART molecules that were to be evaluated during a

five-year period that ended in October 2015. We granted Boehringer an exclusive worldwide, royalty-bearing license and received an upfront payment of \$15.0 million. Through December 31, 2015, we received a total of \$14.0 million in milestone payments from Boehringer. We have the potential to earn additional development, regulatory and sales milestone payments that can reach up to approximately \$205.0 million for each of the two ongoing programs under this agreement. Boehringer would be required to pay us mid single-digit royalties on product sales.

## Financial Operations Overview

### Revenues

Our revenue consists primarily of collaboration revenue, including amounts recognized relating to upfront nonrefundable payments for licenses or options to obtain future licenses, research and development funding and milestone payments earned under our collaboration and license agreement with our strategic collaborators, including Janssen, Takeda, Servier and Boehringer. In addition, we have earned revenues through several grants and/or contracts with the U.S. government and other research institutions on behalf of the U.S. government, primarily with respect to research and development activities related to infectious disease product candidates.

### Research and Development Expense

Research and development expenses consist of expenses incurred in performing research and development activities. These expenses include conducting pre-clinical experiments and studies, clinical trials, manufacturing efforts and regulatory filings for all product candidates, and other indirect expenses in support of our research and development activities. We capture research and development expense on a program-by-program basis for our product candidates that are in clinical development and recognize these expenses as they are incurred. The following are items we include in research and development expenses:

• Employee-related expenses such as salaries and benefits;

• Employee-related overhead expenses such as facilities and other allocated items;

• Stock-based compensation expense to employees and consultants engaged in research and development activities;

• Depreciation of laboratory equipment, computers and leasehold improvements;

• Fees paid to consultants, subcontractors, clinical research organizations (CROs) and other third party vendors for work performed under our pre-clinical and clinical trials including but not limited to investigator grants, laboratory work and analysis, database management, statistical analysis, and other items;

• Amounts paid to vendors and suppliers for laboratory supplies;

• Costs related to manufacturing clinical trial materials, including vialing, packaging and testing;

• License fees and other third party vendor payments related to in-licensed product candidates and technology; and

• Costs related to compliance with regulatory requirements.

It is difficult to determine with certainty the duration and completion costs of our current or future pre-clinical programs and clinical trials of our product candidates, or if, when or to what extent we will generate revenues from the commercialization and sale of any of our product candidates that obtain regulatory approval. We may never succeed in achieving regulatory approval for any of our product candidates. The duration, costs and timing of clinical trials and development of our product candidates will depend on a variety of factors, including the uncertainties of future

clinical trials and pre-clinical studies, uncertainties in clinical trial enrollment rate and significant and changing government regulation. In addition, the probability of success for each product candidate will depend on numerous factors, including competition, manufacturing capability and commercial viability. We will determine which programs to pursue and how much to fund each program in response to the scientific and clinical success of each product candidate, as well as an assessment of each product candidate's commercial potential.

#### General and Administrative Expense

General and administrative expenses consist of salaries and related benefit costs for employees in our executive, finance, legal and intellectual property, business development, human resources and other support functions, travel expenses and other legal and professional fees.