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As confidentially submitted to the Securities and Exchange Commission on May 14, 2015
This draft registration statement has not been publicly filed with the Securities and Exchange Commission and all information herein remains strictly confidential
Registration No. 333-

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

FORM S-1
REGISTRATION STATEMENT
Under
The Securities Act of 1933

Conkwest, Inc.
(Exact name of Registrant as specified in its charter)

Delaware	2836	43-1979754
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

2533 South Coast Highway 101, Suite 210
Cardiff-by-the-Sea, California 92007
(858) 633-0300
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Patrick Soon-Shiong, M.D., FRCS (C), FACS
Chairman and Chief Executive Officer
Conkwest, Inc.
2533 South Coast Highway 101, Suite 210
Cardiff-by-the-Sea, California 92007
(858) 633-0300
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Martin J. Waters Daniel R. Koeppen Wilson Sonsini Goodrich & Rosati, P.C. 12235 El Camino Real, Suite 200 San Diego, California 92130 (858) 350-2300	Barry J. Simon, M.D. President and Chief Operating Officer Conkwest, Inc. 2533 South Coast Highway 101, Suite 210 Cardiff-by-the-Sea, California 92007 (858) 633-0300	Sean M. Clayton Charles S. Kim Kristin E. VanderPas Cooley LLP 1333 2nd Street, Suite 400 Santa Monica, California 90401 (310) 883-6400

Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement becomes effective.

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

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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. (Check one):

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

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price(1)(2)	Amount of Registration Fee(3)
Common Stock, par value $0.0001 per share	$	$

(1) Includes any additional shares that the underwriters have the option to purchase.
(2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.
(3) Calculated pursuant to Rule 457(o) under the Securities Act of 1933, as amended, based on an estimate of the proposed maximum aggregate offering price.

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

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

SUBJECT TO COMPLETION, DATED , 2015

PRELIMINARY PROSPECTUS

Shares

Common Stock

This is an initial public offering of shares of common stock by Conkwest, Inc. The initial public offering price is expected to be between $ and $ per share. Prior to this offering, there has been no public market for our common stock. We are offering shares to be sold in the offering.

We have applied to list our common stock on The NASDAQ Global Select Market under the symbol " ."

We are an "emerging growth company" as defined under the federal securities laws and, as such, have elected to comply with certain reduced public company reporting requirements.

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

(1) See "Underwriting" for a description of the compensation payable to the underwriters.

We have granted the underwriters an option for a period of 30 days to purchase up to an additional shares from us at the initial public offering price, less the underwriting discounts and commissions.

Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page 15 to read about factors you should consider before buying shares of our common stock.

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

The underwriters expect to deliver the shares of common stock to purchasers on or about , 2015.

Joint Book-Running Managers

BofA Merrill Lynch **Citigroup** **Jefferies** **Piper Jaffray**

, 2015

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Neither we nor the underwriters have authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses we have prepared. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus is current only as of its date.

Through and including , 2015 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

For investors outside the United States: Neither we nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about, and to observe any restrictions relating to, this offering and the distribution of this prospectus.

PROSPECTUS SUMMARY

The following summary highlights selected information contained elsewhere in this prospectus and is qualified in its entirety by the more detailed information and financial statements included elsewhere in this prospectus. It does not contain all the information that may be important to you and your investment decision. You should carefully read this entire prospectus, including the matters set forth under "Risk Factors," "Management's Discussion and Analysis of Financial of Financial Conditions and Results of Operations," and our financial statements and related notes included elsewhere in this prospectus. In this prospectus, unless context requires otherwise, references to "we," "us," "our," "Conkwest," or "the Company" refer to Conkwest, Inc.

Overview

We are a pioneering clinical-stage immunotherapy company focused on harnessing the power of the innate immune system by using the natural killer cell to treat cancer, infectious diseases and inflammatory diseases. Natural killer, or NK, cells are the body's first line of defense due to their innate ability to rapidly seek and destroy abnormal cells, such as cancer or virally-infected cells, without prior exposure or activation by other support molecules required to activate adaptive immune cells such as T-cells.

We believe we are uniquely positioned to implement precision cancer medicine and potentially change the current paradigm of cancer care by leveraging the advances that have evolved during the past decade and addressing newly discovered challenges of cancer. We believe that many recent advances in cancer treatments have not adequately addressed the heterogeneity of tumor cells, the large mutation load per tumor cell identified by advanced genomics sequencing technologies, and the resistance of the cancer stem cell to chemotherapy. Cancer is only recently understood to be a complex of rare diseases, with hundreds of patient-specific, cancer-promoting mutated proteins, some known and many more unknown. Identifying and targeting these mutated proteins is our strategy to overcome the challenges of cancer in the era of genomics, transcriptomics and immuno-oncology. We believe neoepitopes, which are newly discovered antigens selectively expressed on the cancer cells and not on the essential normal tissue, represent large untapped targeting opportunities for immune effector cells such as our activated NK cells.

Multiple Modes of Tumor Cell Killing. Our immuno-oncology NK platform has multiple modes to potentially induce cell death against the tumor or infected cell by: (1) direct killing by binding to stress ligands expressed by the diseased cell with the release of toxic granules directly into the tumor cell; (2) antibody mediated killing by binding to antibodies administered in combination and enhancing the cancer killing effect of the administered antibody, enabling targeted cell killing through antibody dependent cellular cytotoxicity, or ADCC; and (3) target activated killing by binding to known or newly discovered tumor-specific antigens expressed on the surface of tumor cells and inducing cell death by the release of toxic granules directly into the tumor cell, by the release of cytokines and chemokines which recruit additional innate and adaptive immune responses and by the recruitment of cytotoxic T-cells.

By implementing an integrated discovery ecosystem and targeting these multiple modes of NK killing of abnormal cells, we believe we are uniquely positioned to potentially address a broad range of known and unknown cancer-promoting mutated proteins and to transform clinical cancer care. Our targeted therapeutic areas include: (1) cancer, focusing on bulky hematological cancers and solid tumors as well as cancer stem cells, (2) infectious diseases, including viral, fungal and bacterial infections, and (3) inflammatory diseases, ranging from rare inherited diseases to more prevalent autoimmune disorders.

Our Integrated Discovery Ecosystem for Precision Medicine. In order to effectively target newly discovered neoepitopes, we plan to integrate the following ecosystem to help drive the development of genetically modified

NK cells anticipated to be directed against these cancer-promoting mutated proteins: (1) a high-speed supercomputing infrastructure to help identify both known antigens on the surface of tumor cells and neoepitopes in clinical patients suffering from cancer, in a timely manner and at large scale; (2) a next-generation genomic and transcriptomic sequencing infrastructure to identify the expression of the neoepitopes on the surface of the tumor cell; (3) a diverse library of human antibodies from which to interrogate and extract an antibody matching the neoepitope; and (4) an NK cell potentially capable of being produced as a scalable, cell-based "off-the-shelf" therapy without the need for patient compatibility matching.

Since the founding of our company in 2002, we have assembled a team of proven, experienced and visionary leaders in biotechnology. Our team is led by Patrick Soon-Shiong, M.D., FRCS (C), FACS, our Chairman and Chief Executive Officer. Dr. Soon-Shiong, a renowned surgeon and scientist, has pioneered novel therapies for both diabetes and cancer, published over 100 scientific papers in the United States, and issued over 95 patents on groundbreaking advancements spanning myriad fields. He performed the first encapsulated islet stem cell transplant in a diabetic patient in the United States. He invented, developed and launched the first nanoparticle delivery system of human albumin, Abraxane, now approved for metastatic breast, lung and pancreatic cancer and is expected to achieve sales of greater than $1.0 billion in 2015. Dr. Soon-Shiong was founder, Chairman and CEO of American Pharmaceutical Partners (sold to Fresenius SE for $5.7 billion in 2008), Abraxis BioScience (sold to Celgene Corporation for $3.7 billion in 2010) and NantWorks, an ecosystem of companies to create a transformative global health information and next generation pharmaceutical development network. Barry Simon, M.D., our President and COO, brings decades of drug development and executive leadership experience from Hoffmann-La Roche, Connetics Corp. and Immunomedics.

Our vision is to be the premier immunotherapy company harnessing the power of the innate immune system and the NK cell to pioneer precision medicine in the treatment of cancer, infectious diseases and inflammatory diseases. Our mission is to leverage an integrated an extensive genomics and transcriptomics discovery engine to identify antibodies targeted to newly discovered neoepitopes and to mobilize the human immune system of cancer patients to kill tumor cells and facilitate long-term remission. We expect to regularly add newly discovered neoepitopes from our discovery engine, and we believe the thousands of newly discovered antigens selectively expressed on the cancer cells and not on the essential normal tissue, will provide us with the ability to continue to create new and targeted libraries of antibodies to potentially be delivered as living drugs for metastatic cancer cells and cancer stem cells.

Our Platforms

Direct Killing: aNK Platform. We have developed a unique NK cell which we believe is capable of being produced as a cell-based "off-the-shelf" therapy, with killing potential for cancer and virally-infected cells. Unlike normal NK cells, our NK cells do not express inhibitory receptors, which diseased cells often utilize to turn off the killing function of NK cells. We have developed a unique activated NK, or aNK cell which lacks these inhibitory receptors but retains activation receptors that enable selective targeting and killing of diseased cells. The killing mechanism of our aNK cells is increased compared to normal NK cells by virtue of delivering a larger payload of compounds responsible for the direct killing of diseased cells. We believe our aNK cells can be grown at commercial scale as an on demand, living drug using our proprietary manufacturing and distribution processes.

Safety studies of aNK cells have been conducted in multiple Phase I clinical trials for a variety of bulky hematological cancers and solid tumors enrolling over 40 patients to date, with encouraging evidence of activity and durable remissions. Based on these clinical trials, we plan to develop the therapeutic applications of this aNK platform through molecular engineering of our aNK cells designed to leverage the multiple modes of killing available to aNKs, including antibody-mediated killing, our haNK platform, and antigen targeted killing, our taNK platform, described below.

Antibody-Mediated Killing: haNK Platform. We have genetically modified our aNK cells to incorporate high-affinity CD16 receptors, which bind to antibodies. These high-affinity NK, or haNK, cells are designed to directly bind to externally administered monoclonal antibodies, or mAbs, such as Herceptin, Erbitux and Rituxan and may be able to enhance the cancer killing effect of the externally administered mAbs, enabling targeted cell killing through ADCC. mAbs are prevalently used to treat cancer and generate over $50.0 billion in reported annual sales. We believe, based on currently available information, that only approximately 10% to 20% of the addressable patient population for mAb therapies carry high-affinity CD16 receptors. This implies that our haNK product candidates may have significant market potential as combination therapies to potentially address a large number of patients who have poor responses to mAbs.

Tumor Target Activated Killing: taNK Platform. We have genetically modified our aNKs to incorporate chimeric antigen receptors, or CARs, to target specific antigens on the surface of abnormal cells. These tumor target activated NK, or taNK, cells are designed to directly bind to tumor-specific antigens in multiple bulky hematological cancers and solid tumors and induce cell death by the release of toxic granules directly into the tumor cell, by the release of cytokines and chemokines which recruit additional innate and adaptive immune responses and by the recruitment of cytotoxic T-cells. These tumor-specific antigens can be divided into the following four classes, which can be targeted by our taNK platform: (1) checkpoint inhibitors expressed on the surface of tumor cells such as PDL1; (2) well-established tumor antigens such as HER-2; (3) newly discovered neoepitopes; and (4) novel surface receptors associated with cancer stem cells.

Potential Advantages of Our aNK Platform over T-Cell and Other Immunotherapies

The immune system has two components: innate immune cells, such as NK cells, which are always switched on to attack diseased cells, and adaptive immune cells, such as T-cells, which are mobilized to mount a delayed response. Our proprietary aNK platform is specifically designed to potentially address many of the limitations associated with current adaptive autologous cellular immunotherapies, including the benefits highlighted below. We believe key limitations of adaptive autologous immunotherapy include the need to retrieve non-compromised immune cells from a cancer patient and the requirement for a complex and costly manufacturing process to develop the therapy. As a consequence of this need to harvest active T-cells, current Phase I clinical trials for autologous CAR-T cell therapies in large part enroll patients from highly selected, advanced stage disease in hematological cancers. In contrast, our allogeneic, “off-the-shelf” NK cells do not rely on the patient’s own immune system, which is often compromised, to achieve its therapeutic effect.

Some of the key potential advantages of our aNK platform are highlighted below.

- *Innate immune response.* aNK cells are always activated and can naturally detect and rapidly destroy a wide variety of diseased cells without prior exposure to pathogens, antigens or activation by stimulatory molecules. In contrast, the adaptive immune system requires co-stimulation for activation, resulting in delayed killing.
- *Promotion of adaptive immune response.* aNK cells stimulate the adaptive component of the immune system by producing chemokines and other molecules that activate and recruit adaptive immune cells, including T-cells, to attack the diseased cells.
- *Capability of activating both innate and adaptive immune system with a single agent.* By combining a PDL1 antibody as a CAR in our NK cells, our PDL1.taNK product candidate, we believe that we have the ability to both activate T-cells and induce direct killing by NK cells simultaneously with the administration of a single therapy.
- *Wide therapeutic potential across multiple tumor types and even late-stage disease.* In preclinical studies and Phase I safety clinical trials to date, aNK cells have demonstrated activity in a spectrum of cancers, including bulky hematological cancers and solid tumors, even in late-stage cancer patients who have failed multiple rounds of chemotherapy, radiation and stem cell transplantation.

- *Ability to attack cancer stem cells.* aNK cells have been shown in preclinical studies to attack cancer stem cells, which are resistant to conventional chemotherapy.
- *Application in diseases beyond cancer.* We believe aNK cells have the potential to treat diseases beyond cancer such as infectious diseases and inflammation because of the inherent ability of NK cells to kill virally infected and abnormal cells. Preclinical studies in Ebola virus demonstrate this capability.
- *Well tolerated.* aNK cells are hypo-immunogenic and have shown no dose limiting toxicities in over 40 patients who have received therapy to date, even when some patients received as many as 18 infusions of aNK cells over six cycles. In contrast, Phase I clinical trials of CAR-T cell therapy report severe adverse toxicities of cytokine release syndrome and neurotoxicity in a number of patients.
- *Ease of administration.* aNK cells may be administrable in outpatient facilities, offering physicians the flexibility to titrate and re-dose therapy based on patient tolerability and need. In contrast, CAR-T cell therapy is a complex and costly procedure, at times requiring hospitalization, pre-conditioning and intensive care unit admission following severe adverse toxicities associated with cytokine release syndrome.
- *Virtually universal patient compatibility.* aNK cells do not require patient-donor matching or a minimum level of patient immuno-competence.
- *Low-cost, efficient and scalable manufacturing.* aNK cells can be cryopreserved, stockpiled and readily accessed on demand from what we believe is the world's only current good manufacturing practices, or cGMP, compliant NK cell bank, a proprietary asset of our company.

Our Product Candidate Pipeline

We plan to use the data from the Phase I clinical trials of aNK cells conducted to date to serve as the foundation of the development strategy for our three distinct modes of tumor cell killing, each with its own attributes, targeted therapeutic areas and pipeline.

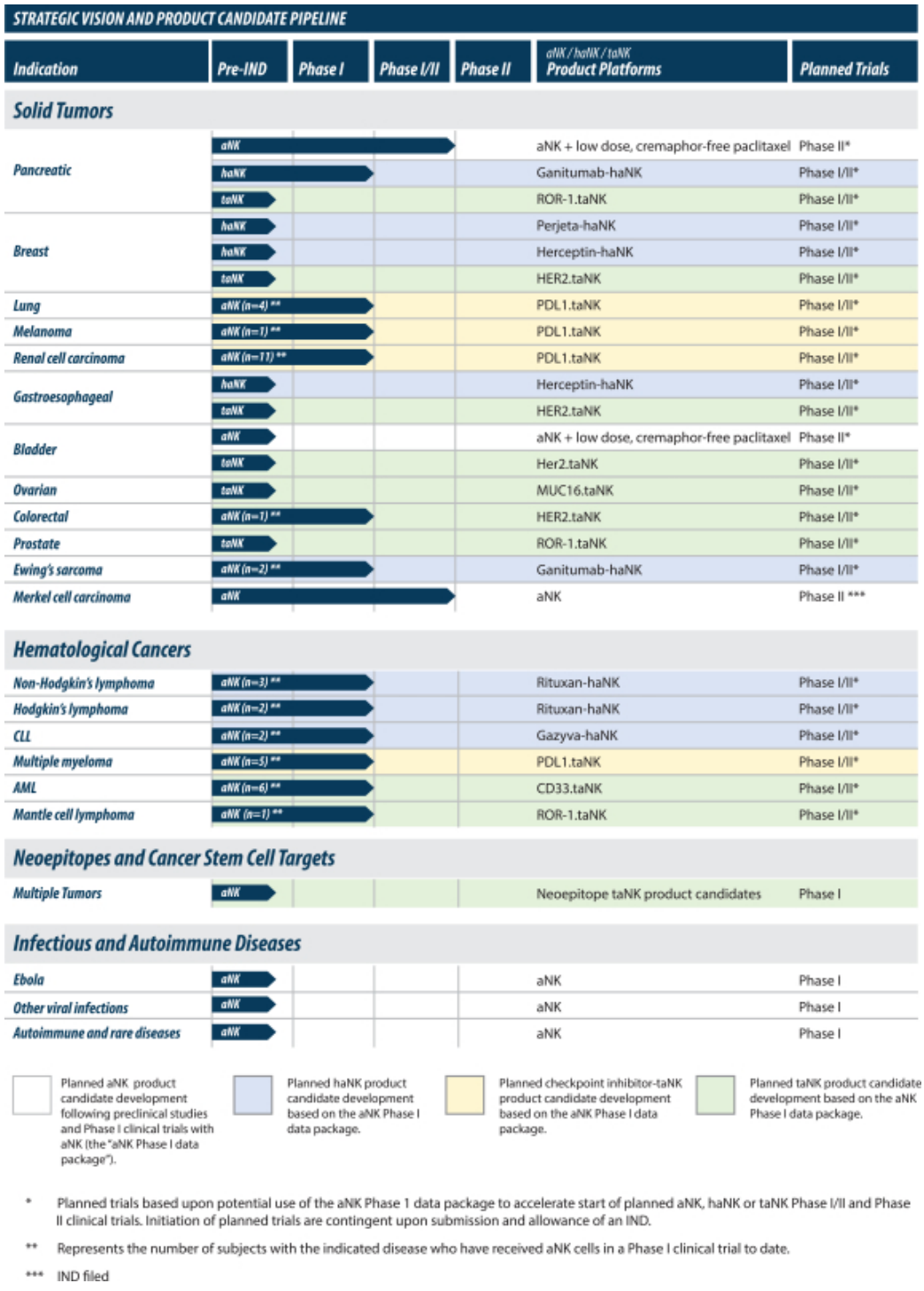
Direct Killing. Our aNK cells have activation receptors that naturally bind to stress-induced proteins. They possess a unique property of resistance to viral counterattack. We are developing our aNK product candidates as monotherapies for the treatment of virally-induced cancers such as polyoma virus induced Merkel cell carcinoma, human Papillomavirus, or HPV, induced cervical cancer and head and neck cancer as well as infectious diseases such as Ebola and other viral, fungal and bacterial infections. We are currently initiating a Phase II clinical trial for our aNK product candidate for Merkel cell carcinoma. Additionally, we intend to pursue combination therapies with low-dose cytotoxic agents and radiation therapy that may augment the ability of our aNK cells to attack cancer cells through these multiple combined points of attack.

Antibody-Mediated Killing. Our haNK cells are genetically engineered to express high-affinity CD16 receptors, designed to enhance the therapeutic efficacy of antibodies through ADCC. We intend to develop our haNK product candidates as combination therapies with widely-used FDA-approved mAbs such as Herceptin, Erbitux and Rituxan. We plan to initiate a Phase I/II clinical trial for our product candidate Herceptin-haNK in 2016. We believe that our haNK product candidates may allow us to potentially address larger markets and earlier lines of treatment. Some biopharmaceutical companies have used our haNK cells as a lot release quality control test for their therapeutic antibodies. If these companies develop and launch these antibodies, we intend to leverage the development performed by our biopharmaceutical licensees by initiating studies of our haNK product candidates in combination with these antibodies, with the goal of the combination potentially enhancing the activity of these antibodies in patients with low affinity CD16 receptors. We believe this enhanced efficacy provides a rationale for studying haNK cell combinations with these new antibodies, whether during the development phase or after commercial launch by the biopharmaceutical company. We plan to accelerate clinical

development of our aNK and haNK product candidates by entering into Phase II and Phase II/III clinical trials with our product candidates in combination with marketed drugs.

Tumor Target Activated Killing. Our taNK cells are genetically engineered to directly bind to tumor antigens by incorporating CARs to target specific antigens on the surface of abnormal cells. We believe our taNK product candidates may be able to treat patients with bulky hematological cancers and solid tumors, areas in which CAR-T cell therapies have been challenged. We plan to initiate Phase I/II clinical trials for our CD33.taNK product candidate for acute myeloid leukemia, or AML, and our PDL1.taNK product candidate for bulky hematological cancers and solid tumors, in 2016.

We are planning to advance a broad pipeline of aNK, haNK and taNK product candidates with the goal of addressing a wide spectrum of diseases ranging from orphan diseases to more prevalent indications. The following chart highlights some of our near-term opportunities.


STRATEGIC VISION AND PRODUCT CANDIDATE PIPELINE
Indication
Pre-IND
Phase I
Phase I/II
Phase II
aNK / haNK / taNK Product Platforms
Planned Trials
Solid Tumors
Pancreatic
aNK
aNK + low dose, cremaphor-free paclitaxel
Phase II*
haNK
Ganitumab-haNK
Phase I/II*
taNK
ROR-1.taNK
Phase I/II*
Breast
haNK
Perjeta-haNK
Phase I/II*
haNK
Herceptin-haNK
Phase I/II*
taNK
HER2.taNK
Phase I/II*
Lung
aNK (n=4) **
PDL1.taNK
Phase I/II*
Melanoma
aNK (n=1) **
PDL1.taNK
Phase I/II*
Renal cell carcinoma
aNK (n=11) **
PDL1.taNK
Phase I/II*
Gastroesophageal
haNK
Herceptin-haNK
Phase I/II*
taNK
HER2.taNK
Phase I/II*
Bladder
aNK
aNK + low dose, cremaphor-free paclitaxel
Phase II*
taNK
Her2.taNK
Phase I/II*
Ovarian
taNK
MUC16.taNK
Phase I/II*
Colorectal
aNK (n=1) **
HER2.taNK
Phase I/II*
Prostate
taNK
ROR-1.taNK
Phase I/II*
Ewing's sarcoma
aNK (n=2) **
Ganitumab-haNK
Phase I/II*
Merkel cell carcinoma
aNK
aNK
Phase II ***
Hematological Cancers
Non-Hodgkin's lymphoma
aNK (n=3) **
Rituxan-haNK
Phase I/II*
Hodgkin's lymphoma
aNK (n=2) **
Rituxan-haNK
Phase I/II*
CLL
aNK (n=2) **
Gazyva-haNK
Phase I/II*
Multiple myeloma
aNK (n=5) **
PDL1.taNK
Phase I/II*
AML
aNK (n=6) **
CD33.taNK
Phase I/II*
Mantle cell lymphoma
aNK (n=1) **
ROR-1.taNK
Phase I/II*
Neoepitopes and Cancer Stem Cell Targets
Multiple Tumors
aNK
Neoepitope taNK product candidates
Phase I
Infectious and Autoimmune Diseases
Ebola
aNK
aNK
Phase I
Other viral infections
aNK
aNK
Phase I
Autoimmune and rare diseases
aNK
aNK
Phase I
Planned aNK product candidate development following preclinical studies and Phase I clinical trials with aNK (the "aNK Phase I data package").
Planned haNK product candidate development based on the aNK Phase I data package.
Planned checkpoint inhibitor-taNK product candidate development based on the aNK Phase I data package.
Planned taNK product candidate development based on the aNK Phase I data package.
* Planned trials based upon potential use of the aNK Phase 1 data package to accelerate start of planned aNK, haNK or taNK Phase I/II and Phase II clinical trials. Initiation of planned trials are contingent upon submission and allowance of an IND.
** Represents the number of subjects with the indicated disease who have received aNK cells in a Phase I clinical trial to date.
*** IND filed

Accelerated Clinical Development Plan

We plan to advance our aNK and haNK programs by entering into Phase II and Phase II/III clinical trials with our product candidates in combination with commercially marketed drugs and select product candidates in late-stage development, both mAbs and chemotherapy agents.

mAb combinations. We plan to pursue opportunities for our aNK and haNK programs with pharmaceutical companies for commercially approved mAbs and select late-stage mAbs in development. We have out-licensed our haNK cells for non-therapeutic use to over 40 biopharmaceutical companies for them to select and validate their monoclonal antibodies for development. Certain biopharmaceutical companies have also used our haNK cells as a lot release quality control test for their therapeutic mAbs. Our accelerated strategy is to leverage the development performed by our biopharmaceutical licensees by initiating investigator-initiated and company-sponsored Phase II and Phase II/III clinical trials of our haNK product candidates in combination with commercially approved mAbs and select late-stage mAbs in development, with the combination potentially enhancing the activity of these antibodies in patients with low affinity CD16 receptors.

Chemotherapy combinations. A large number of monoclonal antibodies and chemotherapy drugs are being marketed for multiple indications. Published data shows that chemotherapy agents such as 5FU, cyclophosphamide and paclitaxel, when administered in low doses, generally enhance the immune system. We plan to accelerate clinical development of our aNK product candidates by entering into investigator-initiated and company-sponsored Phase II and Phase II/III trials of these product candidates administered in combination with approved chemotherapy agents. The table below describes our accelerated clinical development plan for aNK and haNK product candidates in combination with commercially marketed drugs and select late-stage product candidates in development.

Strategic Vision for Combination Therapy Product Candidate Pipeline

Product Candidate	*Indication*	*Combination Regimen*	*Planned Trials*
aNK Combination	Pancreas	Low dose cremaphor-free paclitaxel cytotoxic combination*	Phase II/III**
	Ovarian	Intraperitoneal and systemic cytotoxic combination*	Phase II/III**
	Bladder	Intravesicular and systemic low dose cytotoxic combination*	Phase II/III**
	Gastric	Low dose cytotoxic combination*	Phase II/III**
haNK Combination	Ewing's sarcoma	Ganitumab combination	Phase II/III**

* Commercially available standard of care products.

** Planned Phase II/III clinical trial based upon potential use of (1) preclinical study and Phase I clinical trial data with aNK and (2) the fact that these are planned combination trials with commercially approved products, or in the case of haNK combination, a Phase III product candidate. Initiation of planned trials are contingent upon submission and allowance of an IND.

Our Strategy

Our goal is to become the leader in the field of immunotherapy by changing the paradigm of care to precision medicine through harnessing the power of the innate immune system, the natural killer cell, to treat cancer, infectious diseases and inflammatory diseases. The key elements of our strategy include:

- ***Utilize the multiple modes of killing by innate immune therapy.*** We plan to pursue a comprehensive clinical development plan designed to maximize the commercial potential and clinical knowledge of aNK cells and the role of innate and adaptive immunotherapy as the backbone in the treatment of cancer, as monotherapy and in combination with chemotherapy, radiation and surgical therapies. We

intend to pursue accelerated regulatory approval pathways and attempt to obtain orphan drug status and breakthrough therapy designation, where appropriate, as well as pursue large market opportunities in many solid tumors.

- ***Leverage our integrated discovery engine to discover neoepitopes.*** Through our strategic collaborations with affiliates of NantWorks and with Sorrento, we plan to identify both known antigens on the surface of tumor cells and neoepitopes in clinical patients, identify the expression of the neoepitopes on the surface of the tumor cell and interrogate a large diverse library of human antibodies and extract an antibody matching the neoepitope. Through this cohesive and expansive discovery engine, we plan to identify antibodies to target newly discovered neoepitopes, thereby driving the development of our product candidate pipeline and establishing just in time precision medicine.
- ***Pursue opportunities with pharmaceutical companies for commercially approved mAbs and select late-stage mAbs in development.*** We have out-licensed our haNK cells for non-therapeutic use, including as a lot release quality control test for therapeutic antibodies, to over 40 biopharmaceutical companies for them to select and validate their mAbs for development. As we pursue these opportunities, we plan to leverage the development performed by our biopharmaceutical licensees by initiating studies of our haNK product candidates in combination with these antibodies, with the combination potentially enhancing the activity of these antibodies in patients with low affinity CD16 receptors.
- ***Accelerate clinical development of aNK and haNK by entering into Phase II and Phase II/III clinical trials with our product candidates in combination with marketed drugs and select late-stage product candidates.*** Published data show that therapeutic mAbs generally have enhanced activity in patients with high-affinity NK cells and that chemotherapy agents such as 5FU, cyclophosphamide and paclitaxel, when administered in low doses, generally enhance the immune system. We plan to accelerate clinical development of our haNK product candidates by entering into investigator-initiated and company-sponsored Phase II and Phase II/III clinical trials of our aNK product candidates administered in combination with commercially approved mAbs and select late-stage mAbs in development or our aNKs in combination with approved chemotherapy agents.
- ***Establish low-cost, scalable manufacturing capabilities to support late-stage clinical trials and global commercialization.*** We believe our aNK cells offer a unique advantage of a simplified, on-demand manufacturing process that is relatively easy to scale. We are building a state-of-the-art, cell-based manufacturing facility with the capacity to support large-scale clinical trials and commercialization. We are developing novel manufacturing methods, both in equipment utilizing state-of-the-art optics and proprietary media designed to maximize the attributes of our NK platform.
- ***Extend our NK platform to address diseases beyond cancer.*** We believe our aNK cells have the potential to treat diseases beyond cancer such as infectious and inflammatory diseases because of the inherent role of NK cells to kill virally infected and abnormal cells. Preclinical studies in Ebola virus demonstrate this capability. In addition to Ebola, we plan to investigate and develop our aNK cells for the treatment of HIV, tuberculosis and influenza, among others.

Risks Associated with Our Business

Our business is subject to numerous risks, as more fully described in the section entitled “Risk Factors” immediately following this prospectus summary. You should read these risks before you invest in our common stock. We may be unable, for many reasons, including those that are beyond our control, to implement our business strategy. In particular, risks associated with our business include:

- We are a clinical-stage biopharmaceutical company with a limited operating history and have incurred significant losses since our inception, and we anticipate that we will continue to incur losses for the foreseeable future;

- The foundation of our business is based upon the success of our aNK cells as a technology platform. Our aNK platform and other product candidate families, including genetically modified taNK and haNK product candidates, will require significant additional clinical testing before we can potentially seek regulatory approval and launch commercial sales;
- Utilizing aNK cells represents a novel approach to immunotherapy, including cancer treatment, and we must overcome significant challenges in order to successfully develop, commercialize and manufacture our aNK and other product candidates;
- Even if we successfully develop and commercialize our aNK product candidate for Merkel cell carcinoma, we may not be successful in developing and commercializing our other product candidates and our commercial opportunities may be limited;
- We may not be able to file investigational new drug applications, or INDs, to commence additional clinical trials on the timelines we expect, and even if we are able to, the FDA may not permit us to proceed in a timely manner, or at all;
- We face significant competition in the biopharmaceutical industry, and many of our competitors have substantially greater experience and resources than we have;
- Our business plan involves the creation of a complex integrated discovery engine capable of addressing a wide range of indications. As a result, our future success depends on our ability to prioritize among many different opportunities;
- Our integrated discovery engine is comprised of multiple novel technologies that have never been tested in combination with our product candidates, and we do not know whether our attempts to use them in combination will be effective;
- Clinical drug development involves a lengthy and expensive process with an uncertain outcome, results of earlier studies and clinical trials may not be predictive of future clinical trial results, we may not be able to rely on the aNK Phase I clinical trial data for our other product candidates, and our clinical trials may fail to adequately demonstrate substantial evidence of safety and efficacy of our product candidates;
- We do not have any therapeutic products that are approved for commercial sale. Our ability to generate revenue from product sales and become profitable depends significantly on our success in a number of factors;
- We will need to obtain substantial additional financing to complete the development and any commercialization of our product candidates; and
- Our Chairman and Chief Executive Officer and entities affiliated with him collectively own a significant percentage of our common stock and could exercise significant influence over matters requiring stockholder approval, regardless of the wishes of other stockholders.

Corporate Information

We were incorporated on October 7, 2002 in the state of Illinois under the name ZelleRx Corporation. On January 22, 2010, we changed our name to Conkwest, Inc. In March 2014, we formed Conkwest, Inc., our wholly owned subsidiary in the state of Delaware, or Conkwest Delaware, for the purposes of changing the state of our incorporation to the state of Delaware. In March 2014, we merged with and into Conkwest Delaware, with Conkwest Delaware surviving the merger. Our principal executive offices are located at The Plastino Building, 2533 South Coast Highway 101, Suite 210, Cardiff-by-the-Sea, California 92007 and our telephone number is (858) 633-0300. Our corporate website address is www.conkwest.com. Information contained on or accessible through our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only.

This prospectus contains references to our trademarks and to trademarks belonging to other entities. Solely for convenience, trademarks and trade names referred to in this prospectus, including logos, artwork and other visual displays, may appear without the ® or ™ symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks and trade names. We do not intend our use or display of other companies' trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

Implications of Being an Emerging Growth Company

As a company with less than $1.0 billion in revenue during our last fiscal year, we qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act, or the JOBS Act, enacted in April 2012. An "emerging growth company" may take advantage of reduced reporting requirements that are otherwise applicable to public companies. These provisions include, but are not limited to:

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

We may use these provisions until the last day of our fiscal year following the fifth anniversary of the closing of this offering. However, if certain events occur prior to the end of such five-year period, including if we become a "large accelerated filer," our annual gross revenue exceeds $1.0 billion or we issue more than $1.0 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company prior to the end of such five-year period.

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

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards, delaying the adoption of these accounting standards until they would apply to private companies. We have irrevocably elected not to avail ourselves of this exemption and, as a result, upon completion of this offering we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

The Offering	
Common stock offered by us	shares
Common stock to be outstanding after this offering	shares
Underwriters' option to purchase additional shares	We have granted the underwriters an option, exercisable for 30 days after the date of this prospectus, to purchase up to an additional shares of common stock from us.
Use of proceeds	We estimate that we will receive net proceeds from this offering of approximately $ million based upon an assumed initial public offering price of $ per share, the mid-point of the estimated price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We expect to use the net proceeds from this offering for the following purposes: (1) approximately $ million to fund expenses in connection with our Phase II clinical trial for our aNK product candidate for Merkel cell carcinoma; (2) approximately $ million to fund expenses in connection with our planned Phase I/II clinical trial for Herceptin-haNK for solid tumors; (3) approximately $ million to fund expenses in connection with our planned Phase I/II clinical trials for CD33.taNK for acute myeloid leukemia and PDL1.taNK for solid tumor hematological cancers; (4) approximately $ million to establish our planned manufacturing facility and processes and the hiring of additional personnel; and (5) any remaining amounts for other research and development activities, working capital and general corporate purposes. See "Use of Proceeds" for additional information.
Risk factors	You should carefully read "Risk Factors" in this prospectus for a discussion of factors that you should consider before deciding to invest in our common stock.
Directed share program	At our request, the underwriters have reserved up to shares of our common stock offered by this prospectus for sale, at the initial public offering price, to our directors and officers and certain employees and other parties related to us. Shares purchased by our directors and officers will be subject to the 180-day lock-up restriction described in the "Underwriting" section of this prospectus. The number of shares of common stock available for sale to the general public will be reduced to the extent these individuals purchase such reserved shares. Any reserved shares that are not so purchased will be offered by the underwriters to the general public on the same basis as the other shares offered by this prospectus.

Proposed NASDAQ Global Select Market trading symbol “ ”

The number of shares of our common stock to be outstanding after this offering is based on 32,997,244 shares of our common stock outstanding as of December 31, 2014 and excludes:

- 999,696 shares of common stock issuable upon the exercise of outstanding warrants as of December 31, 2014, with a weighted-average exercise price of $3.10 per share;
- 2,775,269 shares of common stock issuable upon the exercise of outstanding options as of December 31, 2014, with a weighted-average exercise price of $1.58 per share; and
- shares of common stock reserved for future issuance under our stock-based compensation plans, consisting of (1) 2,705,000 shares of common stock reserved for future issuance under our 2014 Equity Incentive Plan, or 2014 Plan, which shares will be added to the shares of common stock to be reserved under our 2015 Equity Incentive Plan, or our 2015 Plan, which will become effective upon completion of this offering and (2) shares of common stock reserved for future issuance under our 2015 Plan, as well as shares of common stock that become available under our 2015 Plan pursuant to provisions thereof that automatically increase the share reserve under the 2015 Plan each year, as more fully described in the section titled “Executive and Director Compensation—Employee Benefit and Stock Plans.”

Unless otherwise noted, the information in this prospectus reflects and assumes the following:

- the recapitalization and reclassification of each outstanding share of our Class A and Class B common stock into one share of common stock, which occurred on , 2015;
- the filing of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws immediately prior to the completion of this offering;
- no exercise of outstanding options or warrants after December 31, 2014; and
- no exercise of the underwriters’ option to purchase additional shares.

Summary Financial Data

We derived the following summary statements of operations data for the years ended December 31, 2013 and 2014 and the summary balance sheet data as of December 31, 2014 from our audited financial statements appearing elsewhere in this prospectus. Historical results are not necessarily indicative of the results that may be expected in the future. You should read the following summary financial data together with the financial statements and the related notes included elsewhere in this prospectus, as well as the sections of this prospectus captioned "Selected Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	Year Ended December 31,	
	2013	2014
	(in thousands, except share and per share data)	
Statements of Operations Data:		
Revenue	$ 600	$ 641
Operating expenses:		
Royalties and cost of licensing	253	323
Research and development	446	1,595
Selling, general and administrative	1,982	4,326
Total operating expenses	2,681	6,244
Loss from operations	(2,081)	(5,603)
Other income (expense):		
Interest expense, net	(461)	(451)
Fair value adjustment	684	(158)
Total other income (expense)	223	(609)
Loss before income taxes	(1,858)	(6,212)
Income tax expense	1	1
Net loss	$ (1,859)	$ (6,213)
Net loss per share:		
Basic and diluted	$ (4.32)	$ (1.40)
Weighted average number of shares during the year		
Basic and diluted	430,519	4,453,702

	As of December 31, 2014	
	Actual	As Adjusted(1)(2)
	(in thousands)	
Balance Sheet Data:		
Cash and cash equivalents	$ 59,104	$
Working capital	56,968	
Total assets	60,828	
Total liabilities	2,405	
Accumulated deficit	(12,741)	
Total stockholders' equity	58,423	

(1) Reflects on an as adjusted basis the sale and issuance by us of shares of common stock in this offering at the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

(2) Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) each of as adjusted working capital, total assets and total stockholders' equity (deficit) by approximately $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same. We may also increase or decrease the number of shares we are offering. Each increase (decrease) of 1.0 million in the number of shares we are offering would increase (decrease) each of as adjusted working capital, total assets and total stockholders' equity by approximately $ million, assuming the assumed initial public offering price per share, as set forth on the cover page of this prospectus, remains the same. The as adjusted information is illustrative only, and we will adjust this information based on the actual initial public offering price and other terms of this offering determined at pricing.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below, as well as all other information included in this prospectus, including our financial statements and the related notes and the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" before you decide to purchase shares of our common stock. If any of the following risks actually occurs, our business, financial condition, operating results, prospects and ability to accomplish our strategic objectives could be materially harmed. As a result, the trading price of our common stock could decline and you could lose all or part of your investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations and the market price of our common stock.

Risks Related to Our Financial Condition and Capital Requirements

We are a clinical-stage biopharmaceutical company with a limited operating history and have incurred significant losses since our inception, and we anticipate that we will continue to incur losses for the foreseeable future, which makes it difficult to assess our future viability.

We are a clinical-stage biopharmaceutical company with a limited operating history upon which you can evaluate our business and prospects. To date, we have generated minimal revenue from non-exclusive license agreements with biopharmaceutical companies to which we have granted the right to use our cell lines and intellectual property for non-clinical laboratory testing, and we have no products approved for commercial sale and have not generated any revenue from product sales. We have incurred operating losses on an annual basis since our formation and we may never become profitable. As of December 31, 2014, we had an accumulated deficit of approximately $12.7 million. We incurred net losses of $1.9 million and $6.2 million for the years ended December 31, 2013 and 2014, respectively. Our losses have resulted principally from costs incurred in ongoing preclinical studies, clinical trials and operations, research and development expenses, as well as general and administrative expenses.

A critical aspect of our strategy is to invest significantly in expanding our aNK platform and the development of our product candidates. We expect to incur significant expenses as we continue to expand our business, including in connection with conducting research and development across multiple therapeutic areas, participating in clinical trial activities, continuing to acquire or in-license technologies, maintaining, protecting and expanding our intellectual property, seeking regulatory approvals and, upon successful receipt of FDA approval, commercializing our products. We will also need to incur costs as we hire additional personnel and increase our manufacturing capabilities, including potentially pursuant to the lease or purchase of a facility, for the manufacturing of our product candidates for our planned clinical trials and, upon potential receipt of FDA approval, for our initial commercialization activities. Moreover, we do not expect to have any significant product sales or revenue for a number of years. These losses have had and, as our operating losses continue to increase significantly in the future due to these expenditures, will continue to have an adverse effect on our stockholders' equity and working capital. Because of the numerous risks and uncertainties associated with our product development efforts, we are unable to predict when we may become profitable, if at all. Additionally, our net losses may fluctuate significantly from quarter to quarter, and as a result a period to period comparison of our results of operations may not be meaningful.

We do not have any therapeutic products that are approved for commercial sale. Our ability to generate revenue from product sales and become profitable depends significantly on our success in a number of factors.

We currently do not have any therapeutic products that are approved for commercial sale. We have not received, and do not expect to receive for at least the next several years, if at all, any revenues from the commercialization of our product candidates if approved. To obtain revenues from sales of our product

candidates that are significant or large enough to achieve profitability, we must succeed, either alone or with third parties, in developing, obtaining regulatory approval for, manufacturing and marketing therapies with commercial potential. Our ability to generate revenue and achieve profitability depends significantly on our success in many areas, including:

- our research and development efforts, including preclinical studies and clinical trials of our aNK platform and our product candidates;
- developing sustainable, scalable, reliable and cost-effective manufacturing and distribution processes for our product candidates, including establishing and maintaining commercially viable supply relationships with third parties and establishing our own current good manufacturing processes, or cGMPs, manufacturing facilities and processes;
- addressing any competing technological and industry developments;
- identifying, assessing, acquiring and/or developing new technology platforms and product candidates across numerous therapeutic areas;
- obtaining regulatory approvals and marketing authorizations for product candidates;
- launching and commercializing any approved products, either directly or with a collaborator or distributor;
- obtaining market acceptance of and acceptable reimbursement for any approved products;
- completing collaborations, licenses and other strategic transactions on favorable terms, if at all;
- maintaining, protecting and expanding our portfolio of intellectual property rights, including patents, trade secrets and know-how; and
- attracting, hiring and retaining qualified personnel.

Even if one or more of our product candidates is approved for commercial sale, we anticipate incurring significant costs associated with commercializing any approved product candidate and we may not generate significant revenue from sales of such products, resulting in limited or no profitability in the future. Our prior losses and expected future losses have had and will continue to have an adverse effect on our stockholders' equity and working capital for the foreseeable future. Any failure to become and remain profitable may adversely affect the market price of our common stock, our ability to raise capital and our future viability.

We will need to obtain substantial additional financing to complete the development and any commercialization of our product candidates, and a failure to obtain this necessary capital when needed on acceptable terms, or at all, could force us to delay, limit, reduce or terminate our commercialization efforts, product development or other operations.

Since our inception, we have used substantial amounts of cash to fund our operations and expect our expenses to increase substantially in the foreseeable future. Developing our product candidates and conducting clinical trials for the treatment of cancer and other diseases will require substantial amounts of capital. We will also require a significant additional amount of capital to commercialize any approved products.

As of December 31, 2014, we had cash and cash equivalents of $59.1 million. We estimate that our net proceeds from this offering will be approximately $ million, based on the initial public offering price of $ per share (the mid-point of the price range set forth on the cover page of this prospectus), after deducting the estimated underwriting commissions and discounts and estimated offering expenses payable by us. We expect to use the net proceeds from this offering to fund expenses in connection with our planned clinical trials, our planned manufacturing facility and processes and the hiring of additional personnel, and for other research and development activities, working capital and general corporate purposes. We believe that such proceeds, together with our existing cash and cash equivalents, will be sufficient to fund our operations for at least the next

12 months. However, changing circumstances may cause us to consume capital significantly faster than we currently anticipate, and we may need to spend more money than currently expected because of circumstances beyond our control. We may require additional capital for the further development and any commercialization of our product candidates and may need to raise additional funds sooner if we choose to expand more rapidly than we presently anticipate.

Our future capital requirements may depend on many factors, including:

- the timing of, and the costs involved in, preclinical and clinical development and obtaining any regulatory approvals for our product candidates;
- the costs of manufacturing, distributing and processing our product candidates;
- the number and characteristics of any other product candidates we develop or acquire;
- our relative responsibility for developing and commercializing taNK product candidates covered by our joint development and license agreement with Sorrento Therapeutics;
- our ability to establish and maintain strategic collaborations, licensing or other commercialization arrangements and the terms and timing of such arrangements;
- the degree and rate of market acceptance of any approved products;
- the emergence, approval, availability, perceived advantages, relative cost, relative safety and relative efficacy of other products or treatments;
- the expenses needed to attract and retain skilled personnel;
- the costs associated with being a public company;
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing intellectual property claims, including litigation costs and the outcome of such litigation;
- the timing, receipt and amount of sales of, or royalties on, any approved products; and
- any product liability or other lawsuits related to our product candidates.

To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing, if available, 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 pharmaceutical partners, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates, or grant licenses on terms that may not be favorable to us. Additional capital may not be available when we need it, on terms that are acceptable to us or at all. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market any approved products that we would otherwise prefer to develop and market ourselves.

Risks Relating to Our Business and Industry

The foundation of our business is based upon the success of our aNK cells as a technology platform. Our aNK platform and other product candidate families, including genetically modified taNK and haNK product candidates, will require significant additional clinical testing before we can potentially seek regulatory approval and launch commercial sales.

Our business and future success depend on our ability to utilize our aNK cells as a technology platform, and to obtain regulatory approval of, and then successfully commercialize, our product candidates addressing

numerous therapeutic areas. Our aNK platform and our product candidate families haNK and taNK are in the early stages of development and may never become commercialized. All of our product candidates developed from our technology platform will require additional clinical and non-clinical development, regulatory review and approval in multiple jurisdictions, substantial investment, access to sufficient commercial manufacturing capacity and significant marketing efforts before they can be successfully commercialized. Because all of our product candidates are based on the same core aNK technology, if any of our product candidates encounter safety or efficacy problems, developmental delays or regulatory issues or other problems, these could impact the development plans for our other product candidates.

Utilizing aNK cells represents a novel approach to immunotherapy, including cancer treatment, and we must overcome significant challenges in order to successfully develop, commercialize and manufacture our aNK and other product candidates.

We have concentrated our research and development efforts on utilizing aNK cells as an immunotherapy platform and genetically modified aNK cells as product candidates based on this platform. We believe that our product candidates represent a novel approach to immunotherapy, including cancer treatment. Advancing this novel immunotherapy creates significant challenges for us, including:

- educating medical personnel regarding the potential side effect profile of our cells;
- enrolling sufficient numbers of patients in clinical trials;
- developing a reliable, safe and effective means of genetically modifying our cells;
- manufacturing our cells on a large scale and in a cost-effective manner;
- submitting applications for and obtaining regulatory approval, as the FDA and other regulatory authorities have limited experience with commercial development of immunotherapies for cancer; and
- establishing sales and marketing capabilities, as well as developing a manufacturing process and distribution network to support the commercialization of any approved products.

We must be able to overcome these challenges and others in order for us to successfully develop, commercialize and manufacture our product candidates utilizing aNK cells.

Even if we successfully develop and commercialize our aNK product candidate for Merkel cell carcinoma, we may not be successful in developing and commercializing our other product candidates, and our commercial opportunities may be limited.

While our most advanced product candidate is our aNK product candidate for Merkel cell carcinoma, we believe that our future success is highly dependent upon our ability to successfully develop and commercialize our other product candidates as well. We are simultaneously pursuing preclinical and clinical development of a number of product candidates spanning several therapeutic areas, including various types of cancer and infectious and inflammatory diseases. For example, we are devoting substantial resources toward the development of haNK product candidates, which we plan to develop as combination therapies with commercially approved mAbs and late-stage product candidates, and taNK product candidates, which we plan to develop for acute myeloid leukemia, or AML, bulky hematological cancers and solid tumors. In addition, our ability to realize the full value of our aNK platform will depend on our success in pursuing our other planned product candidates for a wide range of other indications.

Even if we are successful in continuing to build our pipeline of additional product candidates based on our technology platform, obtaining regulatory approvals and commercializing any approved product candidates will require substantial additional funding beyond the net proceeds of this offering and are prone to numerous risks of failure. Investment in biopharmaceutical product development involves significant risks that any product candidate will fail to demonstrate adequate efficacy or an acceptable safety profile to the satisfaction of regulatory authorities, gain regulatory approval or become commercially viable. We cannot provide you any assurance that we will be able

to successfully advance any product candidates through the development process. Our research programs may initially show promise in identifying additional product candidates, yet fail to yield additional product candidates for clinical development or commercialization for many reasons, including the following:

- our additional product candidates may not succeed in preclinical or clinical testing due to failing to generate enough data to support the initiation or continuation of clinical trials or due to lack of patient enrollment in clinical trials;
- a product candidate may be shown to have harmful side effects or other characteristics in larger scale clinical studies that indicate it is unlikely to meet applicable regulatory criteria;
- competitors may develop alternatives that render our product candidates obsolete or less attractive;
- we may not be able or willing to assemble sufficient resources to acquire or discover additional product candidates from our technology platform;
- product candidates we develop may nevertheless be covered by third parties' patents or other exclusive rights;
- the market for a product candidate may change during our program so that the continued development of that product candidate is no longer reasonable;
- a product candidate may not be capable of being manufactured in commercial quantities at an acceptable cost, or at all; and
- a product candidate may not be accepted as safe and effective by patients, the medical community or third-party payors.

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

We may not be able to file INDs to commence additional clinical trials on the timelines we expect, and even if we are able to, the FDA may not permit us to proceed in a timely manner, or at all.

Prior to commencing clinical trials in the United States for any of our product candidates, we may be required to have an allowed IND for each product candidate. We currently have only one allowed IND for our aNK product candidate for Merkel cell carcinoma, and are required to file additional INDs prior to initiating our planned clinical trials. We believe that the data from previous preclinical studies will support the filing of additional INDs, to enable us to undertake additional clinical studies as we have planned. However, submission of an IND may not result in the FDA allowing further clinical trials to begin and, once begun, issues may arise that will require us to suspend or terminate such clinical trials. Additionally, even if relevant regulatory authorities agree with the design and implementation of the clinical trials set forth in an IND or clinical trial application, these regulatory authorities may change their requirements in the future. The fact that we are pursuing novel technologies may also exacerbate these risks with respect to our product candidates, and as a result we may not meet our anticipated clinical development timelines.

We face significant competition in the biopharmaceutical industry, and many of our competitors have substantially greater experience and resources than we have.

Even if our aNK cell therapy proves successful, we might not be able to remain competitive because of the rapid pace of technological development in the biopharmaceutical field. Our aNK, haNK and taNK product candidates will compete with other cell-based immunotherapy approaches using T- and dendritic cells. We are aware of companies developing product candidates focused on NK cells. These companies include Bristol-Myers Squibb and Innate Pharma. Companies that are currently focused on T-cell based treatments include Adaptimmune Limited, Amgen Inc., Bellicum Pharmaceuticals, Inc., bluebird bio, Inc., Celgene Corporation,

Cellectis SA, GlaxoSmithKline plc, Intrexon Corporation, Juno Therapeutics, Inc., Kite Pharma, Inc., Novartis AG, Pfizer Inc. and Ziopharm Oncology, Inc. There is currently one approved dendritic cell-based cancer vaccine, PROVENGE, which is marketed by Valeant Pharmaceuticals for the treatment of metastatic castrateresistant prostate cancer. Other companies focused on developing dendritic cell-based product candidates include Argos Therapeutics, Inc., Biovest International, Inc., ImmunoCellular Therapeutics, Ltd., Immune Design, Inc., Inovio Pharmaceuticals, Inc., Intrexon Corporation and Northwest Biotherapeutics, Inc.

Many of our competitors have greater financial and other resources, larger research and development staffs, and more experienced capabilities in researching, developing and testing products than we do. All of these companies also have more experience in conducting clinical trials, obtaining FDA and other regulatory approvals, and manufacturing, marketing and distributing therapeutic products. Small companies like us may successfully compete by establishing collaborative relationships with larger pharmaceutical companies or academic institutions. In addition, large pharmaceutical companies or other companies with greater resources or experience than us may choose to forgo therapy opportunities that would have otherwise been complementary to our product development and collaboration plans. Our competitors may succeed in developing, obtaining patent protection for, or commercializing their products more rapidly than us. A competing company developing or acquiring rights to a more effective therapeutic product for the same diseases targeted by us, or one that offers significantly lower costs of treatment, could render our products noncompetitive or obsolete.

Our business plan involves the creation of a complex integrated discovery engine capable of addressing a wide range of indications. As a result, our future success depends on our ability to prioritize among many different opportunities.

We do not have sufficient resources to pursue development of all or even a substantial portion of the potential opportunities afforded to us by our integrated development engine. Because we have limited resources and access to capital to fund our operations, our management must make significant prioritization decisions as to which product candidates to pursue, and how much of our resources to allocate to each. Our management has broad discretion to suspend, scale down, or discontinue any or all of these development efforts, or to initiate new programs to treat other diseases. If we select and commit resources to opportunities that we are unable to successfully develop, or we forego more promising opportunities, our business, financial condition and results of operations will be adversely affected.

Our integrated discovery engine is comprised of multiple novel technologies that have never been tested in combination with our product candidates, and we do not know whether our attempts to use them in combination will be effective.

Our business strategy includes using our integrated discovery engine to introduce new product candidates in combination with technologies that were developed by other companies with whom we have entered into strategic collaborations. Each technology and collaboration is unique and has its own risks, and the failure of any individual technology or the combination could materially impair our ability to successfully pursue our own aNK platform and related product candidates.

With respect to our agreement with Sorrento Therapeutics, Inc., or Sorrento, we have not yet jointly developed any taNK product candidates. Although Sorrento has one of the largest fully human antibody libraries in the world, Sorrento’s antibodies may not be compatible with our taNK product candidates and there may be other libraries that would be more compatible with our technology and would produce better results for us. To the extent that we use antibodies from other parties for our taNK product candidates, we would still be required to pay royalties to Sorrento.

We have also entered into collaborations with affiliates of NantWorks to provide us with access to their database of genomic and proteomic information collected from a broad array of tumor cell samples. Our rights to

use the database are non-exclusive and we therefore cannot guarantee that we would ultimately have any competitive advantage based on our use of this technology. The database also may not be able to identify novel tumor-associated antigens that are targetable with our technology and the genetic and proteomic analysis capability may not be effective as a companion diagnostic to guide therapeutic treatments.

Although we have agreements with these parties, we cannot control their actions and they may make mistakes, work with our competitors, or not devote sufficient time and attention to us. The arrangements may become cost-prohibitive for us, and their technologies may become obsolete or better options may be available that we are unable to utilize. Using our technology in combination with theirs has never been tried, and we cannot assure you that we will be successful in producing product candidates in connection with these arrangements.

Clinical drug development involves a lengthy and expensive process with an uncertain outcome, results of earlier studies and clinical trials may not be predictive of future clinical trial results, we may not be able to rely on the aNK Phase I clinical trial data for our other product candidates, and our clinical trials may fail to adequately demonstrate substantial evidence of safety and efficacy of our product candidates.

Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. A failure of one or more of our clinical trials can occur at any time during the clinical trial process. The results of preclinical studies and early clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials. There is a high failure rate for drugs proceeding through clinical trials, and product candidates in later stages of clinical trials may fail to show the required safety and efficacy despite having progressed through preclinical studies and initial clinical trials. A number of companies in the pharmaceutical industry have suffered significant setbacks in advanced clinical trials due to lack of efficacy or adverse safety profiles, notwithstanding promising results in earlier clinical trials, and we cannot be certain that we will not face similar setbacks. Even if our clinical trials are completed, the results may not be sufficient to support obtaining regulatory approval for our product candidates. In addition, our strategy and anticipated timelines are predicated upon our ability to utilize the Phase I clinical trial data for aNK observed to date to support our planned clinical trials for all of our product candidates, including our haNK and taNK product candidates. To date, we have only one IND for our aNK product candidate, and we cannot assure you FDA will allow us to utilize the Phase I aNK data to support other planned clinical trials or allow our anticipated INDs for (1) planned Phase I or Phase I/II clinical trials for our other product candidates as potential monotherapies, (2) planned Phase II/III clinical trials for our haNK product candidates as potential combination therapies, or (3) any other planned clinical trials.

We have in the past experienced delays in our ongoing clinical trials and we may in the future. We do not know whether future clinical trials, if any, will begin on time, need to be redesigned, enroll an adequate number of patients on time or be completed on schedule, if at all. Clinical trials can be delayed, suspended or terminated by us, regulatory authorities, clinical trial investigators, and ethics committees for a variety of reasons, including failure to:

- generate sufficient preclinical, toxicology, or other in vivo or in vitro data to support the initiation or continuation of clinical trials;
- obtain regulatory approval, or feedback on clinical trial design, to commence a clinical trial;
- identify, recruit and train suitable clinical investigators;
- reach agreement on acceptable terms with prospective CROs and clinical trial sites;
- obtain and maintain institutional review board, or IRB, approval at each clinical trial site;
- identify, recruit and enroll suitable patients to participate in a clinical trial;
- have a sufficient number of patients complete a clinical trial or return for post-treatment follow-up;
- ensure clinical investigators observe clinical trial protocol or continue to participate in a clinical trial;
- address any patient safety concerns that arise during the course of a clinical trial;

- address any conflicts with new or existing laws or regulations;
- add a sufficient number of clinical trial sites;
- timely manufacture sufficient quantities of product candidate for use in clinical trials; or
- raise sufficient capital to fund a clinical trial.

Patient enrollment is a significant factor in the timing of clinical trials and is affected by many factors, including the size and nature of the patient population, the proximity of patients to clinical sites, the eligibility criteria for the clinical trial, the design of the clinical trial, competing clinical trials and clinicians' and patients' or caregivers' perceptions as to the potential advantages of the drug candidate being studied in relation to other available therapies, including any new drugs or treatments that may be approved for the indications we are investigating.

We could also encounter delays if a clinical trial is suspended or terminated by us, by the data safety monitoring board for such clinical trial or by the FDA or any other regulatory authority, or if the IRBs of the institutions in which such clinical trials are being conducted suspend or terminate the participation of their clinical investigators and sites subject to their review. Such authorities may suspend or terminate a clinical trial due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements, including GCPs, or our clinical protocols, inspection of the clinical trial operations or clinical trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a product candidate, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial.

If we experience delays in the completion of, or termination of, any clinical trial of our product candidates for any reason, the commercial prospects of our product candidates may be harmed, and our ability to generate product revenues from any of these product candidates will be delayed. In addition, any delays in completing our clinical trials will increase our costs, slow down our product candidate development and approval process and jeopardize our ability to commence product sales and generate revenues. Any of these occurrences may significantly harm our business, financial condition and prospects. In addition, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates.

We may be unable to obtain regulatory approval for our product candidates. The denial or delay of any such approval would delay commercialization and have a material adverse effect on our potential to generate revenue, our business and our results of operations.

The research, development, testing, manufacturing, labeling, packaging, approval, promotion, advertising, storage, recordkeeping, marketing, distribution, post-approval monitoring and reporting, and export and import of biopharmaceutical products are subject to extensive regulation by the FDA, and by foreign regulatory authorities in other countries. These regulations differ from country to country. To gain approval to market our product candidates, we must provide regulatory authorities with substantial evidence of safety, purity and potency of the product for each indication we seek to commercialize. We have not yet obtained regulatory approval to market any of our product candidates in the United States or any other country. Our business depends upon obtaining these regulatory approvals.

The FDA can delay, limit or deny approval of our product candidates for many reasons, including:

- our inability to satisfactorily demonstrate with substantial clinical evidence that the product candidates are safe, pure and potent for the requested indication;
- the FDA's disagreement with our clinical trial protocol or the interpretation of data from preclinical studies or clinical trials;
- the population studied in the clinical trial not being sufficiently broad or representative to assess safety in the full population for which we seek approval;

- our inability to demonstrate that clinical or other benefits of our product candidates outweigh any safety or other perceived risks;
- the FDA's determination that additional preclinical or clinical trials are required;
- the FDA's non-approval of the labeling or the specifications of our product candidates;
- the FDA's failure to accept the manufacturing processes or facilities of third-party manufacturers with which we contract; or
- the potential for approval policies or regulations of the FDA to significantly change in a manner rendering our clinical data insufficient for approval.

Even if we eventually successfully complete clinical testing and receive approval of any regulatory filing for our product candidates, the FDA may only grant approval contingent on the performance of costly additional post-approval clinical trials. The FDA may also approve our product candidates for a more limited indication or a narrower patient population than we originally requested, and the FDA may not approve the labeling that we believe is necessary or desirable for the successful commercialization of our product candidates. To the extent we seek regulatory approval in foreign countries, we may face challenges similar to those described above with regulatory authorities in applicable jurisdictions. Any delay in obtaining, or our inability to obtain, applicable regulatory approval for any of our product candidates would delay or prevent commercialization of our product candidates and would materially adversely impact our business, results of operations, financial condition and prospects.

Use of our product candidates could be associated with side effects or adverse events.

As with most biopharmaceutical products, use of our product candidates could be associated with side effects or adverse events which can vary in severity and frequency. Side effects or adverse events associated with the use of our product candidates may be observed at any time, including in clinical trials or once a product is commercialized, and any such side effects or adverse events may negatively affect our ability to obtain regulatory approval or market our product candidates. Side effects such as toxicity or other safety issues associated with the use of our product candidates could require us to perform additional studies or halt development or sale of these product candidates or expose us to product liability lawsuits which will harm our business. We may be required by regulatory agencies to conduct additional preclinical or clinical trials regarding the safety and efficacy of our product candidates which we have not planned or anticipated. We cannot assure you that we will resolve any issues related to any product-related adverse events to the satisfaction of the FDA or any regulatory agency in a timely manner or ever, which could harm our business, prospects and financial condition.

In the Phase I clinical trial of a NK-001 conducted by Rush University, one case of transient grade 4 hypoglycemia and several mild-to-moderate fevers were seen in five out of six patients receiving higher doses. In the Phase I clinical trial of aNK-001 conducted by the University of Frankfurt, one report of mild fever and a report of sustained back pain were observed. If we are successful in commercializing our product candidates, the FDA and other foreign regulatory agency regulations will require that we report certain information about adverse medical events if those products may have caused or contributed to those adverse events. The timing of our obligation to report would be triggered by the date we become aware of the adverse event as well as the nature of the event. We may inadvertently fail to report adverse events we become aware of within the prescribed timeframe. We may also fail to appreciate that we have become aware of a reportable adverse event, especially if it is not reported to us as an adverse event or if it is an adverse event that is unexpected or removed in time from the use of our products. If we fail to comply with our reporting obligations, the FDA or other foreign regulatory agencies could take action including criminal prosecution, the imposition of civil monetary penalties, seizure of our products, or delay in approval or clearance of future products.

The clinical and commercial utility of our aNK platform is uncertain and may never be realized.

Our aNK platform is in the early stages of development. aNK cells have only been evaluated in four Phase I clinical safety trials to date, in over 40 patients. These clinical trials were designed to evaluate safety and

tolerability, and not designed to produce statistically significant results as to efficacy. Most of the data to date regarding aNK cells were derived from clinical trials not conducted by us, including physician-sponsored clinical trials, and utilizing product not manufacturer by us but which we believe is comparable to aNK. Success in early clinical trials does not ensure that large-scale clinical trials will be successful nor does it predict final results. In addition, we will not be able to treat patients if we cannot manufacture a sufficient quantity of aNK cells that meet our minimum specifications. In addition, our haNK and taNK product candidates have never been tested in humans, and the results from the aNK clinical trials may not necessarily be indicative of the safety and tolerability or efficacy of haNK and taNK.

We may not ultimately be able to provide the FDA with substantial clinical evidence to support a claim of safety, purity and potency sufficient to enable the FDA to approve aNK cells for any indication. This may be because later clinical trials fail to reproduce favorable data obtained in earlier clinical trials, because the FDA disagrees with how we interpret the data from these clinical trials, or because the FDA does not accept these therapeutic effects as valid endpoints in pivotal clinical trials necessary for market approval. We will also need to demonstrate that aNK cells are safe. We do not have data on possible harmful long-term effects of aNK cells and do not expect to have this data in the near future. As a result, our ability to generate clinical safety and effectiveness data sufficient to support submission of a marketing application or commercialization of our aNK cell therapy is uncertain and is subject to significant risk.

We have limited experience as a company conducting clinical trials and rely on third parties to conduct many of our preclinical studies and clinical trials. Any failure by a third party or by us to conduct the clinical trials according to Good Clinical Practices, or GCPs, and in a timely manner may delay or prevent our ability to seek or obtain regulatory approval for or commercialize our product candidates.

To date, only one clinical trial related to our product candidates has been conducted by us. All other preclinical studies and clinical trials to date have been investigator-initiated studies sponsored by the investigator's institution. This lack of experience may contribute to our planned clinical trials not beginning or completing on time, if at all. Large-scale clinical trials will require significant additional resources and reliance on contract research organizations, or CROs, clinical investigators, or consultants. Consequently, our reliance on outside parties may introduce delays beyond our control. Our CROs and other third parties must communicate and coordinate with one another in order for our trials to be successful. Additionally, our CROs and other third parties may also have relationships with other commercial entities, some of which may compete with us. If our CROs or other third parties conducting our clinical trials do not perform their contractual duties or regulatory obligations, experience work stoppages, do not meet expected deadlines, terminate their agreements with us or need to be replaced, or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical trial protocols, GCPs, or other regulatory requirements or for any other reason, we may need to conduct additional clinical trials or enter into new arrangements with alternative CROs, clinical investigators or other third parties. We may be unable to enter into arrangements with alternative CROs on commercially reasonable terms, or at all.

We and the third parties upon which we rely are required to comply with GCPs. GCPs are regulations and guidelines enforced by regulatory authorities around the world, through periodic inspections, for products in clinical development. If we or these third parties fail to comply with applicable GCP regulations, the clinical data generated in our clinical trials may be deemed unreliable and have to be repeated, and our submission of marketing applications may be delayed or the regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We are subject to the risk that, upon inspection, a regulatory authority will determine that any of our clinical trials fail to comply or failed to comply with applicable GCP regulations. In addition, our clinical trials must be conducted with material produced under current cGMP and Good Tissue Practice, or GTP, regulations, which are enforced by regulatory authorities. In addition, our clinical trials must be conducted with material produced under cGMP regulations, which are enforced by regulatory authorities. Our failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process. Moreover, our business may be significantly impacted if our CROs,

clinical investigators or other third parties violate federal or state healthcare fraud and abuse or false claims laws and regulations or healthcare privacy and security laws.

We also anticipate that part of our strategy for pursuing the wide range of indications potentially addressed by our aNK platform will involve further investigator-initiated clinical trials. While these trials generally provide us with valuable clinical data that can inform our future development strategy in a cost-efficient manner, we generally have less control over not only the conduct but also the design of these clinical trials. Third-party investigators may design clinical trials involving our product candidates with clinical endpoints that are more difficult to achieve or in other ways that increase the risk of negative clinical trial results compared to clinical trials we may design on our own. Negative results in investigator-initiated clinical trials, regardless of how the clinical trial was designed or conducted, could have a material adverse effect on our prospects and the perception of our product candidates.

Our successful development of our taNK product candidates is heavily dependent upon our collaboration with Sorrento.

In December 2014, we entered into a joint development and license agreement with Sorrento, pursuant to which the parties agreed to exclusively collaborate on research, development and commercialization of our taNK product candidates as agreed between the parties. The prospects for the product candidates depend on the expertise, development and commercial skills, and financial strength of Sorrento. Our collaboration with Sorrento may not be successful, and we may not realize the expected benefits from this collaboration, due to a number of important factors, including the following:

- Sorrento's technology platform or Sorrento itself could be slow, adversely affecting our ability to develop product candidates as quickly as we would otherwise be able to;
- whether we can successfully resolve disagreements related to which party should advance a particular program;
- in the event Sorrento advances a particular program, Sorrento will have sole control over development, spending, commercialization, and out-licensing;
- the continued service of certain key employees of Sorrento that we are dependent upon;
- the timing and amount of any payments we may receive under these agreements will depend on, among other things, the efforts, allocation of resources, and successful commercialization of the relevant product candidates by Sorrento and us; and
- Sorrento may change the focus of their development or commercialization efforts or pursue or emphasize higher-priority programs, including as a result of a change in control of Sorrento.

A failure of Sorrento to successfully develop our product candidates that are covered by the collaboration, or commercialize such product candidates, or the termination of our agreement with Sorrento may have a material adverse effect on our business, results of operations and financial condition.

We are heavily dependent on our senior management, particularly Drs. Patrick Soon-Shiong, Barry Simon, Hans G. Klingemann and Tien Lee, and a loss of a member of our senior management team in the future, could harm our business.

If we lose members of our senior management, we may not be able to find appropriate replacements on a timely basis, and our business could be adversely affected. Our existing operations and continued future development depend to a significant extent upon the performance and active participation of certain key individuals, including Drs. Patrick Soon-Shiong, our Chairman and Chief Executive Officer and our principal stockholder, Barry Simon, our President and Chief Operating Officer, and Hans G. Klingemann, our co-founder and Vice President, Research and Development, and Tien Lee, our Vice President, Operations and Corporate

Development. Although Dr. Soon-Shiong spends a significant amount of his time on Conkwest matters and is highly active in our management, he does devote a certain amount of his time to a number of different endeavors and companies, including NantWorks, a collection of multiple companies in the healthcare and technology space, which he founded in 2011. Additionally, we are dependent on commercial relationships with various other parties affiliated with Nantworks and with Dr. Soon-Shiong, as described below under "Related Party Transactions" and if Dr. Soon-Shiong was to cease his affiliation with us or with Nantworks, these entities may be unwilling to continue these relationships with us on commercially reasonable terms, or at all. The risks related to our dependence upon Dr. Soon Shiong is particularly acute given his ownership percentage, relationships, role in our company and reputation. If we were to lose Drs. Soon-Shiong, Simon, Klingemann or Lee, we may not be able to find appropriate replacements on a timely basis and our financial condition and results of operations could be materially adversely affected.

To induce valuable employees to remain at our company, in addition to salary and cash incentives, we have provided stock options and warrants that vest over time. The value to employees of stock options and warrants that vest over time may be significantly affected by movements in our stock price that are beyond our control, and may at any time be insufficient to counteract more lucrative offers from other companies. Despite our efforts to retain valuable employees, members of our management, scientific and development teams may terminate their employment with us on short notice. We face significant competition for employees, particularly scientific personnel, from other biopharmaceutical companies, which include both publicly-traded and privately-held companies, and we may not be able to hire new employees quickly enough to meet our needs. Although we have employment agreements with our key employees, these employment agreements provide for at-will employment, which means that any of our employees could leave our employment at any time, with or without notice. We do not maintain "key man" insurance policies on the lives of these individuals or the lives of any of our other employees.

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

To effect our business plan, we will need to rapidly add other management, accounting, regulatory, manufacturing and scientific staff. As of March 31, 2015, we only had 11 employees. We will need to attract, retain and motivate a significant number of new additional managerial, operational, sales, marketing, financial, and other personnel, as well as highly skilled scientific and medical personnel, and to expand our capabilities to successfully pursue our research, development, manufacturing and commercialization efforts and secure collaborations to market and distribute our products. This growth may strain our existing managerial, operational, financial and other resources. We also intend to add personnel in our research and development and manufacturing departments as we expand our clinical trial and research capabilities. Moreover, we will need to hire additional accounting and other personnel and augment our infrastructure as we transition to operating as a public company. Any inability to attract and retain qualified employees to enable our planned growth and establish additional capabilities or our failure to manage our growth effectively could delay or curtail our product development and commercialization efforts and harm our business.

We have limited manufacturing experience and may not be able to manufacture aNK cells on a large scale or in a cost-effective manner.

aNK cells have been grown in various quantities in closed-bag cell culture systems and smaller quantities in bioreactors. We or our third-party contractors will need to develop the ability to grow aNK cells on a large scale basis in a cost efficient manner. We have not demonstrated the ability to manufacture aNK cells beyond quantities sufficient for research and development and limited clinical activities. We have no experience manufacturing aNK cells specifically at the capacity that will be necessary to support large clinical trials or commercial sales, and have limited experience producing haNK and taNK cells, which may involve a more complex process(es) than manufacturing aNK cells. The novel nature of our technology also increases the complexity and risk in the manufacturing process. We are in the process of locating a site for the manufacture of aNK cells for our planned clinical trials and, if we receive FDA approval, initial commercialization. However,

we may encounter difficulties in obtaining the approvals for, and designing, constructing, validating and operating, any new manufacturing facility. We may also be unable to hire the qualified personnel that we will require to accommodate the expansion of our operations and manufacturing capabilities. If we relocate our manufacturing activities to a new facility during or after a pivotal clinical trial, we may be unable to obtain regulatory approval unless and until we demonstrate to the FDA's satisfaction the similarity of our aNK cells manufactured in the new facility to our aNK cells manufactured in the prior facility. If we cannot adequately demonstrate similarity to the FDA, we could be required to repeat clinical trials, which would be expensive, and would substantially delay regulatory approval.

Because our product candidates are cell-based, their manufacture is extremely complicated. In addition, we rely on certain third party suppliers for manufacturing supplies such as X-VIVO 10 media formulation to grow and produce the cells. Our present production process may not meet our initial expectations as to reproducibility, yield, purity or other measurements of performance. In addition, we may have to customize a bioreactor system to our manufacturing process. Because our manufacturing process is unproven, we may never successfully commercialize our products. In addition, because the clinical trials were conducted using a system that will not be sufficient for commercial quantities, we may have to show comparability of the different versions of systems we have used. For these and other reasons, we may not be able to manufacture aNK cells on a large scale or in a cost-effective manner.

aNK cells have been produced at academic institutions associated with our other clinical trial sites. In the past, the lack of production of aNK cells have caused delays in the commencement of our clinical trials. The Baylor Center for Cellular and Gene Therapy is currently producing aNK cells for our clinical trial at the University of Pittsburgh Cancer Institute, or UPCI, and for our Merkel Cell clinical trial. We are adding NK cell production capacity in 2015 to meet anticipated demand for additional clinical trials but may not be able to successfully build out the facility to meet our current and anticipated future needs. Any damage to or destruction of the Baylor Center facility or equipment, or our facility and equipment, when we secure it, prolonged power outage, contamination or shutdown by the FDA or other regulatory authority could significantly impair or curtail our ability to obtain and produce aNK cells. In addition, the aNK cells of our master cell bank are stored in freezers at a third party biorepository (BioReliance), and aNK cells of our working cell bank are stored in freezers at the Baylor facility, and will also be stored in our freezers when we establish a production facility. If these cells are damaged at both facilities, including by the loss or malfunction of these freezers or our back-up power systems, we would need to establish a replacement aNK master cell bank, which would delay our patients' treatments. If we are unable to establish a replacement aNK master cell bank, we could incur significant additional expenses and liability to patients whose treatment is delayed, and our business could suffer.

If we or any of our third party manufacturers do not maintain high standards of manufacturing, our ability to develop and commercialize aNK cells could be delayed or curtailed.

We and any third parties that we may use in the future to manufacture our products must continuously adhere to cGMP regulations rigorously enforced by the FDA through its facilities inspection program. If our facilities or the facilities of third parties who produce our products do not pass a pre-approval inspection, the FDA will not grant market approval for aNK cells. In complying with cGMP, we and any third-party manufacturers must expend significant time, money and effort in production, record-keeping and quality control to assure that each component of our aNK cell therapy meets applicable specifications and other requirements. We or any of these third-party manufacturers may also be subject to comparable or more stringent regulations of foreign regulatory authorities. If we or any of our third-party manufacturers fail to comply with these requirements, we may be subject to regulatory action, which could delay or curtail our ability to develop, obtain regulatory approval of, and commercialize aNK cells. If our component part manufacturers and suppliers fail to provide components of sufficient quality, and that meet our required specifications, our clinical trials or commercialization of aNK cells could be delayed or halted, and we could face product liability claims.

If we or our third-party manufacturers use hazardous and biological materials in a manner that causes injury or violates applicable law, we may be liable for damages.

Our research and development activities involve the controlled use of potentially hazardous substances, including chemical and biological materials, by us and any third-party manufacturers. We and our manufacturers are subject to federal, state and local laws and regulations in the United States governing the use, manufacture, storage, handling and disposal of medical and hazardous materials. Although we believe that our procedures for using, storing and disposing of these materials comply with legally prescribed standards, we cannot completely eliminate the risk of contamination or injury resulting from medical or hazardous materials. As a result of any such contamination or injury, we may incur liability or local, city, state or federal authorities may curtail the use of these materials and interrupt our business operations. In the event of an accident, we could be held liable for damages or penalized with fines, and the liability could exceed our resources. We do not have any insurance for liabilities arising from medical or hazardous materials. Compliance with applicable environmental laws and regulations is expensive, and current or future environmental regulations may impair our research, development and production efforts, which could harm our business, prospects, financial condition or results of operations.

We have not yet developed a validated methodology for freezing and thawing large quantities of aNK cells, which will be required for the storage and distribution of our product candidates.

We have not demonstrated that aNK cells can be frozen and thawed in large quantities without damage, in a cost-efficient manner and without degradation over time. We may encounter difficulties not only in developing freezing and thawing methodologies, but also in obtaining the necessary regulatory approvals for using such methodologies in treatment. If we cannot adequately demonstrate similarity of our frozen product to the unfrozen product to the satisfaction of the FDA, we could be required to repeat clinical trials, which would be expensive and substantially delay regulatory approval. If we are unable to freeze aNK cells for shipping purposes, our ability to promote adoption and standardization of our products, as well as achieve economies of scale by centralizing our production facility, will be limited. Even if we are able to successfully freeze and thaw aNK cells in large quantities, we will still need to develop a cost-effective and reliable distribution and logistics network, which we may be unable to accomplish. For these and other reasons, we may not be able to commercialize aNK cells on a large scale or in a cost-effective manner.

We will rely on third party healthcare professionals to administer aNK cells to patients, and our business could be harmed if these third parties administer aNK cells incorrectly.

We will rely on the expertise of physicians, nurses and other associated medical personnel to administer aNK cells to clinical trial patients. If these medical personnel are not properly trained to administer, or do not properly administer, aNK cells, the therapeutic effect of aNK cells may be diminished or the patient may suffer injury.

In addition, if we achieve the ability to freeze and thaw our aNK cells, third-party medical personnel will have to be trained on proper methodology for thawing aNK cells received from us. If this thawing is not performed correctly, the cells may become damaged and/or the patient may suffer injury. While we envision providing training materials and other resources to these third-party medical personnel, the thawing of aNK cells will occur outside our supervision and may not be administered properly. If, due to a third-party error, people believe that aNK cells are ineffective or harmful, the desire to use aNK cells may decline, which would negatively impact our business, reputation and prospects. We may also face significant liability even though we may not be responsible for the actions of these third parties.

Even if any of our product candidates receive regulatory approvals, they may fail to achieve the broad degree of market acceptance and use necessary for commercial success.

Any potential future commercial success of any of our product candidates will depend, among other things, on its acceptance by physicians, patients, healthcare payers, and other members of the medical community as a therapeutic and cost-effective alternative to commercially available products. Because only a few cell-based

therapy products have been commercialized, we do not know to what extent cell-based immunotherapy products will be accepted as therapeutic alternatives. If we fail to gain market acceptance, we may not be able to earn sufficient revenues to continue our business. Market acceptance of, and demand for, any product that we may develop will depend on many factors, including:

- our ability to provide substantial evidence of safety and efficacy;
- convenience and ease of administration;
- prevalence and severity of adverse side effects;
- availability of alternative and competing treatments;
- cost effectiveness;
- effectiveness of our marketing and distribution strategy and pricing of any product that we may develop;
- publicity concerning our products or competitive products; and
- our ability to obtain sufficient third-party coverage and adequate reimbursement.

If aNK cells are approved for use but fail to achieve the broad degree of market acceptance necessary for commercial success, our operating results and financial condition will be adversely affected. In addition, even if aNK cells gain acceptance, the markets for treatment of patients with our target indications may not be as significant as we estimate.

There are risks inherent in our business that may subject us to potential product liability suits and other claims, which may require us to engage in expensive and time-consuming litigation or pay substantial damages and may harm our reputation and reduce the demand for our product.

Our business exposes us to product liability risks, which are inherent in the testing, manufacturing, marketing and sale of biopharmaceutical products. We will face an even greater risk of product liability if we commercialize aNK cells. For example, we may be sued if any product we develop allegedly causes or is perceived to cause injury or is found to be otherwise unsuitable during product testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability and a breach of warranties. Claims could also be asserted under state consumer protection acts. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of our products. Even a successful defense would require significant financial and management resources.

Certain aspects of how aNK cells are processed and administered may increase our exposure to liability. Medical personnel administer aNK cells to patients intravenously in an outpatient procedure. This procedure poses risks to the patient similar to those occurring with infusions of other cell products, such as T cells and stem cells, including blood clots, infection and mild to severe allergic reactions. Additionally, aNK cells or components of our aNK cell therapy may cause unforeseen harmful side effects. For example, a patient receiving aNK cells could have a severe allergic reaction or could develop an autoimmune condition to materials infused with the aNK cells.

In addition, we have not conducted studies on the long-term effects associated with the media that we use to grow our aNK cells. Similarly, we expect to use media in freezing our aNK cells for shipment. These media could contain substances that have proved harmful if used in certain quantities. As we continue to develop our aNK cell therapy, we may encounter harmful side effects that we did not previously observe in our prior studies and clinical trials. Additionally, the discovery of unforeseen side effects of aNK cells could also lead to lawsuits against us.

Regardless of merit or eventual outcome, product liability or other claims may, among other things, result in:

- decreased demand for any approved products;
- injury to our reputation and significant negative media attention;

- withdrawal of clinical trial participants or cancellation of clinical trials;
- costs to defend the related litigation;
- a diversion of management's time and our resources;
- substantial monetary awards to clinical trial participants or patients;
- regulatory investigations, product recalls, withdrawals or labeling, marketing or promotional restrictions;
- exhaustion of any available insurance and our capital resources;
- loss of revenue; and
- the inability to commercialize any products we develop.

Our inability to obtain and maintain sufficient product liability insurance at an acceptable cost and scope of coverage to protect against potential product liability claims could prevent or inhibit the commercialization of our products. We are in the process of obtaining product liability insurance covering our clinical trials with policy limits that we believe are customary for similarly situated companies and adequate to provide us with coverage for foreseeable risks. Although we maintain such insurance, any claim that may be brought against us could result in a court judgment or settlement in an amount that is not covered, in whole or in part, by our insurance or that is in excess of the limits of our insurance coverage. If we determine that it is prudent to increase our product liability coverage due to the commercial launch of any approved product, we may be unable to obtain such increased coverage on acceptable terms, or at all. Our insurance policies also have various exclusions and deductibles, and we may be subject to a product liability claim for which we have no coverage. We will have to pay any amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient capital to pay such amounts. Moreover, in the future, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses. If and when we obtain approval for marketing our product candidates, we intend to expand our insurance coverage to include the sale of the applicable products; however, we may be unable to obtain this liability insurance on commercially reasonable terms. If a successful product liability or other claim or series of claims is brought against us for uninsured liabilities or in excess of insured liabilities, our assets may not be sufficient to cover these claims and our business operations could suffer.

We currently have no marketing and sales organization and have no experience in marketing products. If we are unable to establish marketing and sales capabilities or enter into agreements with third parties to market and sell our product candidates, we may not be able to generate product revenue.

We currently have no sales, marketing or distribution capabilities and have no experience as a company in marketing products. If we develop internal sales, marketing and distribution organization, this would require significant capital expenditures, management resources and time, and we would have to compete with other pharmaceutical and biotechnology companies to recruit, hire, train and retain marketing and sales personnel.

If we are unable or decide not to establish internal sales, marketing and distribution capabilities, we expect to pursue collaborative arrangements regarding the sales, marketing and distribution of our products. However, we may not be able to establish or maintain such collaborative arrangements, or if we are able to do so, their sales forces may not be successful in marketing our products. Any revenue we receive would depend upon the efforts of such third parties, which may not be successful. We may have little or no control over the sales, marketing and distribution efforts of such third parties and our revenue from product sales may be lower than if we had commercialized our product candidates ourselves. We also face competition in our search for third parties to assist us with the sales, marketing and distribution efforts of our product candidates. There can be no assurance that we will be able to develop internal sales, marketing distribution capabilities or establish or maintain relationships with third-party collaborators to commercialize any product in the United States or overseas.

A variety of risks associated with marketing our product candidates internationally could materially adversely affect our business.

We plan to seek regulatory approval of our product candidates outside of the United States and, accordingly, we expect that we will be subject to additional risks related to operating in foreign countries if we obtain the necessary approvals, including:

- differing regulatory requirements in foreign countries;
- unexpected changes in tariffs, trade barriers, price and exchange controls and other regulatory requirements;
- economic weakness, including inflation, or political instability in particular foreign economies and markets;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- foreign taxes, including withholding of payroll taxes;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country;
- difficulties staffing and managing foreign operations;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- differing payor reimbursement regimes, governmental payors or patient self-pay systems, and price controls;
- potential liability under the Foreign Corrupt Practices Act of 1977 or comparable foreign regulations;
- challenges enforcing our contractual and intellectual property rights, especially in those foreign countries that do not respect and protect
- intellectual property rights to the same extent as the United States;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad; and
- business interruptions resulting from geo-political actions, including war and terrorism.

These and other risks associated with international operations may materially adversely affect our ability to attain or maintain profitable operations.

We have formed, and may in the future form or seek, strategic alliances or enter into additional licensing arrangements in the future, and we may not realize the benefits of such alliances or licensing arrangements.

We have formed, and may in the future form or seek, strategic alliances, create joint ventures or collaborations or enter into additional licensing arrangements with third parties that we believe will complement or augment our development and commercialization efforts with respect to our product candidates and any future product candidates that we may develop.

Any of these relationships may require us to incur non-recurring and other charges, increase our near and long-term expenditures, issue securities that dilute our existing stockholders or disrupt our management and business. In addition, we face significant competition in seeking appropriate strategic partners and the negotiation process is time-consuming and complex. Moreover, we may not be successful in our efforts to establish a strategic partnership or other alternative arrangements for our product candidates because they may be deemed to be at too early of a stage of development for collaborative effort and third parties may not view our product

candidates as having the requisite potential to demonstrate safety and efficacy. If we license products or businesses, we may not be able to realize the benefit of such transactions if we are unable to successfully integrate them with our existing operations and company culture. We cannot be certain that, following a strategic transaction or license, we will achieve the revenue or specific net income that justifies such transaction. Any delays in entering into new strategic partnership agreements related to our product candidates could delay the development and commercialization of our product candidates in certain geographies for certain indications, which would harm our business prospects, financial condition and results of operations.

Our internal computer systems, or those used by our contractors or consultants, may fail or suffer security breaches.

Our business model involves the storage and transmission of clinical trial and other data on our systems and on the systems of our consultants and contractors, and security breaches expose us to a risk of loss of this information, governmental fines and penalties, litigation and/or potential liability, in addition to negative publicity. Despite the implementation of security measures, our internal computer systems and those of our contractors and consultants are vulnerable to damage from computer viruses and unauthorized access. Our security measures and those of our contractors and consultants may also be breached due to employee error, malfeasance or otherwise. If such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our development programs and our business operations. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Likewise, we rely on third parties for research and development of our product candidates and to conduct clinical trials and may rely on third parties for the manufacture of our product candidates and similar events relating to their computer systems could also have a material adverse effect on our business.

To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the further development and commercialization of our product candidates could be delayed.

Future acquisitions and investments could disrupt our business and harm our financial condition and operating results.

Our success may depend, in part, on our ability to expand our products and services. In some circumstances, we may determine to do so through the acquisition of complementary businesses and technologies rather than through internal development. The identification of suitable acquisition candidates can be difficult, time-consuming and costly, and we may not be able to successfully complete identified acquisitions. The risks we face in connection with acquisitions include:

- diversion of management time and focus from operating our business to addressing acquisition integration challenges;
- retention of key employees from the acquired company;
- coordination of research and development functions;
- integration of the acquired company’s accounting, management information, human resources and other administrative systems; and
- liability for activities of the acquired company before the acquisition, including intellectual property infringement claims, employee disputes, and alleged violations of laws; and
- unanticipated write-offs or charges.

Our failure to address these risks or other problems encountered in connection with our past or future acquisitions and investments could cause us to fail to realize the anticipated benefits of these acquisitions or

investments, cause us to incur unanticipated liabilities, and harm our business generally. Future acquisitions could also result in dilutive issuances of our equity securities, the incurrence of debt, contingent liabilities, amortization expenses, incremental operating expenses or the write-off of goodwill, any of which could harm our financial condition or operating results.

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

Our operations, and those of our contractors and consultants, could be subject to earthquakes, power shortages, telecommunications failures, water shortages, floods, hurricanes, typhoons, fires, extreme weather conditions, medical epidemics, acts of terrorism, acts of war and other natural or man-made disasters or business interruptions, for which we are predominantly self-insured. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses. We rely on third-party manufacturers to produce and process our product candidates. Our ability to obtain clinical supplies of our product candidates could be disrupted if the operations of these suppliers are affected by a man-made or natural disaster or other business interruption. Our corporate headquarters are in California near major earthquake faults and fire zones. Our operations and financial condition could suffer in the event of a major earthquake, fire or other natural disaster.

Our employees, independent contractors, clinical investigators, CROs, consultants, commercial partners and vendors 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 illegal activity by our employees, independent contractors, clinical investigators, CROs, consultants, commercial partners and vendors. Misconduct by these parties could include intentional, reckless and/or negligent conduct that fails to:

- comply with the laws of the FDA and other similar foreign regulatory bodies;
- provide true, complete and accurate information to the FDA and other similar foreign regulatory bodies;
- comply with manufacturing standards we have established;
- comply with healthcare fraud and abuse, privacy and security and other laws in the United States and similar foreign fraudulent misconduct laws;
- comply with federal securities laws regulating insider trading; or
- report financial information or data accurately or to disclose unauthorized activities to us.

If we obtain FDA approval of any of our product candidates and begin commercializing those products in the United States, our potential exposure under such laws will increase significantly, and our costs associated with compliance with such laws are also likely to increase. These laws may impact, among other things, our current activities with principal investigators and research patients, as well as proposed and future sales, marketing and education programs. In particular, the promotion, sales and marketing of healthcare items and services, as well as certain business arrangements in the healthcare industry, are subject to extensive laws designed to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, structuring and commission(s), certain customer incentive programs and other business arrangements generally. Activities subject to these laws also include the collection and/or use of information obtained in the course of patient recruitment for clinical trials. The healthcare laws that may affect our ability to operate include, but are not limited to:

- the federal Anti-Kickback Statute, which prohibits, among other things, knowingly and willfully soliciting, receiving, offering or providing any remuneration (including any kickback, bribe, or rebate),

directly or indirectly, overtly or covertly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual, or the purchase, lease, order or recommendation of any good, facility, item or service for which payment may be made, in whole or in part, under a federal healthcare program, such as the Medicare and Medicaid programs;

- federal civil and criminal false claims laws and civil monetary penalty laws, including the civil False Claims Act, which impose criminal and civil penalties against individuals or entities for, among other things, knowingly presenting, or causing to be presented, claims for payment or approval from the federal government including Medicare and Medicaid, that are false or fraudulent or knowingly making a false statement to improperly avoid, decrease or conceal an obligation to pay money to the federal government;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created additional federal criminal statutes that prohibit, among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations, or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payor (e.g., public or private), and knowingly and willfully falsifying, concealing or covering up by any trick or device a material fact or making any materially false statements in connection with the delivery of, or payment for, healthcare benefits, items or services relating to healthcare matters;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their respective implementing regulations, which impose requirements, including mandatory contractual terms, on certain covered healthcare providers, health plans, and healthcare clearinghouses as well as their respective business associates that perform services for them that involve the use, or disclosure of, individually identifiable health information, relating to the privacy, security and transmission of individually identifiable health information;
- the federal Physician Payments Sunshine Act, created under the Patient Protection and Affordable Care Act, as amended by the Health Care Education Reconciliation Act, which we refer to collectively as ACA, and its implementing regulations, which require certain manufacturers of drugs, devices, biologicals and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to the United States Department of Health and Human Services, or HHS, information related to payments or other transfers of value made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members by the 90th day of each subsequent calendar year, and disclosure of such information will be made by HHS on a publicly available website; and
- federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers.

Additionally, we are subject to state and foreign laws and regulations that are analogous to the healthcare laws and regulations described above, among others, some of which may be broader in scope and may apply regardless of the payor. Some state laws require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and relevant compliance guidance promulgated by the federal government; some state laws require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures; and some state and foreign laws govern the privacy and security of health information in ways that differ, and in certain cases are more stringent than, HIPAA, thus complicating compliance efforts.

We have adopted a code of business conduct and ethics, but it is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent inappropriate conduct may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or

regulations. Efforts to ensure that our business arrangements will comply with applicable healthcare laws may involve substantial costs. It is possible that governmental and enforcement authorities will conclude that our business practices do not comply with current or future statutes, regulations or case law interpreting applicable fraud and abuse or other healthcare laws and regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of civil, criminal and/or administrative penalties, damages, disgorgement, monetary fines, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, and curtailment of our operations, any of which could adversely affect our ability to operate our business and our results of operations. Defending against any such actions can be costly, time-consuming, and may require significant financial and personnel resources. Therefore, even if we are successful in defending against any such actions that may be brought against us, our business may be impaired.

We face significant competition in the biopharmaceutical industry, and many of our competitors have substantially greater experience and resources than we have.

Even if our aNK cell therapy proves successful, we might not be able to remain competitive because of the rapid pace of technological development in the biopharmaceutical field. We are currently aware of several companies developing cell-based immunotherapy products, such as cancer vaccines, as a method of treating cancer. Our aNK, taNK and haNK product candidates will compete with product candidates from companies that are currently focused on T-cell based treatments for cancer, such as CAR-T and TCR therapies, as well as dendritic cell-based therapies. Companies focused on the development of T-cell based treatments for cancer include Adaptimmune Limited, Bellicum Pharmaceuticals, Inc., bluebird bio, Inc., Celgene Corporation, Cellectis SA, GlaxoSmithKline plc, Intrexon Corporation, Juno Therapeutics, Inc., Kite Pharma, Inc., Novartis AG, Pfizer Inc. and Ziopharm Oncology, Inc. There is currently one approved dendritic cell-based cancer vaccine, PROVENGE which is marketed by Valeant Pharmaceuticals for the treatment of metastatic castrate-resistant prostate cancer. In addition, companies focused on developing dendritic cell-based product candidates include Aduro BioTech Inc, Advaxis, Inc., Argos Therapeutics, Inc., Biovest International, Inc., ImmunoCellular Therapeutics, Ltd., Immune Design, Inc., Inovio Pharmaceuticals, Inc., Intrexon Corporation and Northwest Biotherapeutics, Inc.

Many of our competitors have greater financial and other resources, larger research and development staffs, and more experienced capabilities in researching, developing and testing products than we do. All of these companies also have more experience in conducting clinical trials, obtaining FDA and other regulatory approvals, and manufacturing, marketing and distributing therapeutic products. Small companies like us may successfully compete by establishing collaborative relationships with larger pharmaceutical companies or academic institutions. In addition, large pharmaceutical companies or other companies with greater resources or experience than us may choose to forgo therapy opportunities that would have otherwise been complementary to our product development and collaboration plans. Our competitors may succeed in developing, obtaining patent protection for, or commercializing their products more rapidly than us. A competing company developing or acquiring rights to a more effective therapeutic product for the same diseases targeted by us, or one that offers significantly lower costs of treatment, could render our products noncompetitive or obsolete.

Competing generic medicinal products or biosimilars may be approved.

In the E.U., there exists a process for approval of generic biological medicinal products once patent protection and other forms of data and market exclusivity have expired. Arrangements for approval of generic biologics products exist in the United States, as well. Other jurisdictions are considering adopting legislation that would allow the approval of generic biological medicinal products. If generic medicinal products are approved, competition from such products may substantially reduce sales of our products.

Public opinion and scrutiny of cell-based immunotherapy approaches may impact public perception of our company and product candidates, or may adversely affect our ability to conduct our business and our business plans.

Our platform utilizes a relatively novel technology involving the genetic modification of human cells and utilization of those modified cells in other individuals, and no NK cell-based immunotherapy has been approved to date. Public perception may be influenced by claims, such as claims that cell-based immunotherapy is unsafe or unethical, and our approach may not gain the acceptance of the public or the medical community. In particular, our success will depend upon physicians specializing in the treatment of those diseases that our product candidates target prescribing treatments that involve the use of our product candidates in lieu of, or in addition to, existing treatments they are already familiar with and for which greater clinical data may be available. More restrictive government regulations or negative public opinion could have an adverse effect on our business or financial condition and may delay or impair the development and commercialization of our product candidates or demand for any products we may develop. Adverse events in our clinical trials, even if not ultimately attributable to our product candidates, and the resulting publicity could result in increased governmental regulation, unfavorable public perception, potential regulatory delays in the testing or approval of our potential product candidates, stricter labeling requirements for those product candidates that are approved and a decrease in demand for any such product candidates.

Risks Relating to Government Regulation

We may fail to obtain or may experience delays in obtaining regulatory approval to market aNK cells or platform products, which will significantly harm our business.

We do not have the necessary approval to market or sell aNK cells or platform products in the United States or any foreign market. Before marketing aNK cell products, we must successfully complete extensive preclinical studies and clinical trials and rigorous regulatory approval procedures. We cannot assure you that we will apply for or obtain the necessary regulatory approval to commercialize aNK cell products in a timely manner, or at all.

Conducting clinical trials is uncertain and expensive and often takes many years to complete. The results from preclinical testing and early clinical trials are often not predictive of results obtained in later clinical trials. In conducting clinical trials, we may fail to establish the effectiveness of aNK cells for the targeted indication or we may discover unforeseen side effects. Moreover, clinical trials may require the enrollment of large numbers of patients, and suitable patients may be difficult to identify and recruit. Clinical trials are also often subject to unanticipated delays. In addition, aNK cells are produced in small scale cell culture systems and we may be unable to adapt the production method to large scale production systems. Also, patients participating in the trials may die before completion of the clinical trial or suffer adverse medical effects unrelated to treatment with aNK cells. This could delay or lead to termination of our clinical trials. A number of companies in the biotechnology industry have suffered significant setbacks in every stage of clinical trials, even in advanced clinical trials after positive results in earlier clinical trials.

To date, the FDA has approved only a few cell-based therapies for commercialization. The processes and requirements imposed by the FDA may cause delays and additional costs in obtaining regulatory approvals for our products. Because our aNK cell therapy is novel, and cell-based therapies are relatively new, regulatory agencies may lack experience in evaluating product candidates like aNK cells. This inexperience may lengthen the regulatory review process, increase our development costs and delay or prevent commercialization of aNK cells. In addition, the following factors may impede or delay our ability to obtain timely regulatory approvals, if at all:

- our limited experience in filing and pursuing Biologics License Applications, or BLAs, necessary to gain regulatory approvals related to genetically modified cancer cell line therapies;
- any failure to develop substantial evidence of clinical efficacy and safety, and to develop quality standards;
- a decision by us or regulators to suspend or terminate our clinical trials if the participating patients are being exposed to unacceptable health risks;

- regulatory inspections of our clinical trials or manufacturing facilities, which may, among other things, require us to undertake corrective action or suspend or terminate our clinical trials if investigators find us not to be in compliance with applicable regulatory requirements;
- our ability to produce sufficient quantities of aNK cells to complete our clinical trials;
- varying interpretations of the data generated from our clinical trials; and
- changes in governmental regulations or administrative action.

Any delays in, or termination of, our clinical trials could materially and adversely affect our development and collaboration timelines, which may cause our stock price to decline. If we do not complete clinical trials for aNK cells and obtain regulatory approvals, we may not be able to recover any of the substantial costs we have invested in the development of aNK cells.

Even if we obtain regulatory approvals for aNK cells, those approvals and ongoing regulation of our products may limit how we manufacture and market our products, which could prevent us from realizing the full benefit of our efforts.

If we obtain regulatory approvals, aNK cells, our aNK product lines, and our manufacturing facilities will be subject to continual regulatory review, including periodic unannounced inspections, by the FDA and other United States and foreign regulatory authorities. In addition, regulatory authorities may impose significant restrictions on the indicated uses or impose ongoing requirements for potentially costly post-approval studies. aNK cells and other product candidates, would also be subject to ongoing FDA requirements governing the labeling, packaging, storage, advertising, promotion, recordkeeping and submission of safety and other post-market information. These and other factors may significantly restrict our ability to successfully commercialize aNK cells and our aNK cell therapy.

Manufacturers of biopharmaceutical products and their facilities, vendors and suppliers are subject to continual review and periodic unannounced inspections by the FDA and other regulatory authorities for compliance with current Good Manufacturing Practices, or cGMP, regulations, which include requirements relating to quality control and quality assurance as well as to the corresponding maintenance of records and documentation. Furthermore, our manufacturing facilities must be approved by regulatory agencies before these facilities can be used to manufacture aNK cells, and they will also be subject to additional regulatory inspections. Any material changes we may make to our manufacturing process or to the components used in our products may require additional prior approval by the FDA and state or foreign regulatory authorities. Failure to comply with FDA or other applicable regulatory requirements may result in criminal prosecution, civil penalties, recall or seizure of products, partial or total suspension of production or withdrawal of a product from the market.

We must also report adverse events that occur when our products are used. The discovery of previously unknown problems with aNK cells or our manufacturing facilities may result in restrictions or sanctions on our products or manufacturing facilities, including withdrawal of our products from the market or suspension of manufacturing. Regulatory agencies may also require us to reformulate our products, conduct additional clinical trials, make changes in the labeling of our product or obtain re-approvals. This may cause our reputation in the market place to suffer or subject us to lawsuits, including class action suits.

In addition, if we, our product candidates or the manufacturing facilities for our product candidates fail to comply with applicable regulatory requirements, a regulatory agency may:

- issue warning letters that can produce adverse publicity;
- impose civil or criminal penalties;
- suspend regulatory approval;
- suspend any ongoing clinical trials;

- refuse to approve pending applications or supplements to applications filed by us;
- impose restrictions on operations, including costly new manufacturing requirements;
- seize or detain products or request us to initiate a product recall; or
- pursue and obtain an injunction.

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

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

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

We may seek orphan drug status or breakthrough therapy designation for one or more of our product candidates, but even if either is granted, we may be unable to maintain any benefits associated with breakthrough therapy designation or orphan drug status, including market exclusivity.

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic intended to treat a rare disease or condition or for which there is no reasonable expectation that the cost of developing and making available in the United States a drug or biologic for a disease or condition will be recovered from sales in the United States for that drug or biologic. If a product that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications, including a full Biologics License Application, or BLA, to market the same drug or biologic for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity. In 2012, the FDA established a Breakthrough Therapy Designation which is intended to expedite the development and review of products that treat serious or life-threatening conditions.

We may seek orphan drug status for one or more of our products candidates, but exclusive marketing rights in the United States may be limited if we seek approval for an indication broader than the orphan designated indication and may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition. In addition, we may seek breakthrough therapy designation for one or more of our product candidates, but there can be no assurance that we will receive such designation.

We will need to obtain FDA approval of any proposed product brand names, and any failure or delay associated with such approval may adversely impact our business.

A biopharmaceutical product cannot be marketed in the United States or other countries until we have completed rigorous and extensive regulatory review processes, including review and approval of a brand name. Any brand names we intend to use for our product candidates will require approval from the FDA regardless of whether we have secured a formal trademark registration from the U.S. Patent and Trademark Office, or the USPTO. The FDA may object to a product brand name if they believe the name creates potential for confusion or inappropriately implies medical claims. If the FDA objects to any of our proposed product brand names, we may be required to adopt an alternative brand name for our product candidates. If we adopt an alternative brand name, we would lose the benefit of our existing trademark applications for such product candidate and may be required to expend significant additional resources in an effort to identify a suitable product brand name that would qualify under applicable trademark laws, not infringe the existing rights of third parties and be acceptable to the FDA. We may be unable to build a successful brand identity for a new trademark in a timely manner or at all, which would limit our ability to commercialize our product candidates.

Coverage and reimbursement decisions by third-party payors may have an adverse effect on pricing and market acceptance.

There is significant uncertainty related to the third-party coverage and reimbursement of newly approved drugs. Patients who are provided medical treatment for their conditions generally rely on third-party payors to reimburse all or part of the costs associated with their treatment. Therefore, market acceptance and sales of our products, if approved, in both domestic and international markets will depend significantly on the availability of adequate coverage and reimbursement from third-party and/or government payors for any of our products and may be affected by existing and future healthcare reform measures. Government authorities and third-party payors, such as private health insurers and health maintenance organizations, decide which drugs they will cover and establish approved lists, known as formularies, and establish payment levels for such drugs. Formularies may not include all FDA-approved drugs for a particular indication. Private payors often follow Medicare coverage policy and payment limitations in setting their own payment rates. Any reduction in payment under Medicare Part D may result in a similar reduction in payments from non-governmental payors. We cannot be certain that coverage and adequate reimbursement will be available for any of our products, if approved, or that such coverage and reimbursement will be authorized in a timely fashion. Also, we cannot be certain that reimbursement policies will not reduce the demand for, or the price paid for, any of our products, if approved. If reimbursement is not available or is available on a limited basis for any of our products, if approved, we may not be able to successfully commercialize any such products.

Reimbursement by a third-party or government payor may depend upon a number of factors, including, without limitation, the third-party or government payor’s determination that use of a product is:

- a covered benefit under its health plan;
- safe, effective and medically necessary;
- appropriate for the specific patient;
- cost-effective; and
- neither experimental nor investigational.

Obtaining coverage and reimbursement approval for a product from a government or other third-party payor is a time consuming and costly process that could require us to provide supporting scientific, clinical and cost-effectiveness data for the use of our products to the payor. We may not be able to provide data sufficient to gain acceptance with respect to coverage and reimbursement or to have pricing set at a satisfactory level. If reimbursement of our products, if any, is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels such as may result where alternative or generic treatments are available, we may be unable to achieve or sustain profitability.

Assuming we obtain coverage for a given product, the resulting reimbursement payment rates might not be adequate or may require co-payments that patients find unacceptably high. Patients are unlikely to use our products unless coverage is provided and reimbursement is adequate to cover a significant portion of the cost of our products.

In the United States, third-party payors include federal and state healthcare programs, government authorities, private managed care providers, private health insurers, and other organizations. No uniform policy of coverage and reimbursement for products exists among third-party payors, and third-party payors are increasingly challenging the price, examining the medical necessity, and reviewing the cost-effectiveness of medical drug products and medical services, in addition to questioning their safety and efficacy. Therefore, coverage and reimbursement for products can differ significantly from payor to payor. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our products to each payor separately, with no assurance that coverage and adequate reimbursement will be obtained. We or our collaborators may need to conduct expensive pharmaco-economic studies in order to demonstrate the medical necessity and cost-effectiveness of our products, in addition to the costs required to obtain the FDA approvals.

In some foreign countries, particularly in Europe, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a product. To obtain reimbursement or pricing approval in some countries, we may be required to conduct additional clinical trials that compare the cost-effectiveness of our products to other available therapies. If reimbursement of any of our products, if approved, is unavailable or limited in scope or amount in a particular country, or if pricing is set at unsatisfactory levels, we may be unable to achieve or sustain profitability of our products in such country.

Recent legislative and regulatory activity may exert downward pressure on potential pricing and reimbursement for our products, if approved, that could materially affect the opportunity to commercialize.

The United States and several other 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 products profitably, if approved. 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. There have been, and likely will continue to be, legislative and regulatory proposals at the federal and state levels directed at broadening the availability of healthcare and containing or lowering the cost of healthcare. We cannot predict the initiatives that may be adopted in the future. The continuing efforts of the government, insurance companies, managed care organizations and other payors of healthcare services to contain or reduce costs of healthcare may adversely affect:

- the demand for any of our products, if approved;
- our ability to set a price that we believe is fair for any of our products, if approved;
- our ability to generate revenues and achieve or maintain profitability;
- the level of taxes that we are required to pay; and
- the availability of capital.

In March 2010, ACA became law in the United States. The goal of ACA is to reduce the cost of healthcare, broaden access to health insurance, constrain healthcare spending, enhance remedies against fraud and abuse, add transparency requirements for the healthcare and health insurance industries, impose taxes and fees on the health industry, impose additional health policy reforms, and substantially change the way healthcare is financed by both governmental and private insurers. While we cannot predict what impact on federal reimbursement policies this legislation will have in general or on our business specifically, ACA may result in downward pressure on

pharmaceutical reimbursement, which could negatively affect market acceptance of any of our products, if they are approved. Provisions of ACA relevant to the pharmaceutical industry include the following:

- an annual, nondeductible fee on any entity that manufactures or imports certain branded prescription drugs and biologic agents, apportioned among these entities according to their market share in certain government healthcare programs, not including orphan drug sales;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program to 23.1% and 13% of the average manufacturer price for most branded and generic drugs, respectively;
- a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts on negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D;
- extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals and by adding new mandatory eligibility categories for certain individuals with income at or below 133% of the Federal Poverty Level, thereby potentially increasing manufacturers' Medicaid rebate liability;
- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program;
- new requirements for certain manufacturers of drugs, devices, biologics, and medical supplies for which payment is available under Medicare, Medicaid, or the Children's Health Insurance Program, with specific exceptions to report annually certain financial arrangements with physicians and teaching hospitals, as defined in ACA and its implementing regulations, including reporting any payment or "transfer of value" provided to physicians and teaching hospitals and any ownership and investment interests held by physicians and their immediate family members during the preceding calendar year;
- expansion of healthcare fraud and abuse laws, including the federal False Claims Act and the federal Anti-Kickback Statute, new government investigative powers and enhanced penalties for noncompliance;
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in and conduct comparative clinical effectiveness research, along with funding for such research; and
- a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted, or injected.

We cannot predict what healthcare reform initiatives may be adopted in the future. Further federal, state and foreign legislative and regulatory developments are likely, and we expect ongoing initiatives to increase pressure on drug pricing. Such reforms could have an adverse effect on anticipated revenues from product candidates that we may successfully develop and for which we may obtain regulatory approval and may affect our overall financial condition and ability to develop product candidates.

Risks Relating to Our Intellectual Property

If our efforts to protect the intellectual property related to our product candidates are not adequate, we may not be able to compete effectively in our market.

We rely upon a combination of patents, trade secret protection and confidentiality agreements to protect the intellectual property related to our product candidates and technology. Any disclosure to or misappropriation by

third parties of our confidential proprietary information could enable competitors to quickly duplicate or surpass our technological achievements, eroding our competitive position in the market. We have worldwide commercial rights to the NK-92 cell line and we believe that we control commercial use of our aNK cells in key territories. We have developed and in-licensed numerous patents and patent applications and we possess substantial know-how and trade secrets relating to the development and commercialization of Natural Killer cell-based immunotherapy product candidates, including related manufacturing processes and technology. As of the date of this prospectus, our owned and licensed patent portfolio consists of approximately 2 licensed U.S. issued patents, approximately 2 licensed U.S. pending patent applications, approximately 1 owned U.S. issued patent, and approximately 24 owned U.S. pending patent applications covering certain of our proprietary technology, inventions, and improvements and our most advanced product candidates, as well as approximately 15 licensed patents and 8 owned patents issued in jurisdictions outside of the United States, approximately 4 licensed patent applications and 3 owned patent applications pending in jurisdictions outside of the United States that, in many cases, are counterparts to the foregoing U.S. patents and patent applications, as well as an additional 2 pending Patent Cooperation Treaty (PCT) patent applications. We believe we have intellectual property rights that are necessary to commercialize aNK cells. However, our patent applications may not result in issued patents, and, even if issued, the patents may be challenged and invalidated. Moreover, our patents and patent applications may not be sufficiently broad to prevent others from practicing our technologies or developing competing products. We also face the risk that others may independently develop similar or alternative technologies or may design around our proprietary property.

The patent application process, also known as patent prosecution, is expensive and time-consuming, and we and our current or future licensors and licensees may not be able to prepare, file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we or our current licensors, or any future licensors or licensees, will fail to identify patentable aspects of inventions made in the course of development and commercialization activities before it is too late to obtain patent protection on them. Therefore, these and any of our patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business. Defects of form in the preparation or filing of our patents or patent applications may exist, or may arise in the future, for example with respect to proper priority claims, inventorship, etc., although we are unaware of any such defects that we believe are of material import. If we or our current licensors, or any future licensors or licensees, fail to establish, maintain or protect such patents and other intellectual property rights, such rights may be reduced or eliminated. If our current licensors, or any future licensors or licensees, are not fully cooperative or disagree with us as to the prosecution, maintenance or enforcement of any patent rights, such patent rights could be compromised. If there are material defects in the form or preparation of our patents or patent applications, such patents or applications may be invalid and unenforceable. Any of these outcomes could impair our ability to prevent competition from third parties, which may have an adverse impact on our business.

The strength of patents in the biopharmaceutical field involves complex legal and scientific questions and can be uncertain. This uncertainty includes changes to the patent laws through either legislative action to change statutory patent law or court action that may reinterpret existing law or rules in ways affecting the scope or validity of issued patents. The patent applications that we own or in-license may fail to result in issued patents in the United States or foreign countries with claims that cover our product candidates. Even if patents do successfully issue from the patent applications that we own or in-license, third parties may challenge the validity, enforceability or scope of such patents, which may result in such patents being narrowed, invalidated or held unenforceable. For example, patents granted by the European Patent Office may be challenged, also known as opposed, by any person within nine months from the publication of their grant. Any successful challenge to our patents could deprive us of exclusive rights necessary for the successful commercialization of our product candidates. Furthermore, even if they are unchallenged, our patents may not adequately protect our product candidates, provide exclusivity for our product candidates, or prevent others from designing around our claims. If the breadth or strength of protection provided by the patents we hold or pursue with respect to our product candidates is challenged, it could dissuade companies from collaborating with us to develop, or threaten our ability to commercialize our product candidates.

Patents have a limited lifespan. In the United States, the natural expiration of a patent is generally 20 years after its effective filing date. Various extensions may be available; however the life of a patent, and the protection it affords, is limited. Without patent protection for our product candidates, we may be open to competition from generic versions of our product candidates. Further, if we encounter delays in our development efforts, including our clinical trials, the period of time during which we could market our product candidates under patent protection would be reduced.

In addition to the protection afforded by patents, we also rely on trade secret protection to protect proprietary know-how that may not be patentable or that we elect not to patent, processes for which patents may be difficult to obtain or enforce, and any other elements of our product candidates, and our product development processes (such as a manufacturing and formulation technologies) that involve proprietary know-how, information or technology that is not covered by patents. However, trade secrets can be difficult to protect. If the steps taken to maintain our trade secrets are deemed inadequate, we may have insufficient recourse against third parties for misappropriating any trade secrets. Misappropriation or unauthorized disclosure of our trade secrets could significantly affect our competitive position and may have a material adverse effect on our business. Furthermore, trade secret protection does not prevent competitors from independently developing substantially equivalent information and techniques and we cannot guarantee that our competitors will not independently develop substantially equivalent information and techniques. The FDA, as part of its Transparency Initiative, is currently considering whether to make additional information publicly available on a routine basis, including information that we may consider to be trade secrets or other proprietary information, and it is not clear at the present time how the FDA's disclosure policies may change in the future, if at all.

In an effort to protect our trade secrets and other confidential information, we require our employees, consultants, advisors, and any other third parties that have access to our proprietary know-how, information or technology, for example, third parties involved in the formulation and manufacture of our product candidates, and third parties involved in our clinical trials to execute confidentiality agreements 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. However, we cannot be certain that our trade secrets and other confidential proprietary information will not be disclosed despite having such confidentiality agreements. Adequate remedies may not exist in the event of unauthorized use or disclosure of our trade secrets. In addition, in some situations, these confidentiality agreements may conflict with, or be subject to, the rights of third parties with whom our employees, consultants, or advisors have previous employment or consulting relationships. To the extent that our employees, consultants or contractors use any intellectual property owned by third parties in their work for us, disputes may arise as to the rights in any related or resulting know-how and inventions. If we are unable to prevent unauthorized material disclosure of our trade secrets to third parties, we may not be able to establish or maintain a competitive advantage in our market, which could materially adversely affect our business, operating results and financial condition.

Changes in U.S. patent law could diminish the value of patents in general, thereby impairing our ability to protect our products.

As is the case with other biopharmaceutical companies, our success is heavily dependent on intellectual property, particularly on obtaining and enforcing patents. Obtaining and enforcing patents in the pharmaceutical industry involves both technological and legal complexity, and therefore, is costly, time-consuming and inherently uncertain. In addition, the United States has recently enacted and is currently implementing wide-ranging patent reform legislation. Further, recent U.S. Supreme Court rulings have either narrowed the scope of patent protection available in certain circumstances or weakened the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained.

For our U.S. patent applications containing a claim not entitled to priority before March 16, 2013, there is a greater level of uncertainty in the patent law. In September 2011, the Leahy-Smith America Invents Act, or the

American Invents Act, or AIA, was signed into law. The AIA includes a number of significant changes to U.S. patent law, including provisions that affect the way patent applications will be prosecuted and may also affect patent litigation. The USPTO is currently developing regulations and procedures to govern administration of the AIA, and many of the substantive changes to patent law associated with the AIA. It is not clear what other, if any, impact the AIA will have on the operation of our business. Moreover, the AIA and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business and financial condition.

An important change introduced by the AIA is that, as of March 16, 2013, the United States transitioned to a "first-to-file" system for deciding which party should be granted a patent when two or more patent applications are filed by different parties claiming the same invention. A third party that files a patent application in the USPTO after that date but before us could therefore be awarded a patent covering an invention of ours even if we had made the invention before it was made by the third party. This will require us to be cognizant going forward of the time from invention to filing of a patent application. Furthermore, our ability to obtain and maintain valid and enforceable patents depends on whether the differences between our technology and the prior art allow our technology to be patentable over the prior art. Since patent applications in the United States and most other countries are confidential for a period of time after filing, we cannot be certain that we were the first to either (i) file any patent application related to our product candidates or (ii) invent any of the inventions claimed in our patents or patent applications.

Among some of the other changes introduced by the AIA are changes that limit where a patentee may file a patent infringement suit and providing opportunities for third parties to challenge any issued patent in the USPTO. This applies to all of our U.S. patents, even those issued before March 16, 2013. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in United States federal court necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action. Accordingly, a third party may attempt to use the USPTO procedures to invalidate our patent claims that would not have been invalidated if first challenged by the third party as a defendant in a district court action.

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.

The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent prosecution process. Periodic maintenance fees and various other governmental fees on any issued patent and/or pending patent applications are due to be paid to the USPTO and foreign patent agencies in several stages over the lifetime of a patent or patent application. We have systems in place to remind us to pay these fees, and we employ an outside firm and rely on our outside counsel to pay these fees. While an inadvertent lapse may sometimes be cured by payment of a late fee or by other means in accordance with the applicable rules, there are many 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 we fail to maintain the patents and patent applications directed to our product candidates, our competitors might be able to enter the market earlier than should otherwise have been the case, which would have a material adverse effect on our business.

Third-party claims alleging intellectual property infringement may adversely affect our business.

Our commercial success depends in part on our avoiding infringement of the patents and proprietary rights of third parties, for example, the intellectual property rights of competitors. Our research, development and commercialization activities may be subject to claims that we infringe or otherwise violate patents owned or controlled by third parties. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which we are developing our product candidates. As the

biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our activities related to our product candidates may give rise to claims of infringement of the patent rights of others. We cannot assure you that our product candidates will not infringe existing or future patents. We may not be aware of patents that have already issued that a third party, for example a competitor in our market, might assert are infringed by our product candidates. It is also possible that patents of which we are aware, but which we do not believe are relevant to our product candidates, could nevertheless be found to be infringed by our product candidates. Nevertheless, we are not aware of any issued patents that we believe would prevent us from marketing our product candidates, if approved. There may also be patent applications that have been filed but not published that, when issued as patents, could be asserted against us.

Third parties making claims against us for infringement or misappropriation of their intellectual property rights may seek and obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize our product candidates. Further, if a patent infringement suit were brought against us, we could be forced to stop or delay research, development, manufacturing or sales of the product or product candidate that is the subject of the suit. Defense of these claims, regardless of their merit, would cause us to incur substantial expenses and, and would be a substantial diversion of employee resources from our business. In the event of a successful claim of infringement against us by a third party, we may have to (1) pay substantial damages, including treble damages and attorneys' fees if we are found to have willfully infringed the third party's patents; (2) obtain one or more licenses from the third party; (3) pay royalties to the third party; and/or (4) redesign any infringing products. Redesigning any infringing products may be impossible or require substantial time and monetary expenditure. Further, we cannot predict whether any required license would be available at all or whether it would be available on commercially reasonable terms. In the event that we could not obtain a license, we may be unable to further develop and commercialize our product candidates, which could harm our business significantly. Even if we are able to obtain a license, the license would likely obligate us to pay license fees or royalties or both, and the rights granted to us might be nonexclusive, which could result in our competitors gaining access to the same intellectual property. Ultimately, we could be prevented from commercializing a product, or be forced to cease some aspect of our business operations, if, as a result of actual or threatened patent infringement claims, we are unable to enter into licenses on acceptable terms.

Defending ourselves or our licensors in litigation is very expensive, particularly for a company of our size, and time-consuming. Some of our competitors may be able to sustain the costs of litigation or administrative proceedings more effectively than we can because of greater financial resources. Patent litigation and other proceedings may also absorb significant management time. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could impair our ability to compete in the marketplace. The occurrence of any of the foregoing could have a material adverse effect on our business, financial condition or results of operations.

We may become involved in lawsuits to protect or enforce our patents or other intellectual property or the patents of our licensors, which could be expensive and time consuming.

Third parties may infringe or misappropriate our intellectual property, including our existing patents, patents that may issue to us in the future, or the patents of our licensors to which we have a license. As a result, we may be required to file infringement claims to stop third-party infringement or unauthorized use. Further, we may not be able to prevent, alone or with our licensors, misappropriation of our intellectual property rights, particularly in countries where the laws may not protect those rights as fully as in the United States.

Generic drug manufacturers may develop, seek approval for, and launch generic versions of our products. If we file an infringement action against such a generic drug manufacturer, that company may challenge the scope, validity or enforceability of our or our licensors' patents, requiring us and/or our licensors to engage in complex, lengthy and costly litigation or other proceedings.

For example, if we or one of our licensors initiated legal proceedings against a third party to enforce a patent covering our product candidates, the defendant could counterclaim that the patent covering our product

candidates is invalid and/or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are commonplace, and there are numerous grounds upon which a third party can assert invalidity or unenforceability of a patent.

In addition, within and outside of the United States, there has been a substantial amount of litigation and administrative proceedings, including interference and reexamination proceedings before the USPTO or oppositions and other comparable proceedings in various foreign jurisdictions, regarding patent and other intellectual property rights in the biopharmaceutical industry. Recently, the AIA introduced new procedures including inter partes review and post grant review. The implementation of these procedures brings uncertainty to the possibility of challenges to our patents in the future, including those that patents perceived by our competitors as blocking entry into the market for their products, and the outcome of such challenges.

In March 2009, we received a final rejection in one of our original patent applications pertaining to methods of use claims for NK-92 from the USPTO. We filed a Notice of Appeal to the USPTO Board of Appeals and Interferences and a Decision on Appeal was rendered in the fall of 2013. That decision reversed the Examiner's rejection of the claim to certain methods of use with NK-92, but affirmed the Examiner's rejection of the remaining patent claims. In December 2013, we brought an action in the U.S. District Court for the Eastern District of Virginia to review the decision of the USPTO as we disagreed with the decision as to the non-allowed claims. A trial before the district court judge is scheduled for July 2015.

Such litigation and administrative proceedings could result in revocation of our patents or amendment of our patents such that they do not cover our product candidates. They may also put our pending patent applications at risk of not issuing, or issuing with limited and potentially inadequate scope to cover our product candidates. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we and the patent examiner were unaware during prosecution. Additionally, it is also possible that prior art of which we are aware, but which we do not believe affects the validity or enforceability of a claim, may, nonetheless, ultimately be found by a court of law or an administrative panel to affect the validity or enforceability of a claim, for example if a priority claim is found to be improper. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on our product candidates. Such a loss of patent protection could have a material adverse impact on our business.

Enforcing our or our licensor's intellectual property rights through litigation is very expensive, particularly for a company of our size, and time-consuming. Some of our competitors may be able to sustain the costs of litigation more effectively than we can because of greater financial resources. Patent litigation and other proceedings may also absorb significant management time. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could impair our ability to compete in the marketplace. The occurrence of any of the foregoing could have a material adverse effect on our business, financial condition or results of operations.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation or administrative proceedings, there is a risk that some of our confidential information could be compromised by disclosure. In addition, during the course of litigation or administrative proceedings, there could be public announcements of the results of hearings, motions or other interim proceedings or developments or public access to related documents. If investors perceive these results to be negative, the market price for our common stock could be significantly harmed.

If we fail to comply with our obligation in any of the agreements under which we license intellectual property rights from third parties or otherwise experience disruptions to our business relationships with our licensors, we could lose license rights that are important to our business.

Licensing of intellectual property rights is of critical importance to our business and involves complex legal, business and scientific issues. We rely on our exclusive license from Hans Klingemann, M.D., Ph.D., one of our founders and the inventor of our aNK cell therapy, and may rely on our exclusive licenses from Rush University Medical Center and other licensors such as Fox Chase Cancer Research Center and the University Health Network. If we fail to comply with the diligence obligations or otherwise materially breach our license agreement, and fail to remedy such failure or cure such breach, the licensor may have the right to terminate the license.

Our license agreement with Dr. Klingemann, as amended, is effective for 15 years following the first commercial sale of a product based on the license and may be terminated earlier by either party for material breach. Under the license agreement we have the right to enforce the licensed patents. At the end of the relevant 15 year period, we will have a perpetual, irrevocable, fully-paid royalty-free, exclusive license. Our license agreement with Rush University Medical Center terminates on the 12th anniversary of our first payment of royalties, at which point the license is deemed perpetual, irrevocable, fully-paid royalty-free, exclusive license, and may be terminated earlier by either party for material breach.

Disputes may arise between us and our licensors regarding intellectual property rights subject to a license agreement, including:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- our right to sublicense intellectual property rights to third parties under collaborative development relationships; and
- our diligence obligations with respect to the use of the licensed technology in relation to our development and commercialization of our product candidates, and what activities satisfy those diligence obligations.

While we would expect to exercise all rights and remedies available to us, including seeking to cure any breach by us, and otherwise seek to preserve our rights under the patents licensed to us, we may not be able to do so in a timely manner, at an acceptable cost or at all. Generally, the loss of any one of our current licenses, or any other license we may acquire in the future, could materially harm our business, prospects, financial condition and results of operations.

Confidentiality agreements with employees and others may not adequately prevent disclosure of our trade secrets and other proprietary information and may not adequately protect our intellectual property, which could limit our ability to compete.

Because we operate in the highly technical field of research and development, we rely in part on trade secret protection in order to protect our proprietary trade secrets and unpatented know-how. However, trade secrets are difficult to protect, and we cannot be certain that others will not develop the same or similar technologies on their own. We have taken steps, including entering into confidentiality agreements with our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors, to protect our trade secrets and unpatented know-how. These agreements generally require that the other party keep confidential and not disclose to third parties all confidential information developed by the party or made known to the party by us during the course of the party’s relationship with us. We also typically obtain agreements from these parties which provide that inventions conceived by the party in the course of rendering services to us will be our exclusive property. However, these agreements may not be honored and may not effectively assign intellectual property rights to us. Enforcing a claim that a party illegally obtained and is using our trade secrets or know-how is difficult, expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States may be less willing to protect trade secrets or know-how. The failure to obtain or maintain trade secret protection could adversely affect our competitive position.

We may be subject to claims that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties.

We have received confidential and proprietary information from third parties. In addition, we employ individuals who were previously employed at other biotechnology or pharmaceutical companies. We may be subject to claims that we or our employees, consultants or independent contractors have inadvertently or otherwise improperly used or disclosed confidential information of these third parties or our employees' former employers. Further, we may be subject to ownership disputes in the future arising, for example, from conflicting obligations of consultants or others who are involved in developing our product candidates. We may also be subject to claims that former employees, consultants, independent contractors, collaborators or other third parties have an ownership interest in our patents or other intellectual property. Litigation may be necessary to defend against these and other claims challenging our right to and use of confidential and proprietary information. If we fail in defending any such claims, in addition to paying monetary damages, we may lose our rights therein. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against these claims, litigation could result in substantial cost and be a distraction to our management and employees.

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

We strive to control cell line distribution as well as limit commercial use through licenses and material transfer agreements with third parties in addition to its patents and patent applications. However, a company may illicitly obtain our cells or create their own modified variants and attempt to commercialize them in foreign countries where we do not have any patents or patent applications where legal recourse may be limited. This may have a significant commercial impact on our foreign business operations.

Filing, prosecuting and defending patents on our product candidates in all countries throughout the world would be prohibitively expensive. The requirements for patentability may differ in certain countries, particularly developing countries. For example, China has a heightened requirement for patentability, and specifically requires a detailed description of medical uses of a claimed drug. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and further, may export otherwise infringing products to territories where we have patent protection, but enforcement on infringing activities is inadequate. These products may compete with our products, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, particularly those relating to pharmaceuticals, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing, and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. In addition, certain countries in Europe and certain developing countries, including India and China, have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In those countries, we may have limited remedies if our patents are infringed or if we are compelled to grant a license to our patents to a third party, which could materially diminish the value of those patents. This could limit our potential revenue opportunities. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we own or license. Finally, our ability to protect and enforce our intellectual property rights may be adversely affected by unforeseen changes in foreign intellectual property laws.

Risks Relating to this Offering and Our Common Stock

Our Chairman and Chief Executive Officer and entities affiliated with him collectively own a significant percentage of our common stock and could exercise significant influence over matters requiring stockholder approval, regardless of the wishes of other stockholders.

Following this offering, our Chairman and Chief Executive Officer, Patrick Soon-Shiong, M.D. and entities affiliated with him, will collectively beneficially own % of our outstanding shares of common stock (assuming no exercise of the underwriters' option to purchase additional shares and no purchasing of shares by Dr. Soon-Shiong and his affiliates in the directed share program). Additionally, Dr. Soon-Shiong is the owner of an option and a warrant to purchase an aggregate of 10.5 million shares of our common stock, which would give him and his affiliates ownership of % of our outstanding shares of common stock if they were fully vested and exercised in full (assuming no exercise of the underwriters' option to purchase additional shares and no purchasing of shares by Dr. Soon-Shiong and his affiliates in the directed share program). In addition, pursuant to the Subscription and Investment Agreement between us and Cambridge Equities, LP, or Cambridge, an entity that Dr. Soon-Shiong controls, Cambridge has the ability to designate one director who shall be nominated by our corporate governance and nominating committee for election to our board of directors for as long as Cambridge continues to hold at least 20% of the issued and outstanding shares of our common stock. Dr. Soon-Shiong was selected by Cambridge to hold this board seat. Dr. Soon-Shiong and his affiliates will therefore have significant influence over management and significant control over matters requiring stockholder approval, including the annual election of directors and significant corporate transactions, such as a merger or other sale of our company or its assets, for the foreseeable future. This concentrated control will limit stockholders' ability to influence corporate matters and, as a result, we may take actions that our stockholders do not view as beneficial. As a result, the market price of our common stock could be adversely affected.

We do not know whether an active, liquid and orderly trading market will develop for our common stock or what the market price of our common stock will be and as a result it may be difficult for you to sell your shares of our common stock.

Prior to this offering there has been no public market for shares of our common stock. Although we expect that our common stock will be approved for listing on The NASDAQ Global Select Market, there is no assurance such application will be approved, or if it is approved, that an active trading market for our shares may develop or be sustained following this offering. You may not be able to sell your shares quickly or at the market price if trading in shares of our common stock is not active. The initial public offering price for our common stock will be determined through negotiations with the underwriters, and the negotiated price may not be indicative of the market price of the common stock after the offering. As a result of these and other factors, you may be unable to resell your shares of our common stock at or above the initial public offering price. Further, an inactive market may also impair our ability to raise capital by selling shares of our common stock and may impair our ability to enter into strategic partnerships or acquire companies or products by using our shares of common stock as consideration.

If a market for our common stock develops, there is a significant risk the market price of our common stock is volatile, and you may not be able to sell your shares at or above the initial public offering price.

We and the underwriters will determine the initial public offering price of our common stock through negotiation. This price will not necessarily reflect the price at which investors in the market will be willing to buy and sell our shares following this offering. The stock market in general and the market for biopharmaceutical companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. A certain degree of market price volatility may also occur as a result of being a newly public company. As a result of this volatility, investors may not be able to sell their common stock at or above the initial public offering price. The market price of our common stock following this offering may be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control, including:

- the commencement, enrollment or results of the planned clinical trials of our product candidates or any future clinical trials we may conduct, or changes in the development status of our product candidates;

- any delay in our regulatory filings for our product candidates and any adverse development or perceived adverse development with respect to the applicable regulatory authority's review of such filings, including without limitation the FDA's issuance of a "refusal to file" letter or a request for additional information;
- adverse results or delays in clinical trials;
- our decision to initiate a clinical trial, not to initiate a clinical trial or to terminate an existing clinical trial;
- adverse regulatory decisions, including failure to receive regulatory approval of our product candidates;
- changes in laws or regulations applicable to our products, including but not limited to clinical trial requirements for approvals;
- our failure to commercialize our product candidates;
- additions or departures of key scientific or management personnel;
- unanticipated serious safety concerns related to the use of our product candidates;
- announcements by us or our competitors of significant contracts, acquisitions, strategic partnerships, joint ventures or capital commitments;
- our ability to effectively manage our growth;
- variations in our quarterly operating results;
- our cash position;
- announcements that our revenue or income are below or that costs or losses are greater than analysts' expectations;
- publication of research reports about us or our industry, or immunotherapy in particular, or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- changes in the market valuations of similar companies;
- general economic slowdowns;
- sales of large blocks of our common stock;
- fluctuations in stock market prices and volumes;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- significant lawsuits, including patent or stockholder litigation;
- concern by potential investors that the large number of shares of common stock which may be sold pursuant to this prospectus may have a downward effect upon the market price of the stock;
- the effect of sales pursuant to this prospectus on the trading volume of our common stock; and
- the other factors described in this "Risk Factors" section.

In the past, securities class action litigation has often been instituted against companies following periods of volatility in the market price of a company's securities. This type of litigation, if instituted, could result in substantial costs and a diversion of management's attention and resources, which would harm our business, operating results or financial condition.

Future sales and issuances of our common stock or rights to purchase common stock, including pursuant to our equity incentive plan and the warrant held by our Chairman and Chief Executive Officer, could result in additional dilution of the percentage ownership of our stockholders and could cause our stock price to fall.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. If our stockholders sell, or the market perceives that our stockholders intend to sell, substantial amounts of our common stock in the public market following this offering, the market price of our common stock could decline significantly. Substantially all of our existing stockholders are subject to lock-up agreements with the underwriters of this offering that restrict the stockholders' ability to transfer shares of our common stock for at least 180 days from the date of this prospectus. The lock-up agreements limit the number of shares of common stock that may be sold immediately following the public offering. Subject to certain limitations, approximately shares will become eligible for sale upon expiration of the lock-up period, as calculated and described in more detail in the section titled "Shares Eligible for Future Sale." In addition, shares issued or issuable upon exercise of options and warrants vested as of the expiration of the lock-up period will be eligible for sale at that time. In particular, the option and the warrant to purchase common stock held by our Chairman and Chief Executive Officer may be exercisable for up to an aggregate of 10.5 million shares of our common stock, or approximately % of our outstanding common stock, assuming exercise of the underwriters' option to purchase additional shares. Sales of stock by these stockholders could have a material adverse effect on the trading price of our common stock.

Following the closing of this offering, certain holders of approximately shares of our common stock, including shares issuable upon the exercise of outstanding options and warrants, are entitled to certain rights with respect to the registration of their shares under the Securities Act of 1933, as amended, or the Securities Act, subject to the 180-day lock-up arrangement described above. Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act, except for shares held by our affiliates as defined in Rule 144 under the Securities Act. Any sales of securities by these stockholders could have a material adverse effect on the market price of our common stock.

In addition, we expect that additional capital may be needed in the future to continue our planned operations, including conducting clinical trials, commercialization efforts, expanded research and development activities and costs associated with operating a public company. To raise capital, we may sell common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. If we sell common stock, convertible securities or other equity securities, investors may be materially diluted by subsequent sales. Such sales may also result in material dilution to our existing stockholders, and new investors could gain rights, preferences and privileges senior to the holders of our common stock, including shares of common stock sold in this offering.

We will incur costs as a result of operating as a public company and our management will be required to devote substantial time to new compliance initiatives and corporate governance practices, including maintaining an effective system of internal control over financial reporting.

As a public company listed in the United States, and increasingly after we are no longer an "emerging growth company," we will incur significant additional legal, accounting and other expenses that we did not incur as a private company. In addition, changing laws, regulations and standards relating to corporate governance and public disclosure, including Sarbanes-Oxley and regulations implemented by the Securities and Exchange Commission or SEC, and The NASDAQ Stock Market, or NASDAQ, may increase legal and financial compliance costs and make some activities more time consuming. These laws, regulations and standards are subject to varying interpretations and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. We intend to invest resources to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of management's time and attention from revenue-generating activities to compliance activities. If notwithstanding our efforts to comply with new laws, regulations and standards, we fail to comply, regulatory authorities may initiate legal proceedings against us and our business may be harmed.

As a public company in the United States, we will be required, pursuant to Section 404 of Sarbanes-Oxley, or Section 404, to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting. We will need to disclose any material weaknesses identified by our management in our internal control over financial reporting, and, when we are no longer an "emerging growth company," we will need to provide a statement that our independent registered public accounting firm has issued an opinion on our internal control over financial reporting. We expect that our first report on compliance with Section 404 will be furnished in connection with our financial statements for the year ending December 31, 2016.

The controls and other procedures are designed to ensure that information required to be disclosed by us in the reports that we file with the SEC is disclosed accurately and is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms. We are in the early stages of conforming our internal control procedures to the requirements of Section 404 and we may not be able to complete our evaluation, testing and any required remediation needed to comply with Section 404 in a timely fashion. Our independent registered public accounting firm was not engaged to perform an audit of our internal control over financial reporting for the year ended December 31, 2014 or for any other period. Accordingly, no such opinion was expressed.

Even after we develop these new procedures, these new controls may become inadequate because of changes in conditions or the degree of compliance with these policies or procedures may deteriorate and material weaknesses in our internal control over financial reporting may be discovered. We may err in the design or operation of our controls, and all internal control systems, no matter how well designed and operated, can provide only reasonable assurance that the objectives of the control system are met. Because there are inherent limitations in all control systems, there can be no absolute assurance that all control issues have been or will be detected. If we are unable, or are perceived as unable, to produce reliable financial reports due to internal control deficiencies, investors could lose confidence in our reported financial information and operating results, which could result in a negative market reaction.

To fully comply with Section 404, we will need to retain additional employees to supplement our current finance staff, and we may not be able to do so in a timely manner, or at all. In addition, in the process of evaluating our internal control over financial reporting, we expect that certain of our internal control practices will need to be updated to comply with the requirements of Section 404 and the regulations promulgated thereunder, and we may not be able to do so on a timely basis, or at all. In the event that we are not able to demonstrate compliance with Section 404 in a timely manner, or are unable to produce timely or accurate financial statements, we may be subject to sanctions or investigations by regulatory authorities, such as the SEC or the stock exchange on which our stock is listed, and investors may lose confidence in our operating results and the price of our common stock could decline. Furthermore, if we are unable to certify that our internal control over financial reporting is effective and in compliance with Section 404, we may be subject to sanctions or investigations by regulatory authorities, such as the SEC or stock exchanges, and we could lose investor confidence in the accuracy and completeness of our financial reports, which could hurt our business, the price of our common stock and our ability to access the capital markets.

We also expect that being a public company will make it more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced coverage or incur substantially higher costs to obtain coverage. These factors could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, on committees of our board of directors or as members of senior management.

We have not paid dividends in the past and do not expect to pay dividends in the future. Any return on investment may be limited to the value of our common stock.

We have never paid cash dividends on our common stock and do not anticipate paying cash dividends in the foreseeable future. The payment of dividends on our common stock will depend on earnings, financial condition and other business and economic factors affecting the Company at such time as the board of directors may

consider relevant. If we do not pay dividends, our common stock may be less valuable because a return on your investment will only occur if our stock price appreciates.

We are an "emerging growth company," and the reduced disclosure requirements applicable to emerging growth companies could make our common stock could be less attractive to investors.

We are an "emerging growth company," as defined in the JOBS Act enacted in April 2012, and may remain an "emerging growth company" for up to five years following the completion of this offering, although, if we have more than $1.0 billion in annual revenue, the market value of our common stock that is held by non-affiliates exceeds $700.0 million as of June 30 of any year, or we issue more than $1.0 billion of non-convertible debt over a three-year period before the end of that five-year period, we would cease to be an "emerging growth company" as of the following December 31. For as long as we remain an "emerging growth company," we are permitted and intend to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not "emerging growth companies." These exemptions include:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management's discussion and analysis of financial condition and results of operations" disclosure;
- not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements;
- reduced disclosure obligations regarding executive compensation; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

We have taken advantage of reduced reporting requirements in this prospectus. In particular, in this prospectus, we have provided only two years of audited financial statements and have not included all of the executive compensation related information that would be required if we were not an emerging growth company. In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards, delaying the adoption of these accounting standards until they would apply to private companies. We have irrevocably elected not to avail ourselves of this exemption and, as a result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies. We cannot predict whether investors will find our common stock less attractive as a result of our reliance on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and the market price of our common stock may be reduced or more volatile.

If you purchase our common stock in this offering, because the initial public offering price of our common stock will be substantially higher than our as adjusted net tangible book value per share following this offering, you will incur immediate and substantial dilution in the book value of your shares.

Investors purchasing common stock in this offering will pay a price per share that substantially exceeds our net tangible book value per share as of December 31, 2014. Net tangible book value is our tangible assets after subtracting our liabilities. As a result, investors purchasing common stock in this offering will incur immediate dilution of $ per share, based on the difference between $ per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, and the as adjusted net tangible book value per share of our outstanding common stock as of December 31, 2014.

This dilution is due to our investors who purchased shares prior to this offering having paid substantially less than the price offered to the public in this offering when they purchased their shares. In addition, as of December 31,

2014, options to purchase 2,775,269 shares of our common stock at a weighted-average exercise price of $1.58 per share and warrants to purchase 999,696 shares of our common stock at a weighted-average exercise price of $3.10 per share were outstanding. The exercise of any of these options would result in additional dilution. As a result of the dilution to investors purchasing shares in this offering, investors may receive significantly less than the purchase price paid in this offering, if anything, in the event of our liquidation. Further, because we will need to raise additional capital to fund our clinical development programs, we may in the future sell substantial amounts of common stock or securities convertible into or exchangeable for common stock.

These future issuances of common stock or common stock-related securities, together with the exercise of outstanding options and any additional shares issued in connection with acquisitions, if any, may result in further dilution. For a further description of the dilution that you will experience immediately after this offering, see “Dilution.”

Our ability to use our net operating loss carryforwards and certain other tax attributes to offset future taxable income may be subject to certain limitations.

As of December 31, 2014 we had U.S. federal and combined California, Illinois and Massachusetts state net operating loss carryforwards, or NOLs, of approximately $10.0 million and $9.7 million, respectively, which expire in various years beginning in 2015, if not utilized. As of December 31, 2014, we had minimal research and development tax credit carryforwards. Under Sections 382 and 383 of Internal Revenue Code of 1986, as amended, or the Code, if a corporation undergoes an “ownership change,” the corporation’s ability to use its pre-change NOLs and other pre-change tax attributes, such as research tax credits, to offset its future post-change income and taxes may be limited. In general, an “ownership change” occurs if there is a cumulative change in our ownership by “5% shareholders” that exceeds 50 percentage points over a rolling three-year period. Similar rules may apply under state tax laws. Although we have not yet conducted a study, we believe that we have recently undergone one or more ownership changes, and accordingly our ability to use our NOLs and other tax assets to reduce taxes owed on the net taxable income that we earn in the event that we attain profitability will be limited. Such limitations and any further limitations from future ownership changes on the ability to use our NOLs and other tax assets could adversely impact our business, financial condition and operating results in the event that we attain profitability.

If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, our share price and trading volume could decline.

The trading market for our common stock will depend on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. There can be no assurance that analysts will cover us or provide favorable coverage. If one or more of the analysts who cover us downgrade our stock or change their opinion of our stock, our share price would likely decline. If one or more of these analysts cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our share price or trading volume to decline.

We are not subject to the provisions of Section 203 of the Delaware General Corporation Law, which could negatively affect your investment.

We elected in our certificate of incorporation to not be subject to the provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. A “business combination” includes a merger, asset sale or other transaction resulting in a financial benefit to the interested stockholder. An “interested stockholder” is a person who, together with affiliates and associates, owns (or, in certain cases, within three years prior, did own) 15% or more of the corporation’s voting stock. Our decision not to be subject to Section 203 will allow, for example, our Chairman and Chief Executive Officer (who with members of his immediate family and entities affiliated with him

beneficially own approximately % of our common stock) to transfer shares in excess of 15% of our voting stock to a third-party free of the restrictions imposed by Section 203. This may make us more vulnerable to takeovers that are completed without the approval of our board of directors and/or without giving us the ability to prohibit or delay such takeovers as effectively.

Some provisions of our charter documents and Delaware law may have anti-takeover effects that could discourage an acquisition of us by others, even if an acquisition would be beneficial to our stockholders, and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our amended and restated certificate of incorporation and amended and restated bylaws that will be effective upon the completion of this offering, as well as provisions of Delaware law, could make it more difficult for a third party to acquire us or increase the cost of acquiring us, even if doing so would benefit our stockholders. These provisions include:

- a requirement that special meetings of stockholders be called only by the board of directors or the chief executive officer;
- advance notice requirements for stockholder proposals and nominations for election to our board of directors; and
- the authority of the board of directors to issue preferred stock on terms determined by the board of directors without stockholder approval and which preferred stock may include rights superior to the rights of the holders of common stock.

These anti-takeover provisions and other provisions in our amended and restated certificate of incorporation and amended and restated bylaws could make it more difficult for stockholders or potential acquirors to obtain control of our board of directors or initiate actions that are opposed by the then-current board of directors and could also delay or impede a merger, tender offer or proxy contest involving our company. These provisions could also discourage proxy contests and make it more difficult for you and other stockholders to elect directors of your choosing or cause us to take other corporate actions you desire. Any delay or prevention of a change of control transaction or changes in our board of directors could cause the market price of our common stock to decline.

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

Our amended and restated certificate of incorporation and amended and restated bylaws provide that we will indemnify our directors and officers, in each case to the fullest extent permitted by Delaware law. In addition, as permitted by Section 145 of the Delaware General Corporation Law, our amended and restated bylaws and our indemnification agreements that we have entered into with our directors and officers provide that:

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

- The rights conferred in our amended and restated bylaws are not exclusive, and we are authorized to enter into indemnification agreements with our directors, officers, employees and agents and to obtain insurance to indemnify such persons.
- We may not retroactively amend our bylaw provisions to reduce our indemnification obligations to directors, officers, employees and agents.

To the extent that a claim for indemnification is brought by any of our directors or officers, it would reduce the amount of funds available for use in our business.

The industry- and market-related estimates included in this prospectus are based on various assumptions and may prove to be inaccurate.

Industry- and market-related estimates included in this prospectus, including, without limitation, estimates related to our market size and industry data, are subject to uncertainty and are based on assumptions which may not prove to be accurate. This may have negative consequences, such as us overestimating our potential market opportunity. For more information, see the section titled “Market, Industry and Other Data.”

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements that are based on management's beliefs and assumptions and on information currently available to management. Some of the statements in the section captioned "Prospectus Summary," "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations," "Business" and elsewhere in this prospectus contain forward-looking statements. In some cases, you can identify forward-looking statements by the following words: "may," "will," "could," "would," "should," "expect," "intend," "plan," "anticipate," "believe," "estimate," "predict," "project," "potential," "continue," "ongoing" or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words.

These statements involve risks, uncertainties and other factors that may cause actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus, we caution you that these statements are based on a combination of facts and factors currently known by us and our projections of the future, about which we cannot be certain. Forward-looking statements in this prospectus include, but are not limited to, statements about:

- our ability to pioneer immunotherapy, implement precision cancer medicine and change the current paradigm of cancer care;
- our expectations regarding the potential benefits of our strategy and technology;
- our expectations regarding the operation of our product candidates and related benefits;
- our ability to utilize multiple modes to induce cell death;
- our beliefs regarding the benefits and perceived limitations of competing approaches, and the future of competing technologies and our industry;
- details regarding our strategic vision and planned product candidate pipeline;
- our beliefs regarding the success, cost and timing of our product candidate development activities and clinical trials;
- our expectations regarding our ability to utilize the Phase I aNK clinical trial data to support the development of all of our product candidates;
- the timing or likelihood of regulatory filings or other actions and related regulatory authority responses, including any planned IND filings or pursuit of accelerated regulatory approval pathways or orphan drug status and breakthrough therapy designations;
- our ability to implement an integrated discovery ecosystem and the operation of that planned ecosystem, including being able to regularly add neoepitopes and subsequently formulate new product candidates;
- the ability and willingness of strategic collaborators, including certain affiliates of NantWorks and Sorrento, to share our vision and effectively work with us to achieve our goals;
- the ability and willingness of various third parties to engage in research and development activities involving our product candidates, and our ability to leverage those activities;
- our ability to attract additional third party collaborators;
- our expectations regarding the ease of administration associated with our product candidates;
- our expectations regarding the patient compatibility associated with our product candidates;
- our beliefs regarding the potential markets for our product candidates and our ability to serve those markets;

- our ability to produce an “off-the-shelf” therapy;
- our beliefs regarding the potential manufacturing and distribution benefits associated with our product candidates, and our ability to scale up the production of our product candidates;
- our plans regarding our planned manufacturing facility and CMO engagement;
- our ability to obtain and maintain regulatory approval of any of our product candidates, and any related restrictions, limitations and/or warnings in the label of any approved product candidate;
- our ability to commercialize any approved products;
- the rate and degree of market acceptance of any approved products;
- our ability to attract and retain key personnel;
- the accuracy of our estimates regarding our any future revenue as well as our future operating expenses, future revenue, capital requirements and needs for additional financing;
- our ability to obtain funding for our operations, including funding necessary to complete further development and any commercialization of our product candidates;
- our ability to obtain and maintain intellectual property protection for our product candidate and not infringe upon the intellectual property of others;
- regulatory developments in the United States and foreign countries;
- our expectations regarding the period during which we qualify as an emerging growth company under the JOBS Act; and
- our use of the proceeds from this offering.

In addition, you should refer to the “Risk Factors” section of this prospectus for a discussion of other important factors that may cause actual results to differ materially from those expressed or implied by the forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this prospectus will prove to be accurate. Furthermore, if the forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

MARKET, INDUSTRY AND OTHER DATA

We obtained the industry, market and similar data set forth in this prospectus from our own internal estimates and research, and from industry publications and research, primary market research commissioned by us, and surveys and studies conducted by third parties. These data involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such information and estimates.

Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances that are assumed in this information. In some cases, we do not expressly refer to the sources from which this data is derived. In that regard, when we refer to one or more sources of this type of data in any paragraph, you should assume that other data of this type appearing in the same paragraph is derived from the same sources, unless otherwise expressly stated or the context otherwise requires.

USE OF PROCEEDS

We estimate that the net proceeds to us from the sale of shares of our common stock in this offering will be $ million, based on an assumed initial public offering price of $ per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. If the underwriters exercise their option to purchase additional shares in full, we estimate that our net proceeds would be $ million, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

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

The principal purposes of this offering are to obtain additional capital to support our operations, establish a public market for our common stock and facilitate our future access to the public capital markets. More specifically, we anticipate that we will use the net proceeds from this offering as follows:

- approximately $ million to fund expenses in connection with our Phase II clinical trial for our aNK product candidate for Merkel cell carcinoma, which we expect will be sufficient to fund the clinical trial;
- approximately $ million to fund expenses in connection with our planned Phase I/II clinical trial for Herceptin-haNK for solid tumors, which we expect will be sufficient to fund the clinical trial;
- approximately $ million to fund expenses in connection with our planned Phase I/II clinical trials for CD33.taNK for acute myeloid leukemia and PDL1.taNK for solid tumor hematological cancers, which we expect will be sufficient to fund the clinical trials;
- approximately $ million to establish our planned manufacturing facility and processes and the hiring of additional personnel; and
- any remaining amounts for other research and development activities, working capital and general corporate purposes.

We may also use a portion of the net proceeds from this offering and our existing cash to in-license, acquire or invest in complementary business, technologies, products or assets. However, we have no current plans, commitments or obligations to do so.

We believe that the net proceeds from this offering and our existing cash will be sufficient to fund our operations through at least the next 12 months. This expected use of the net proceeds from the offering represents our intentions based upon our current plans and business conditions. We cannot specify with certainty all of the particular uses of the net proceeds that we will receive from this offering, or the amounts that we will actually spend on the uses set forth above. The amounts and timing of our actual expenditures will depend on numerous factors, including the ongoing status of and results from clinical trials and other studies, the product approval process with the FDA, and the scope of our commercialization efforts, as well as any strategic collaborations that we may enter into with third parties for our product candidates, any unforeseen cash needs, and our investments and acquisitions. We may find it necessary or advisable to use the net proceeds for other purposes, and we will have broad discretion in using these proceeds. Investors will be relying on our judgment regarding the use of the

net proceeds from this offering. Pending the use of proceeds as described above, we plan to invest the net proceeds that we receive in short-term and intermediate-term interest-bearing obligations, investment-grade investments, certificates of deposit or direct or guaranteed obligations of the U.S. government. We cannot predict whether the invested proceeds will yield a favorable return.

DIVIDEND POLICY

We have never declared or paid cash dividends on our common stock. We currently intend to retain all available funds and any future earnings for use in the operation of our business and do not anticipate paying any dividends on our common stock in the foreseeable future. Any future determination to declare dividends will be made at the discretion of our board of directors and will depend on, among other factors, our financial condition, operating results, capital requirements, general business conditions and other factors that our board of directors may deem relevant.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and capitalization as of December 31, 2014:

- on an actual basis;
- on an as adjusted basis to reflect our receipt of the net proceeds from our issuance and sale of shares of our common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the estimated offering price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	December 31, 2014	
	Actual	As Adjusted(1)
Cash and cash equivalents	$ 59,104	$
Notes payable	265	
Warrant derivative liability	177	
Stockholders' equity:		
Common stock, $0.0001 par value; no shares authorized, issued or outstanding (actual); shares authorized, shares issued and outstanding (as adjusted)	—	
Class A common stock, $0.0001 par value; 75,470,414 shares authorized, 32,997,244 issued and outstanding (actual); no shares authorized, issued or outstanding (as adjusted)	3	
Class B common stock, $0.0001 par value; 4,529,586 shares authorized, no shares issued and outstanding (actual); no shares authorized, issued or outstanding (as adjusted)	—	
Preferred stock, $0.0001 par value; 20,000,000 shares authorized, no shares issued and outstanding (actual and as adjusted)	—	
Additional paid-in capital	71,161	
Accumulated deficit	(12,741)	
Total stockholders' equity	58,423	
Total capitalization	$ 58,865	$

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

The outstanding share information in the table above is based on 32,997,244 shares outstanding as of December 31, 2014 and excludes:

- 999,696 shares of common stock issuable upon the exercise of outstanding warrants as of December 31, 2014, with a weighted-average exercise price of $3.10 per share;
- 2,775,269 shares of common stock issuable upon the exercise of outstanding options as of December 31, 2014, with a weighted-average exercise price of $1.58 per share;

- shares of common stock reserved for future issuance under our stock-based compensation plans, consisting of (1) 2,705,000 shares of common stock reserved for future issuance under our 2014 Plan, which shares will be added to the shares of common stock to be reserved under our 2015 Plan which will become effective upon completion of this offering, and (2) shares of common stock reserved for future issuance under our 2015 Plan, as well as, shares of common stock that become available under our 2015 Plan pursuant to provisions thereof that automatically increase the share reserve under the 2015 Plan each year, as more fully described in the section titled "Executive and Director Compensation—Employee Benefit and Stock Plans."

DILUTION

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

Our historical net tangible book value as of December 31, 2014 was approximately $57.4 million, or $1.74 per share of common stock. Our historical net tangible book value is the amount of our total tangible assets less our liabilities. As of December 31, 2014, we excluded $0.8 million of intangible assets and $0.1 million of deferred equity issuance costs to arrive at tangible assets. Historical net tangible book value per share is our historical net tangible book value divided by the number of shares of common stock outstanding as of December 31, 2014.

After giving effect to the sale of shares of common stock in this offering at an assumed initial public offering price of $, the midpoint of the estimated offering price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value at December 31, 2014 would have been $ million, or $ per share of common stock. This represents an immediate increase in as adjusted net tangible book value of $ per share to existing stockholders and an immediate dilution of $ per share to new investors.

The following table illustrates this dilution:

Assumed initial public offering price per share		$
Historical net tangible book value per share as of December 31, 2014	$1.74	
Increase in net tangible book value per share attributable to new investors in this offering		
As adjusted net tangible book value per share immediately after this offering		
Dilution per share to new investors in this offering		$

Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) our as adjusted net tangible book value per share to new investors by $, and would increase (decrease) dilution per share to new investors in this offering by $, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. In addition, to the extent any outstanding options or warrants to purchase common stock are exercised, new investors would experience further dilution. If the underwriters exercise their option to purchase additional shares in full, the as adjusted net tangible book value per share of our common stock after giving effect to this offering would be approximately $ per share, and the dilution per share to investors in this offering would be approximately $ per share of common stock.

The following table summarizes, on an as adjusted basis as of December 31, 2014, the total number of shares of common stock purchased from us, the total consideration paid to us and the average price per share paid to us by existing stockholders and by new investors purchasing shares of common stock in this offering at the assumed initial public offering price of $, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, before deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us:

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

Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) each of the total consideration paid by new investors and total consideration paid by all stockholders by approximately $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each increase (decrease) of 1.0 million shares in the number of shares of common stock offered by us, as set forth on the cover page of this prospectus, would increase (decrease) each of the total consideration paid by new investors and total consideration paid by all stockholders by approximately $ million, assuming that the assumed initial public offering price remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. In addition, to the extent any outstanding options or warrants to purchase common stock are exercised or any outstanding restricted stock units have vested, new investors will experience further dilution.

If the underwriters exercise their option to purchase additional shares in full, our existing stockholders would own % and our new investors would own % of the total number of shares of our common stock outstanding after this offering.

The foregoing discussion and tables are based on 32,997,244 shares of common stock outstanding as of December 31, 2014, and excludes:

- 999,696 shares of common stock issuable upon the exercise of outstanding warrants as of December 31, 2014, with a weighted-average exercise price of $3.10 per share;
- 2,775,269 shares of common stock issuable upon the exercise of outstanding options as of December 31, 2014, with a weighted-average exercise price of $1.58 per share; and
- shares of common stock reserved for future issuance under our stock-based compensation plans, consisting of (1) 2,705,000 shares of common stock reserved for future issuance under our 2014 Plan, which shares will be added to the shares of common stock to be reserved under our 2015 Plan which will become effective upon completion of this offering, and (2) shares of common stock reserved for future issuance under our 2015 Plan, as well as, shares of common stock that become available under our 2015 Plan pursuant to provisions thereof that automatically increase the share reserve under the 2015 Plan each year, as more fully described in the section titled “Executive and Director Compensation—Employee Benefit and Stock Plans.”

Furthermore, we may choose to raise additional capital through the sale of equity or convertible debt securities due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent we issue additional shares of common stock or other equity or convertible debt securities in the future, there will be further dilution to investors participating in this offering

SELECTED FINANCIAL DATA

We derived the following selected statements of operations data for the years ended December 31, 2013 and 2014 and selected balance sheet data as of December 31, 2013 and 2014 from our audited financial statements included elsewhere in this prospectus. Historical results are not necessarily indicative of the results that may be expected in the future. You should read the following selected financial data below together with the financial statements and related notes included elsewhere in this prospectus, as well as the section of this prospectus captioned "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	Year Ended December 31,	
	2013	2014
	(in thousands, except share and per share data)	
Statements of Operations Data:		
Revenue	$ 600	$ 641
Operating expenses:		
Royalties and cost of licensing	253	323
Research and development	446	1,595
Selling, general and administrative	1,982	4,326
Total operating expenses	2,681	6,244
Loss from operations	(2,081)	(5,603)
Other income (expense):		
Interest expense, net	(461)	(451)
Fair value adjustment	684	(158)
Total other income (expense)	223	(609)
Loss before income taxes	(1,858)	(6,212)
Income tax expense	1	1
Net loss	$ (1,859)	$ (6,213)
Net loss per share:		
Basic and diluted	$ (4.32)	$ (1.40)
Weighted average number of shares during the year:		
Basic and diluted	430,519	4,453,702

	As of December 31,	
	2013	2014
	(in thousands)	
Balance Sheet Data:		
Cash and cash equivalents	$ 350	$ 59,104
Working capital (deficit)	(4,020)	56,968
Total assets	2,103	60,828
Total liabilities	4,998	2,405
Accumulated deficit	(6,528)	(12,741)
Total stockholders' equity (deficit)	(2,895)	58,423

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

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our financial statements and notes thereto appearing elsewhere in this prospectus. In addition to historical financial information, the following discussion and analysis contains forward-looking statements that involve risks, uncertainties, and assumptions. Our actual results could differ materially from those anticipated by these forward-looking statements as a result of many factors. We discuss factors that we believe could cause or contribute to these differences below and elsewhere in this prospectus, including those set forth under "Risk Factors" and "Forward-Looking Statements."

Overview

We are a pioneering clinical-stage immunotherapy company focused on harnessing the power of the innate immune system by using the natural killer cell to treat cancer, infectious diseases and inflammatory diseases. Natural killer, or NK, cells are the body's first line of defense due to their innate ability to rapidly seek and destroy abnormal cells, such as cancer or virally-infected cells, without prior exposure or activation by other support molecules required to activate adaptive immune cells such as T-cells.

We believe we are uniquely positioned to implement precision cancer medicine and potentially change the current paradigm of cancer care by leveraging the advances that have evolved during the past decade and addressing newly discovered challenges of cancer. We believe that many recent advances in cancer treatments have not adequately addressed the heterogeneity of tumor cells, the large mutation load per tumor cell identified by advanced genomics sequencing technologies, and the resistance of the cancer stem cell to chemotherapy. Cancer is only recently understood to be a complex of rare diseases, with hundreds of patient-specific, cancer-promoting mutated proteins, some known and many more unknown called neoepitopes. Identifying and targeting these mutated proteins is our strategy to overcome the challenges of cancer in the era of genomics, transcriptomics and immuno-oncology. We believe neoepitopes, which are newly discovered antigens selectively expressed on the cancer cells and not on the essential normal tissue, represent large untapped targeting opportunities for immune effector cells such as our activated NK cells.

Multiple Modes of Tumor Cell Killing. Our immuno-oncology NK platform has multiple modes to potentially induce cell death against the tumor or infected cell by: (1) direct killing by binding to stress ligands expressed by the diseased cell with the release of toxic granules directly into the tumor cell; (2) antibody mediated killing by binding to antibodies administered in combination and enhancing the cancer killing effect of the administered antibody, enabling targeted cell killing through antibody dependent cellular cytotoxicity, or ADCC; and (3) target activated killing by binding to known or newly discovered tumor-specific antigens, expressed on the surface of tumor cells and inducing cell death by the release of toxic granules directly into the tumor cell, by the release of cytokines and chemokines which recruit additional innate and adaptive immune responses and by the recruitment of cytotoxic T-cells.

By implementing an integrated discovery ecosystem and leveraging these multiple modes of NK killing of abnormal cells, we believe we are uniquely positioned to potentially address potentially a broad range of known and unknown cancer-promoting mutated proteins and to transform clinical cancer care. Our targeted therapeutic areas include: (1) cancer, focusing on bulky hematological cancers and solid tumors as well as cancer stem cells, (2) infectious diseases, including viral, fungal and bacterial infections, and (3) inflammatory diseases, ranging from rare inherited diseases to more prevalent autoimmune disorders.

Our Integrated Discovery Ecosystem for Precision Medicine. In order to effectively target newly discovered neoepitopes, we plan to integrate the following ecosystem to help drive the development of genetically modified NK cells anticipated to be directed against these cancer-promoting mutated proteins: (1) a high-speed supercomputing infrastructure to help identify both known antigens on the surface of tumor cells and neoepitopes

in clinical patients suffering from cancer, in a timely manner and at large scale; (2) a next-generation genomic and transcriptomic sequencing infrastructure to identify the expression of the neoepitopes on the surface of the tumor cell; (3) a diverse library of human antibodies from which to interrogate and extract an antibody matching the neoepitope; and (4) an NK cell potentially capable of being produced as a scalable cell-based “off-the-shelf” therapy without the need for patient compatibility matching. We expect to regularly add newly discovered neoepitopes from our discovery engine, and we believe the thousands of newly discovered antigens selectively expressed on the cancer cells and not on the essential normal tissue will provide us with the ability to create new and targeted libraries of antibodies to be potentially delivered as living drugs for metastatic cancer cells and cancer stem cells.

We retain exclusive worldwide rights to clinical and research data, intellectual property and know-how developed with our aNK cells, as well as what we believe is the only clinical grade master cell bank of aNK cells in existence.

Since our inception in 2002, we have devoted substantially all of our resources to the discovery and development of our product candidates, including conducting clinical trials, and funding general and administrative support for these operations. To date, we have generated minimal revenue from non-exclusive license agreements with numerous pharmaceutical and biotechnology companies granting the right to use our cell lines and intellectual property for non-clinical use. We have not generated any revenue from product sales. We have incurred net losses in each year since our inception and, as of December 31, 2014, we had an accumulated deficit of $12.7 million. Our net losses were approximately $1.9 million and $6.2 million for the years ended December 31, 2013 and 2014, respectively. Substantially all of our net losses resulted from costs incurred in connection with our research and development programs and from selling, general and administrative costs associated with our operations.

We expect to continue to incur significant expenses and increasing operating losses for the foreseeable future, which may fluctuate significantly from quarter-to-quarter and year-to-year. We anticipate that our expenses will increase substantially as we:

- continue research and development, including preclinical and clinical development of our existing product candidates;
- potentially seek regulatory approval for our product candidates;
- seek to discover and develop additional product candidates;
- establish a commercialization infrastructure and scale up our manufacturing and distribution capabilities to commercialize any of our product candidates for which we may obtain regulatory approval;
- seek to comply with regulatory standards and laws;
- maintain, leverage and expand our intellectual property portfolio;
- hire clinical, manufacturing, scientific and other personnel to support our product candidates development and future commercialization efforts;
- add operational, financial and management information systems and personnel; and
- incur additional legal, accounting and other expenses in operating as a public company.

We do not expect to generate any revenue from product sales unless and until we successfully complete development and obtain marketing approval for one or more of our product candidates, which we do not expect to happen for at least the next several years, if ever. Until such time that we can generate substantial revenue from product sales, if ever, we expect to finance our operating activities through a combination of equity offerings, debt financings, government or other third-party funding, marketing and distribution arrangements and

other collaborations, strategic alliances and licensing arrangements. However, we may be unable to raise additional funds or enter into such other arrangements when needed on favorable terms or at all, which would have a negative impact on our financial condition and could force us to delay, limit, reduce or terminate our research and development programs or commercialization efforts. Failure to receive additional funding could cause us to cease operations, in part or in full.

Collaboration Agreements

We anticipate that strategic collaborations will become an integral part of our operations, providing opportunities to leverage our partners' expertise and capabilities to further expand the potential of our technologies and product candidates. We believe we are well positioned to become a leader in cell-based immunotherapy due to our broad and vertically integrated platform and through complementary strategic partnerships.

In December 2014, we entered into a global collaboration with Sorrento Therapeutics, Inc. to jointly develop taNK product candidates as may be agreed between the parties. This transaction allows us to leverage Sorrento's proprietary G-MAB technology platform, one of the largest fully human antibody libraries in the world, to source CARs for our taNK product candidates. The economics from each product candidate will be dependent on the proportion of the development costs that each party contributes.

In addition, we entered into a collaboration with affiliates of NantWorks to provide us with access to a molecular diagnostics company with a database of genomic and proteomic information collected from a broad array of tumor cell samples. Through our strategic collaborations with affiliates of NantWorks and with Sorrento, we plan to identify both known antigens on the surface of tumor cells and neoepitopes in clinical patients, identify the expression of the neoepitopes on the surface of the tumor cell and interrogate a large diverse library of human antibodies and extract an antibody matching the neoepitope. Through this integrated and extensive discovery engine, we plan to identify antibodies to target newly discovered neoepitopes, with the goal of driving the development of our product pipeline and establishing just in time precision medicine.

Components of our Results of Operations

Revenue

To date, we have derived substantially all of our revenue from non-exclusive license agreements with numerous pharmaceutical and biotechnology companies granting them the right to use our cell lines and intellectual property for non-clinical use. These agreements generally include upfront fees and annual research license fees for such use, as well as commercial license fees for sales of our licensee's products developed or manufactured using our intellectual property and cell lines. Our license agreements may also include milestone payments, although to date, we have not generated any revenue from milestone payments. We recognize revenue when there is persuasive evidence of an arrangement, delivery has occurred or we have provided the service, the fees are fixed and determinable and collectability is reasonably assured. We expect our revenue from license agreements to fluctuate from year-to-year, primarily as a result of the consummation of new licensing agreements, expiration of existing licensing agreements and the timing of our revenue recognition. To date, we have not generated any revenue from product sales. If we fail to complete the development of our product candidates in a timely manner or fail to obtain regulatory approval for them, we may never be able to generate substantial future revenue.

Operating Expenses

We classify our operating expenses into three categories: royalties and cost of licensing, research and development and selling, general and administrative expenses. Personnel costs including salaries, benefits, bonuses and stock-based compensation expense comprise a significant component of our research and development and selling, general and administrative expense categories. We allocate expenses associated with our facilities and information technology costs between these two categories based on the nature of each cost.

Royalties and Cost of Licensing

Royalties and cost of licensing primarily consists of our expenses related to the generation of revenue from our license agreements. These expenses primarily consist of royalty payments made pursuant to our in-licensing agreements and patent amortization expense. We have in-licensing agreements with various medical centers for the right to use their products and / or intellectual property. We expect our royalty payments pursuant to our in-licensing agreements to fluctuate in absolute dollars from year-to-year with the corresponding revenue from license agreements.

Research and Development

Research and development expense consists of expenses incurred while performing research and development activities to discover and develop our product candidates. This includes conducting preclinical studies and clinical trials, manufacturing development efforts and activities related to regulatory filings for product candidates. We recognize research and development expenses as they are incurred. Our research and development expense primarily consists of:

- clinical trial and regulatory-related costs;
- expenses incurred under agreements with investigative sites and consultants that conduct our clinical trials;
- manufacturing and testing costs and related supplies and materials;
- employee-related expenses, including salaries, benefits, travel and stock-based compensation; and
- facility expenses dedicated to research and development

We typically use our employee, consultant and infrastructure resources across our development programs. We track outsourced development costs by product candidate or development program, but we do not allocate personnel costs, other internal costs or external consultant costs to specific product candidates or development programs.

Substantially all of our research and development expenses to date have been incurred in connection with our product candidates. We expect our research and development expenses to increase significantly for the foreseeable future as we advance an increased number of our product candidates through clinical development, including the conduct of our planned clinical trials. The process of conducting clinical trials necessary to obtain regulatory approval is costly and time consuming. The successful development of product candidates is highly uncertain. At this time, we cannot reasonably estimate the nature, timing or costs required to complete the remaining development of any product candidates. This is due to the numerous risks and uncertainties associated with the development of product candidates.

The costs of clinical trials may vary significantly over the life of a project owing to, but not limited to, the following:

- per patient trial costs;
- the number of sites included in the clinical trials;
- the countries in which the clinical trials are conducted;
- the length of time required to enroll eligible patients;
- the number of patients that participate in the clinical trials;
- the number of doses that patients receive;
- the cost of comparative agents used in clinical trials;
- the drop-out or discontinuation rates of patients;

- potential additional safety monitoring or other studies requested by regulatory agencies;
- the duration of patient follow-up; and
- the efficacy and safety profile of the product candidate.

We do not expect any of our product candidates to be commercially available for at least the next several years, if ever.

Selling, General and Administrative

Selling, general and administrative expense consists primarily of salaries and personnel-related costs, including employee benefits and any stock-based compensation, for employees performing functions other than research and development. This includes personnel in executive, finance, human resources and administrative support functions. Other selling, general and administrative expenses include facility-related costs not otherwise allocated to research and development expense, professional fees for auditing, tax and legal services, advertising costs, noncapitalized expenses associated with obtaining and maintaining patents, consulting costs and costs of our information systems.

We expect that our selling, general and administrative expenses will increase for the foreseeable future as we expand operations, internalize the manufacturing of our product candidates (including costs related to building out a state-of-the-art manufacturing facility as well as hiring additional employees to support our manufacturing and processing department), and begin operating as a public reporting company (including increased fees for outside consultants, lawyers and accountants, as well as increased directors' and officers' liability insurance premiums). We also expect to incur increased costs to comply with stock exchange listing and SEC requirements, corporate governance, internal controls, investor relations, disclosure and similar requirements applicable to public companies. Additionally, if and when we believe that a regulatory approval of a product candidate appears likely, we expect to incur significant increases in our selling, general and administrative expenses relating to the sales and marketing of the approved product candidate.

Other Income (Expense)

Other income (expense) consists primarily of non-cash costs related to fair value adjustments to our derivative warrant liability and amortization of debt issuance costs and debt discount to interest expense. Other income (expense) also includes interest expense incurred on our borrowings.

In 2010 we issued, in conjunction with a termination and release agreement, a warrant to purchase 62,016 shares of Class A common stock. The warrant was initially exercisable at $4.51 per share and is currently exercisable at $3.25 per share. The warrant expires in February 2020. The warrant includes a provision that for a period of two years after a reverse merger, the exercise price of the warrant is protected against down-round financing unless two-thirds of shareholders consent to the new transaction. We accounted for the warrant as a derivative liability, which is adjusted to fair value each reporting period.

Income Tax

Income tax expense consists of U.S. federal and state income taxes. To date, we have not been required to pay U.S. federal income taxes because of our current and accumulated net operating losses. Our only income tax expense to date relates to minimum state income taxes in the State of California.

Results of Operations

Comparison of Years Ended December 31, 2013 and 2014

	Year Ended December 31,		Period-to-Period Change
	2013	2014	
	(in thousands)		
Revenue	$ 600	$ 641	$ 41
Operating expenses:			
Royalties and cost of licensing	253	323	70
Research and development	446	1,595	1,149
Selling, general and administrative	1,982	4,326	2,344
Total operating expenses	2,681	6,244	3,563
Loss from operations	(2,081)	(5,603)	(3,522)
Other income (expense):			
Interest expense, net	(461)	(451)	10
Fair value adjustment	684	(158)	(842)
Total other income (expense)	223	(609)	(832)
Loss before income taxes	(1,858)	(6,212)	(4,354)
Income tax expense	1	1	—
Net loss	$(1,859)	$(6,213)	$ (4,354)

Revenue

Revenue increased $41,000 during the year ended December 31, 2014 as compared to the year ended December 31, 2013. The increase was primarily attributable to earning a $0.2 million commercial license fee associated with one of our licensees' first commercial sale of a product developed using our intellectual property and cell lines. This increase was partially offset by a $0.1 million decrease in upfront and annual research license fees during the year ended December 31, 2014, due primarily to the timing of revenue recognition and a net decrease in the number of license agreements.

Royalties and Cost of Licensing

Royalties and cost of licensing increased $0.1 million during the year ended December 31, 2014 as compared to the year ended December 31, 2013. The increase was primarily attributable to a $49,000 increase in royalty payments under our in-licensing agreements and a $20,000 increase in patent amortization expense during the year ended December 31, 2014.

Research and Development

Research and development expense increased by $1.1 million, from $0.5 million for the year ended December 31, 2013 to $1.6 million for the year ended December 31, 2014. This increase was primarily attributable to a $0.6 million increase in salaries and personnel-related costs due to an increase in headcount of our research and development personnel, a $0.4 million increase in laboratory and clinical trials expenses, and a $0.1 million increase in rent expense for our research and development facilities.

Selling, General and Administrative

Selling, general and administrative expense increased by $2.3 million, from $2.0 million for the year ended December 31, 2013 to $4.3 million for the year ended December 31, 2014. This increase was primarily

attributable to an increase of $2.0 million in salaries and personnel-related costs as we prepared to file our registration statement and operate as a public company. Patent filing expenses increased by $0.2 million as we continued to apply for patent protection for our product candidates.

Other Income (Expense)

Other income (expense) changed by $0.8 million, from other income of $0.2 million for the year ended December 31, 2013 to other expense of $0.6 million for the year ended December 31, 2014. This change was primarily attributable to a $0.8 million increase in the fair value adjustment related to our derivative warrant liability.

Liquidity and Capital Resources

Sources of Liquidity

To date, we have funded our operations primarily through the issuance of $57.4 million of common stock, $7.7 million of convertible preferred stock, $2.3 million of debt and payables that were converted into common stock in 2013 and 2014 in connection with certain financings in those years, and $0.4 million of convertible promissory notes. As of December 31, 2014, we had cash and cash equivalents of $59.1 million, compared to $0.4 million as of December 31, 2013.

Recent Equity Financings

In December 2014, we raised a net total of $57.3 million from the sale of common stock to third parties, including $8.0 million in a private placement transaction on December 18, 2014, and $49.3 million in a private placement transaction on December 24, 2014. The funds received from these recent issuances of our common stock are currently our primary source of capital for our research and development and operating expenditures.

Cash Flows

The following table sets forth our primary sources and uses of cash for periods indicated:

	Year Ended December 31,	
	2013	2014
	(in thousands)	
Net cash used in operating activities	$ (408)	$ (5,354)
Net cash used in investing activities	(263)	(299)
Net cash provided by financing activities	905	64,407
Net increase in cash and cash equivalents	$ 234	$58,754

Operating Activities

For the year ended December 31, 2013, our net cash used in operating activities of $0.4 million consisted of a net loss of $1.9 million, primarily attributable to our spending on research and development and selling, general and administrative expenses, partially offset by $0.6 million in adjustments for non-cash items and $0.9 million of cash provided by changes in working capital. Adjustments for non-cash items primarily consisted of $0.9 million of stock-based compensation expense and $0.3 million of amortization of the debt discount, partially offset by the change in fair value of our derivative warrant liability of $0.7 million. Changes in working capital consisted primarily of an increase in accounts payable of $0.7 million.

For the year ended December 31, 2014, our net cash used in operating activities of $5.4 million consisted of a net loss of $6.2 million, primarily attributable to an increase in spending on research and development efforts

and selling, general and administrative expenses, and $0.8 million of cash used to fund changes in working capital, partially offset by $1.7 million in adjustments for non-cash items. Changes in working capital consisted primarily of a decrease in accounts payable and accrued expenses of $0.6 million. Adjustments for non-cash items primarily consisted of $0.8 million of stock-based compensation expense, $0.4 million of amortization of the debt discount, $0.2 million of depreciation expense and a change in fair value of our derivative warrant liability of $0.2 million.

Investing Activities

For the year ended December 31, 2013, net cash used in investing activities was $0.3 million, which primarily consisted of investments in intangible assets as we invested in patent-related costs associated with our aNK cell line.

For the year ended December 31, 2014, net cash used in investing activities was $0.3 million, which was primarily attributable to the purchase of property and equipment.

Financing Activities

For the year ended December 31, 2013, net cash provided by financing activities consisted of $0.7 million in net proceeds from our debt and equity offerings and $0.2 million in payments received for prior issuance of Class B common stock.

For the year ended December 31, 2014, net cash provided by financing activities consisted of $63.1 million net proceeds from our debt and equity offerings, $1.2 million in payments received for prior issuance of Class B common stock and $0.2 million from the exercise of stock options.

Future Funding Requirements

To date, we have generated minimal revenue from non-exclusive license agreements with numerous pharmaceutical and biotechnology companies granting the right to use our cell lines and intellectual property for non-clinical use for laboratory testing, and we have not generated any revenue from product sales. We do not expect to generate significant revenue unless and until we obtain regulatory approval of and commercialize any of our product candidates and we do not know when, or if, this will occur. In addition, we expect our expenses to significantly increase in connection with our ongoing development activities, particularly as we continue the research, development and clinical trials of, and seek regulatory approval for, our product candidates. Moreover, following the closing of this offering, we expect to incur additional costs associated with operating as a public company. In addition, subject to obtaining regulatory approval of our product candidates, we expect to incur significant commercialization expenses for product sales, marketing, manufacturing and distribution. We anticipate that we will need substantial additional funding in connection with our continuing operations. We expect that our expenses will increase substantially if and as we:

- continue research and development, including preclinical and clinical development of our existing product candidates;
- potentially seek regulatory approval for our product candidates;
- seek to discover and develop additional product candidates;
- establish a commercialization infrastructure and scale up our manufacturing and distribution capabilities to commercialize any of our product candidates for which we may obtain regulatory approval;
- seek to comply with regulatory standards and laws;
- maintain, leverage and expand our intellectual property portfolio;

- hire clinical, manufacturing, scientific and other personnel to support our product candidates development and future commercialization efforts;
- add operational, financial and management information systems and personnel; and
- incur additional legal, accounting and other expenses in operating as a public company.

Based upon our current operating plan, we expect that the net proceeds from this offering, together with our existing cash and cash equivalents, will enable us to fund our operating expenses and capital expenditures requirements for at least the next twelve months. We have based this estimate on assumptions that may prove to be wrong, and we may use our available capital resources sooner than we currently expect. The successful development of any product candidate is highly uncertain. Due to the numerous risks and uncertainties associated with the development and commercialization of our product candidates, if approved, we are unable to estimate the amounts of increased capital outlays and operating expenses associated with completing the development of our product candidates.

Our future capital requirements will depend on many factors, including:

- the timing of, and the costs involved in, preclinical and clinical development and obtaining any regulatory approvals for our product candidates;
- the costs of manufacturing, distributing and processing our product candidates;
- the number and characteristics of any other product candidates we develop or acquire;
- our relative responsibility for developing and commercializing taNK product candidates covered by our joint development and license agreement with Sorrento Therapeutics;
- our ability to establish and maintain strategic collaborations, licensing or other commercialization arrangements and the terms and timing of such arrangements;
- the degree and rate of market acceptance of any approved products;
- the emergence, approval, availability, perceived advantages, relative cost, relative safety and relative efficacy of other products or treatments;
- the expenses needed to attract and retain skilled personnel;
- the costs associated with being a public company;
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing intellectual property claims, including litigation costs and the outcome of such litigation;
- the timing, receipt and amount of sales of, or royalties on, any approved products; and
- any product liability or other lawsuits related to our product candidates.

Because all of our product candidates are in the early stages of preclinical and clinical development and the outcome of these efforts is uncertain, we cannot estimate the actual amounts necessary to successfully complete the development and commercialization of any of our product candidates or whether, or when, we may achieve profitability. Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through a combination of equity offerings, debt financings, collaborations, strategic alliances and/or licensing arrangements. We do not have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing, if available, 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 pharmaceutical partners, we may have to relinquish valuable rights to

our technologies, future revenue streams, research programs or product candidates, or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market our product candidates that we would otherwise prefer to develop and market ourselves.

Contractual Obligations, Commitments and Contingencies

Our principal commitments consist of obligations under our outstanding debt obligations, non-cancelable leases for our office space and certain equipment and vendor contracts to provide research services. The following table summarizes these contractual obligations as of December 31, 2014:

		Payments Due By Period			
Contractual Obligations	Total	Less Than 1 Year	1 to 3 Years	4 to 5 Years	More Than 5 Years
		(in thousands)			
Principal payments of debt(1)	$ 265	$ 265	$—	$ —	$ —
Operating lease commitments	244	145	99	—	—
Minimum royalty fees	75	25	50	—	—
Total contractual obligations	$ 584	$ 435	$ 149	$ —	$ —

(1) This debt was settled subsequent to December 31, 2014.

We also have potential royalty payment obligations pursuant to our in-licensing agreements that are contingent upon the initiation and completion of future activities. As of December 31, 2014, we were unable to estimate the timing or likelihood of achieving milestones or making future product sales and, therefore, any related payments are not included in the table above.

Off-Balance Sheet Arrangements

During the periods presented, we did not have any off-balance sheet arrangements as defined under SEC rules.

Critical Accounting Policies and Significant Judgments and Estimates

This management's discussion and analysis of our financial condition and results of operations is based on our financial statements, which we have prepared in accordance with accounting principles generally accepted in the United States. The preparation of our financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of our financial statements, as well as the reported revenues and expenses during the reported periods. We evaluate these estimates and judgments on an ongoing basis. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are more fully described in Note 2 to our audited financial statements appearing elsewhere in this prospectus, we believe that the following accounting policies are critical to the process of making significant judgments and estimates in the preparation of our financial statements and understanding and evaluating our reported financial results.

Revenue Recognition and Deferred Revenue

We generate revenue primarily from our non-exclusive license agreements with pharmaceutical and biotechnology companies granting them the right to use our cell lines and intellectual property for non-clinical

use. These agreements generally include upfront fees and annual research license fees for such use, as well as commercial license fees for sales of our licensee's products developed or manufactured using our intellectual property and cell lines. Our license agreements may also include milestone payments, although to date, we have not generated any revenue from milestone payments. We recognize revenue when there is persuasive evidence of an arrangement, delivery has occurred or we have provided the service, the fees are fixed and determinable and collectability is reasonably assured.

When entering into an agreement, we first determine whether the agreement includes multiple deliverables and is subject to accounting guidance in Accounting Standards Codification, or ASC, Subtopic 605-25, *Multiple-Element Arrangements*. If we determine that an agreement includes multiple elements, we determine whether the agreement should be divided into separate units of accounting and how the agreement consideration should be measured and allocated among the separate units of accounting.

An element qualifies as a separate unit of accounting when the delivered element has standalone value to the customer. Our agreements do not include a general right of return relative to delivered elements. Any delivered elements that do not qualify as separate units of accounting are combined with other undelivered elements within the agreement as a single unit of accounting. If the agreement constitutes a single combined unit of accounting, we determine the revenue recognition method for the combined unit of accounting and recognize the revenue over the period from inception through the date the last deliverable within the single unit of accounting is delivered.

License rights and non-contingent deliverables, such as knowledge transfer, do not have standalone value as they are not sold separately and they cannot be resold and, consequently are considered a single unit of accounting. Therefore, license revenue in the form of upfront fees is deferred and recognized over the applicable relationship period, which historically has been the estimated period of the Company's substantive performance obligations or the period the rights granted are in effect.

We recognize a milestone payment when earned if it is substantive and we have no ongoing performance obligations related to the milestone. A milestone payment is considered substantive if it: (1) is commensurate with either the performance to achieve the milestone or the enhanced value of the delivered item as a result of a specific outcome resulting from the performance to achieve the milestone; (2) relates solely to past performance; and (3) is reasonable relative to all of the deliverables and payment terms, including other potential milestone consideration, within the agreement.

We record any amounts received prior to satisfying the revenue recognition criteria as deferred revenue in the accompanying balance sheets.

Intangible Assets

We capitalize costs incurred in connection with patent applications (principally legal fees), patent purchases, and trademarks related to our cell line currently generating our revenue from licensing agreements, as intangible assets. We amortize these assets using the straight-line method over the estimated useful lives of the patents, generally 5-15 years. Other intangibles, consisting of trademarks and copyrights, are considered to have indefinite lives and are not amortized but reviewed for impairment annually, or sooner under certain circumstances.

Fair Value of Financial Instruments

We have common stock warrants that meet the definition of derivative financial instruments and are accounted for as a derivative liability. The fair value of this warrant derivative liability is based on a Monte Carlo simulation model at each reporting period. Estimating the fair value of the underlying shares is highly complex and subjective because our stock is not publicly traded.

The derivative warrant liability for the common stock warrants was $19,000 and $0.2 million at December 31, 2013 and December 31, 2014, respectively.

Stock-Based Compensation

We record the fair value of stock options issued to our employees as of the grant date as compensation expense. We recognize compensation expense, net of forfeitures, on a straight-line basis over the requisite service period, which is equal to the applicable vesting period.

We account for equity instruments issued to non-employees using a fair value approach under ASC Subtopic 505-50, *Equity-Based Payments to Non-Employees*. We value equity instruments and stock options granted using the Black-Scholes option-pricing model. The value of non-employee stock-based compensation is subject to periodic adjustments as the underlying equity instruments vest and is recognized as an expense over the term of the related financing or the period over which services are received.

Stock-based compensation expense has been reported in our statements of operations as follows:

	Year Ended December 31,	
	2013	2014
	(in thousands)	
Research and development	$251	$222
Selling, general and administrative	633	567
Total stock-based compensation expense	$884	$789

Determination of the Fair Value of Stock-Based Compensation Grants

We calculate the fair value of stock-based compensation arrangements using the Black-Scholes option-pricing model. The Black-Scholes option-pricing model requires the use of highly subjective assumptions, including the fair value of the underlying common stock on the date of grant, the risk-free interest rate for a period that approximates the expected term of our stock options, the expected term of our stock options, the expected volatility of the price of our common stock, and the expected dividend yield. These estimates involve inherent uncertainties and the application of management's judgment. If factors change and different assumptions are used, our stock-based compensation expense could be materially different in the future. These assumptions are estimated as follows:

- ***Fair value of our common stock*****—**because our stock is not publicly traded, we estimated the fair value of our common stock, as discussed in "Common Stock Valuation Methodology—Third Party Valuations" below. Following the closing of this offering and the commencement of public trading of our common stock, the fair value per share of our common stock for purposes of determining stock-based compensation will be the closing price of our common stock as reported on the applicable grant date.
- ***Risk-free interest rate*****—**we determine the risk-free interest rate by reference to implied yields available from U.S. Treasury securities with a remaining term equal to the expected life assumed at the date of grant.
- ***Expected term*****—**we determine the average expected life of "plain vanilla" stock options based on the simplified method in accordance with SEC Staff Accounting Bulletin Nos. 107 and 110, as our common stock to date has not been publicly traded. We expect to use the simplified method until we have sufficient historical exercise data to provide a reasonable basis upon which to estimate expected term. For options that are not considered "plain vanilla," such as those with exercise prices in excess of the fair market value of the underlying stock, we use an expected life equal to the contractual term of the option.
- ***Expected volatility*****—**we do not have sufficient history to estimate the volatility of our common stock. We calculate expected volatility based on reported data for selected similar publicly traded companies for which the historical information is available. For the purpose of identifying peer companies, we consider characteristics such as industry, length of trading history, similar vesting terms and in-the-money option status. We plan to continue to use the guideline peer group volatility information until the historical volatility of our common stock is sufficient to measure expected volatility for future option grants.

- ***Expected dividend yield***—the expected dividend yield is based on our expectation of not paying dividends for the foreseeable future.

We account for stock-based compensation arrangements with non-employees which contain only service conditions for vesting using a fair value approach. The fair value of these options is measured using the Black-Scholes option-pricing model reflecting the same assumptions as applied to employee options in each of the reported periods, other than the expected life, which is assumed to be the remaining contractual life of the option. For non-employee options subject to vesting, the compensation costs of these arrangements are subject to re-measurement over the vesting period.

The following summarizes the assumptions used for estimating the fair value of stock options granted to employees for the period indicated:

	Year Ended December 31, 2014	
	Employee Grants	Non-Employee Grants
Risk-free interest rate	1.58% - 1.89%	2.17%
Expected term (in years)	5.00 - 5.64	9.22 - 9.71
Expected volatility	81% - 91%	81%
Expected dividend yield	0%	0%

In addition to the assumptions used in the Black-Scholes option-pricing model, the amount of stock option expense we recognize in our statements of operations includes an estimate of stock option forfeitures. As we do not have a history upon which to base the calculation of a forfeiture rate, we used a 5% forfeiture rate for stock options granted with cliff vesting. Changes in the estimated forfeiture rate can have a significant impact on our stock-based compensation expense as the cumulative effect of adjusting the rate is recognized in the period the forfeiture estimate is changed. If a revised forfeiture rate is higher than the previously estimated forfeiture rate, an adjustment is made that will result in a decrease to the stock-based compensation expense recognized in the financial statements. If a revised forfeiture rate is lower than the previously estimated forfeiture rate, an adjustment is made that will result in an increase to the stock-based compensation expense recognized in our financial statements.

Based upon an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover of this prospectus, the aggregate intrinsic value of outstanding options to purchase shares of our common stock as of December 31, 2014 was $ million, of which $ million related to vested options and $ million to unvested options.

Determination of Exercise Price of Stock Options and the Fair Value of Common Stock on Grant Dates

The following table summarizes by grant date the number of shares of common stock subject to stock options granted between January 1, 2014 and December 31, 2014, as well as the associated per-share exercise price and the estimated fair value per share of our common stock on the grant date:

Grant Date	Number of Shares Underlying Options Granted	Exercise Price Per Share	Estimated Fair Value Per Share
March 17, 2014	1,450,000	$ 0.40	$ 0.40
November 24, 2014	720,000	0.78	0.78
December 10, 2014	630,000	3.25	3.25
December 18, 2014	425,000	3.25	3.25

In estimating the fair value of our common stock at each grant date to set the exercise price of the stock options, given the absence of a public market for our common stock, management and our board of directors

used either the price at which we recently sold shares of common stock to an investor in an arms-length transaction or recently obtained contemporaneous valuations performed by a third-party valuation specialist in accordance with the guidance outlined in the American Institute of Certified Public Accountants Practice Aid, *Valuation of Privately-Held Company Equity Securities Issued as Compensation*, also known as the Practice Aid. The estimated fair value per share of our common stock in the table above, as determined by either the third-party valuations or recent sale of our common stock, were used to measure the stock-based compensation expense for options granted during these periods.

The dates of our contemporaneous valuations have not always coincided with the dates of our stock-based compensation grants. In such instances, management and our board of directors' fair value estimates have been based on the most recent contemporaneous valuation of our shares of common stock and an assessment of additional objective and subjective factors they believed were relevant as of the grant date, including:

- our stage of development, including the progress of our research and development activities;
- our operating and financial performance, including our levels of available capital resources;
- the market performance of comparable publicly traded companies;
- the achievement of enterprise milestones, including our progress in clinical trials;
- the existence of recent sales of our stock in arms'-length transactions;
- the lack of marketability of our securities by virtue of being a private company;
- current business conditions and risks; and
- management and board experience.

Common Stock Valuation Methodology

March 2014 Grants

In estimating the fair value of our common stock to set the exercise price of the stock options granted on March 17, 2014, management and our board of directors utilized a third-party valuation as of March 17, 2014. The valuation report reflected a fair value for our common stock of $0.40 per share.

Management and our valuation specialist used the market approach in determining the equity value of our business as of the March 17, 2014. The market approach estimates the fair value of a company by applying market multiples of comparable publicly traded companies, the guideline public company method, or publicly disclosed data from arm's-length strategic merger or sale transactions involving similar companies in the marketplace, the market transaction method. For the March 17, 2014 valuation, we used the guideline company method. We identified companies similar to our business and used these guideline companies to develop relevant market multiples and ratios. We then applied these market multiples and ratios to our applicable financial data to estimate our equity value. In selecting guideline public companies, we gave consideration to differences between us and the selected guideline public companies in terms of size, anticipated profitability, market size and other critical characteristics that generally reflect an investor's assessment of the business and financial risks inherent in our industry.

The following assumptions were used to complete the valuation using the guideline company method of the market approach:

- total equity value of $3.65 million;
- pro rata allocation of the equity value to common stock based on fully diluted as-converted common shares of 6,345,210; and
- a lack of marketability discount of 30%.

November 2014 Grants

In estimating the fair value of our common stock to set the exercise price of the stock options granted on November 24, 2014, management and our board of directors utilized a third-party valuation as of June 30, 2014. The valuation report reflected a fair value for our common stock of $0.78 per share. Management and our board of directors determined that there were no significant factors effecting the fair value of our common stock that had occurred between June 30, 2014 and November 24, 2014.

For the June 30, 2014 valuation, management and our valuation specialist used the pricing of our private placement of Series C convertible preferred stock that was established based on arms-length negotiations with sophisticated third parties as the baseline for determining our equity value due to the close proximity in time of the equity issuance in April 2014 to the valuation date. Our total equity value was implied using a backsolve technique within the Options Pricing Method, or OPM, to allocate equity. The backsolve method uses an iterative approach within the OPM to solve for our total equity value that is consistent with the Series C convertible preferred stock price of $2.40 per share, given the rights and preferences of the preferred and common stockholders with our capital structure. Management and our valuation specialist then utilized the OPM to allocate the equity value to our common stock. The OPM treats common stock and convertible preferred stock as call options on an equity value, with exercise prices based on the liquidation preference of the convertible preferred stock. Therefore, the common stock has value only if the funds available for distribution to the stockholders exceed the value of the liquidation preference at the time of a liquidity event such as a merger, sale or initial public offering, assuming the enterprise has funds available to make a liquidation preference meaningful and collectible by the stockholders. The common stock is modeled to be a call option with a claim on the enterprise at an exercise price equal to the remaining value immediately after the convertible preferred stock is liquidated. The OPM uses the Black-Scholes option-pricing model to price the call options. The OPM is appropriate to use when the range of possible future outcomes is so difficult to predict that forecasts would be highly speculative.

The following assumptions were used to complete the valuation using the backsolve technique within the OPM analysis:

- total equity value of $21.0 million, based on the pricing of our Series C convertible preferred stock issuance;
- $7.3 million of the total equity value allocated to common stock; and
- a lack of marketability discount of 20%.

The increase in valuation of our common stock from $0.40 per share in March 2014 to $0.78 per share in November 2014 was primarily driven by the successful closing of our private placement of Series C convertible preferred stock in April 2014.

December 2014 Grants

In estimating the fair value of our common stock to set the exercise price of the stock options granted on December 10, 2014 and December 18, 2014, management and our board of directors utilized the $3.25 per share price established in connection with the sale of our common stock in December 2014 to a sophisticated third party (Sorrento Therapeutics, Inc., or Sorrento) in an arm’s length transaction, due to the close proximity in time of the equity issuance to the stock option grant dates. We issued to Sorrento an aggregate of 2,461,538 shares of our Class A common stock at a price of $3.25 per share in two separate tranches that closed on December 16, 2014 and December 18, 2014, in connection with our joint development and license agreement.

Utilization of Net Operating Loss Carryforwards and Research and Development Credits

As of December 31, 2014, we had federal and state income tax net operating loss, or NOL, carryforwards of approximately $10.0 million and $9.7 million, respectively, which will expire at various dates through 2033. As

of December 31, 2014, we also had minimal federal and state research and development tax credit carryforwards to offset future income taxes.

Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, or the Code, if a corporation undergoes an "ownership change" (generally defined as a greater than 50% change (by value) in its equity ownership over a three-year period), the corporation's ability to use its pre-change net operating loss carry forwards and other pre-change tax attributes to offset its post-change income may be limited. Although we have not completed a study to determine the impact of ownership changes on our NOL carryforwards, we believe that we have recently undergone one or more ownership changes and accordingly, our ability to use our NOLs will be limited.

Emerging Growth Company Status

On April 5, 2012, the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, was enacted. Section 107 of the JOBS Act provides that an "emerging growth company" can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. Thus, an "emerging growth company" can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this extended transition period for complying with new or revised accounting standards and, therefore, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

Recent Accounting Pronouncements

Application of New or Revised Accounting Standards—Adopted

In July 2013, the Financial Accounting Standards Board, or FASB, issued Accounting Standards Update, or ASU, No. 2013-11, *Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Credit Carryforward Exist*, or ASU 2013-11. ASU 2013-11 amends the presentation requirements of ASC Topic 740, *Income Taxes*, and requires an unrecognized tax benefit to be presented in the financial statements as a reduction to a deferred tax asset for a NOL carryforward, similar tax loss, or a tax credit carryforward. To the extent the tax benefit is not available at the reporting date under the governing tax law or if the entity does not intend to use the deferred tax asset for such purpose, the unrecognized tax benefit should be presented as a liability and not combined with deferred tax assets. ASU 2013-11 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2013. The amendments are to be applied to all unrecognized tax benefits that exist as of the effective date and may be applied retrospectively to each prior reporting period presented. The adoption of ASU 2013-11 did not have a material impact on our financial statements and disclosures as we had no uncertain tax positions at December 31, 2013 and 2014.

Application of New or Revised Accounting Standards—Not Yet Adopted

In May 2014, the FASB issued guidance codified in ASC Topic 606, *Revenue Recognition—Revenue from Contracts with Customers*, which amends the guidance in former ASC Topic 605, *Revenue Recognition*, and becomes effective beginning January 1, 2017. This guidance requires that entities recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. We are currently evaluating the impact of the provisions of ASC Topic 606 on its financial statements and disclosures. On April 29, 2015, the FASB proposed deferring the effective date of Topic 606 by one year.

In June 2014, the FASB issued ASU 2014-12, *Compensation-Stock Compensation (Topic 718): Accounting for Share-Based Payments when the Terms of an Award Provide that a Performance Target Could Be Achieved After the Requisite Service Period*, or ASU 2014-12. The ASU requires that a performance target that affects vesting and that could be achieved after the requisite service period be treated as a performance condition.

ASU 2014-12 is effective for annual periods and interim periods within those annual periods beginning after December 15, 2015. Earlier adoption is permitted. We are currently evaluating the impact of the adoption of ASU 2014-12 on our financial statements and disclosures.

In August 2014, the FASB issued ASU No. 2014-15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern*, or ASU 2014-15, which amends ASC Subtopic 205-40 to provide guidance about management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern and to provide related disclosures. Specifically, the amendments (1) provide a definition of the term "substantial doubt," (2) require an evaluation every reporting period, (3) provide principles for considering the mitigating effect of management's plans, (4) require certain disclosures when substantial doubt is alleviated as a result of consideration of management's plans, (5) require an express statement and other disclosures when substantial doubt is not alleviated and (6) require an assessment for a period of one year after the date that financial statements are issued. ASU 2014-15 is effective for fiscal years ending after December 15, 2016, and for annual periods and interim periods thereafter. We do not plan on early adopting this standard, but it will not have a material impact on our financial condition.

In January 2015, the FASB issued ASU No. 2015-01, Income Statement—*Extraordinary and Unusual Items (Subtopic 225-20); Simplifying Income Statement Presentation by Eliminating the Concept of Extraordinary Items*, which eliminates from GAAP the concept of extraordinary items, stating that the concept causes uncertainty because (1) it is unclear when an item should be considered both unusual and infrequent and (2) users do not find the classification and presentation necessary to identify those events and transactions. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2015, with early adoption permitted provided the guidance is applied from the beginning of the fiscal year of adoption. We do not expect this standard to have an impact on its financial statements upon adoption.

In February 2015, the FASB issued ASU 2015-02, *Consolidation (Topic 810)—Amendments to the Consolidation Analysis*, or ASU 2015-02. ASU 2015-02 affects reporting entities that are required to evaluate whether they should consolidate certain legal entities. Specifically, the amendments (1) modify the evaluation of whether limited partnerships and similar legal entities are variable interest entities (VIEs) or voting interest entities, (2) eliminate the presumption that a general partner should consolidate a limited partnership, (3) affect the consolidated analysis of reporting entities that are involved with VIEs, and (4) provide a scope exception for certain entities. ASU 2015-02 is effective for interim and annual reporting periods beginning after December 15, 2015. We are currently evaluating the impact of the adoption of ASU 2015-02 on our financial statements and disclosures.

In April 2015, the FASB issued ASU 2015-03, *Interest—Imputation of Interest (Subtopic 835-30)*, or ASU 2015-03, which requires the debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with the presentation of debt discounts. This guidance is effective for financial statements issued for fiscal years beginning after December 15, 2015, and interim periods within those fiscal years. We do not expect this standard to have a material impact on our financial statements upon adoption.

Quantitative and Qualitative Disclosures about Market Risk

As of December 31, 2014, we had $59.1 million in cash and cash equivalents maintained in FDIC insured operating accounts. Our primary exposure to market risk for our cash and cash equivalents is interest income sensitivity, which is affected by changes in the general level of U.S interest rates. However, we do not believe a sudden change in the interest rates would have a material impact on our financial condition or results of operations due to the short-term maturities on our cash equivalents. A hypothetical 100 basis point change in interest rates during any of the periods presented would not have had a material impact on our financial statements.

BUSINESS

Overview

We are a pioneering clinical-stage immunotherapy company focused on harnessing the power of the innate immune system by using the natural killer cell to treat cancer, infectious diseases and inflammatory diseases. Natural killer, or NK, cells are the body's first line of defense due to their innate ability to rapidly seek and destroy abnormal cells, such as cancer or virally-infected cells, without prior exposure or activation by other support molecules required to activate adaptive immune cells such as T-cells.

We believe we are uniquely positioned to implement precision cancer medicine and potentially change the current paradigm of cancer care by leveraging the advances that have evolved during the past decade and addressing newly discovered challenges of cancer. We believe that many recent advances in cancer treatments have not adequately addressed the heterogeneity of tumor cells, the large mutation load per tumor cell identified by advanced genomics sequencing technologies, and the resistance of the cancer stem cell to chemotherapy. Cancer is only recently understood to be a complex of rare diseases, with hundreds of patient-specific, cancer-promoting mutated proteins, some known and many more unknown called neoepitopes. Identifying and targeting these mutated proteins is our strategy to overcome the challenges of cancer in the era of genomics, transcriptomics and immuno-oncology. We believe neoepitopes, which are newly discovered antigens selectively expressed on the cancer cells and not on the essential normal tissue, represent large untapped targeting opportunities for immune effector cells such as our activated NK cells.

Multiple Modes of Tumor Cell Killing. Our immuno-oncology NK platform has multiple modes to potentially induce cell death against the tumor or infected cell by: (1) direct killing by binding to stress ligands expressed by the diseased cell with the release of toxic granules directly into the tumor cell; (2) antibody mediated killing by binding to antibodies administered in combination and enhancing the cancer killing effect of the administered antibody, enabling targeted cell killing through antibody dependent cellular cytotoxicity, or ADCC; and (3) target activated killing by binding to known or newly discovered tumor-specific antigens expressed on the surface of tumor cells and inducing cell death by the release of toxic granules directly into the tumor cell, by the release of cytokines and chemokines which recruit additional innate and adaptive immune responses and by the recruitment of cytotoxic T-cells.

By implementing an integrated discovery ecosystem and leveraging these multiple modes of NK killing of abnormal cells, we believe we are uniquely positioned to potentially address a broad range of known and unknown cancer-promoting mutated proteins and to transform clinical cancer care. Our targeted therapeutic areas include: (1) cancer, focusing on bulky hematological cancers and solid tumors as well as cancer stem cells, (2) infectious diseases, including viral, fungal and bacterial infections, and (3) inflammatory diseases, ranging from rare inherited diseases to more prevalent autoimmune disorders.

Our Integrated Discovery Ecosystem for Precision Medicine. In order to effectively target newly discovered neoepitopes, we plan to integrate the following ecosystem to help drive the development of genetically modified NK cells anticipated to be directed against these cancer-promoting mutated proteins: (1) a high-speed supercomputing infrastructure to help identify both known antigens on the surface of tumor cells and neoepitopes in clinical patients suffering from cancer, in a timely manner and at large scale; (2) a next-generation genomic and transcriptomic sequencing infrastructure to identify the expression of the neoepitopes on the surface of the tumor cell; (3) a diverse library of human antibodies from which to interrogate and extract an antibody matching the neoepitope; and (4) an NK cell potentially capable of being produced as a scalable cell-based "off-the-shelf" therapy without the need for patient compatibility matching. We expect to regularly add newly discovered neoepitopes from our discovery engine, and we believe the thousands of newly discovered antigens selectively expressed on the cancer cells and not on the essential normal tissue will provide us with the ability to create new and targeted libraries of antibodies to be potentially delivered as living drugs for metastatic cancer cells and cancer stem cells.

Direct Killing: aNK Platform. We have developed a unique NK cell which we believe is capable of being produced as a cell-based "off-the-shelf" therapy, with killing potential for cancer and virally-infected cells. Unlike normal NK cells, our NK cells do not express inhibitory receptors, which diseased cells often utilize to turn off the killing function of NK cells. We have developed a unique activated NK, or aNK, cell which lacks these inhibitory receptors but retains activation receptors that enable selective targeting and killing of diseased cells. The killing mechanism of our aNK cells is increased compared to normal NK cells by virtue of delivering a larger payload of compounds involved responsible for the direct killing of diseased cells. We believe our aNK cells can be grown at commercial scale as an on demand, living drug using our proprietary manufacturing and distribution processes.

Safety studies of aNK cells in multiple Phase I clinical trials have been conducted in a variety of bulky hematological cancers and solid tumors, enrolling over 40 patients to date, with encouraging evidence of activity and durable remissions. Based on these clinical trials, we plan to develop the therapeutic applications of this aNK platform through molecular engineering of our aNK cells designed to leverage the multiple modes of killing available to aNKs, including antibody-mediated killing, our haNK platform, and antigen targeted killing, our taNK platform, described below.

Antibody-Mediated Killing: haNK Platform. We have genetically modified our aNK cells to incorporate high-affinity CD16 receptors, which bind to antibodies. These high-affinity NK, or haNK, cells are designed to directly bind to mAbs, such as Herceptin, Erbitux and Rituxan and may be able to enhance the cancer killing effect of the externally administered mAbs, enabling targeted cell killing through ADCC. mAbs are prevalently used to treat cancer and generate over $50.0 billion in reported annual sales. We believe, based on currently available information, that only approximately 10% to 20% of the addressable patient population for mAb therapies carry high-affinity CD16 receptors. This implies that our haNK product candidates may have significant market potential as a combination therapy to potentially address a large number of patients who have poor responses to mAbs.

Tumor Target Activated Killing: taNK Platform. We have genetically modified our aNKs to incorporate chimeric antigen receptors, or CARs, to target specific antigens on the surface of abnormal cells. These tumor target activated NK, or taNK, cells are designed to directly bind to tumor-specific antigens in bulky hematological cancers and solid tumors and induce cell death by the release of toxic granules directly into the tumor cell, by the release of cytokines and chemokines which recruit additional innate and adaptive immune responses and by the recruitment of cytotoxic T-cells. These tumor-specific antigens can be divided into the following four classes, which can be targeted by our taNK platform: (1) checkpoint inhibitors expressed on the surface of tumor cells such as PDL1; (2) well-established tumor antigens such as HER-2; (3) newly discovered neoepitopes; and (4) novel surface receptors associated with cancer stem cells.

Potential Advantages of our aNK Platform over T-Cell and Other Current Immunotherapies. The immune system has two components: innate immune cells, such as NK cells, which are always switched on to attack diseased cells, and adaptive immune cells, such as T-cells, which are mobilized to mount a delayed response. Our proprietary aNK platform is specifically designed to potentially address many of the limitations associated with current adaptive autologous cellular immunotherapies. We believe key limitations of adaptive autologous immunotherapy are the need to retrieve non-compromised immune cells from a cancer patient and the requirement for a complex and costly manufacturing process to develop the therapy. As a consequence of this need to harvest active T-cells, current Phase I clinical trials for autologous CAR-T cell therapies in large part enroll patients from highly selected, earlier-stage disease in bulky hematological cancers. In contrast, our allogeneic, "off-the-shelf" NK cells do not rely on the patient's own immune system, which is often compromised, to achieve its therapeutic effect.

- *Innate immune response.* aNK cells are always activated and can naturally detect and rapidly destroy a wide variety of diseased cells without prior exposure to pathogens, antigens or activation by stimulatory molecules. In contrast, the adaptive immune system requires co-stimulation for activation, resulting in delayed killing.

- *Promotion of adaptive immune response.* aNK cells stimulate the adaptive component of the immune system by producing chemokines and other molecules that activate and recruit adaptive immune cells, including T-cells, to attack the diseased cells.
- *Capability of activating both innate and adaptive immune system with a single agent.* By combining a PDL1 antibody as a CAR in our NK cells, our PDL1.taNK product candidate, we believe that we have the ability to both activate T-cells and induce direct killing by NK cells simultaneously with the administration of a single therapy.
- *Wide therapeutic potential across multiple tumor types and even late-stage disease.* In preclinical studies and Phase I safety clinical trials to date, aNK cells have demonstrated activity in a spectrum of cancers, including bulky hematological cancers and solid tumors, even in late-stage cancer patients who have failed multiple rounds of chemotherapy, radiation and stem cell transplantation.
- *Ability to attack cancer stem cells.* aNK cells have been shown in preclinical studies to attack cancer stem cells, which are resistant to conventional chemotherapy.
- *Application in diseases beyond cancer.* We believe aNK cells have the potential to treat diseases beyond cancer such as infectious and inflammatory diseases because of the inherent ability of NK cells to kill virally infected and abnormal cells. Preclinical studies in Ebola virus demonstrate this capability.
- *Well tolerated.* aNK cells are hypo-immunogenic and have shown no dose limiting toxicities in over 40 patients who have received therapy to date, even when some patients received as many as 18 infusions of aNK cells over six cycles. In contrast, Phase I clinical trials of CAR-T cell therapy have experienced challenges, such as reports of severe adverse toxicities of cytokine release syndrome and neurotoxicity in a number of patients.
- *Ease of administration.* aNK cells may be administrable in outpatient facilities, offering physicians the flexibility to titrate and re-dose therapy based on patient tolerability and need. In contrast, CAR-T cell therapy is a complex and costly procedure, at times requiring hospitalization, pre-conditioning and intensive care unit admission following severe adverse toxicities associated with cytokine release syndrome.
- *Virtually universal patient compatibility.* aNK cells do not require patient-donor matching or a minimum level of patient immuno-competence.
- *Low-cost, efficient and scalable manufacturing.* aNK cells can be cryopreserved, stockpiled and readily accessed on demand from what we believe is the world's only current good manufacturing practices, or cGMP, compliant NK cell bank, a proprietary asset of our company.

Clinical Trials to Date. aNK cells have been evaluated as a monotherapy in over 40 patients to date in four Phase I clinical trials. Unlike many cell-based adaptive immunotherapy clinical trials, pre-conditioning agents such as IL-2 were not administered to enhance therapeutic effect and all patients in the aNK Phase I clinical trials had very advanced cancer having failed multiple rounds of standard chemotherapy, radiation and even stem cell transplantation and were not preselected. The safety profile showed minimal adverse effects, and no dose limiting toxicities even when some patients received as many as 18 infusions of our aNK cells over six cycles. Infusions of aNK cells up to $1x10^{10}$ cells/m^2 were well tolerated. Even in these late-stage patients refractory to standard therapy, encouraging evidence of activity in cancers, including bulky hematological cancers and solid tumors was observed, including some patients with durable remission. One patient with Hodgkin's lymphoma exhibited complete remission and remains in complete remission five years post treatment. Activity was also noted in bulky hematological cancers with stable disease and partial responses in patients with diffuse large B cell lymphoma and with multiple myeloma, with durable stabilization of disease for over two years in a patient with diffuse large B cell lymphoma. In solid tumors, encouraging responses were seen in patients with advanced lung cancer who failed surgery, radiation and chemotherapy, with three out of four patients demonstrating partial response or stable disease. In patients with metastatic renal cell carcinoma who failed standard therapy, including surgery, radiation and chemotherapy, stable disease and partial responses were noted in five out of 11 patients who received doses ranging from $1x10^8$ to $1x10^9$ aNK cells.

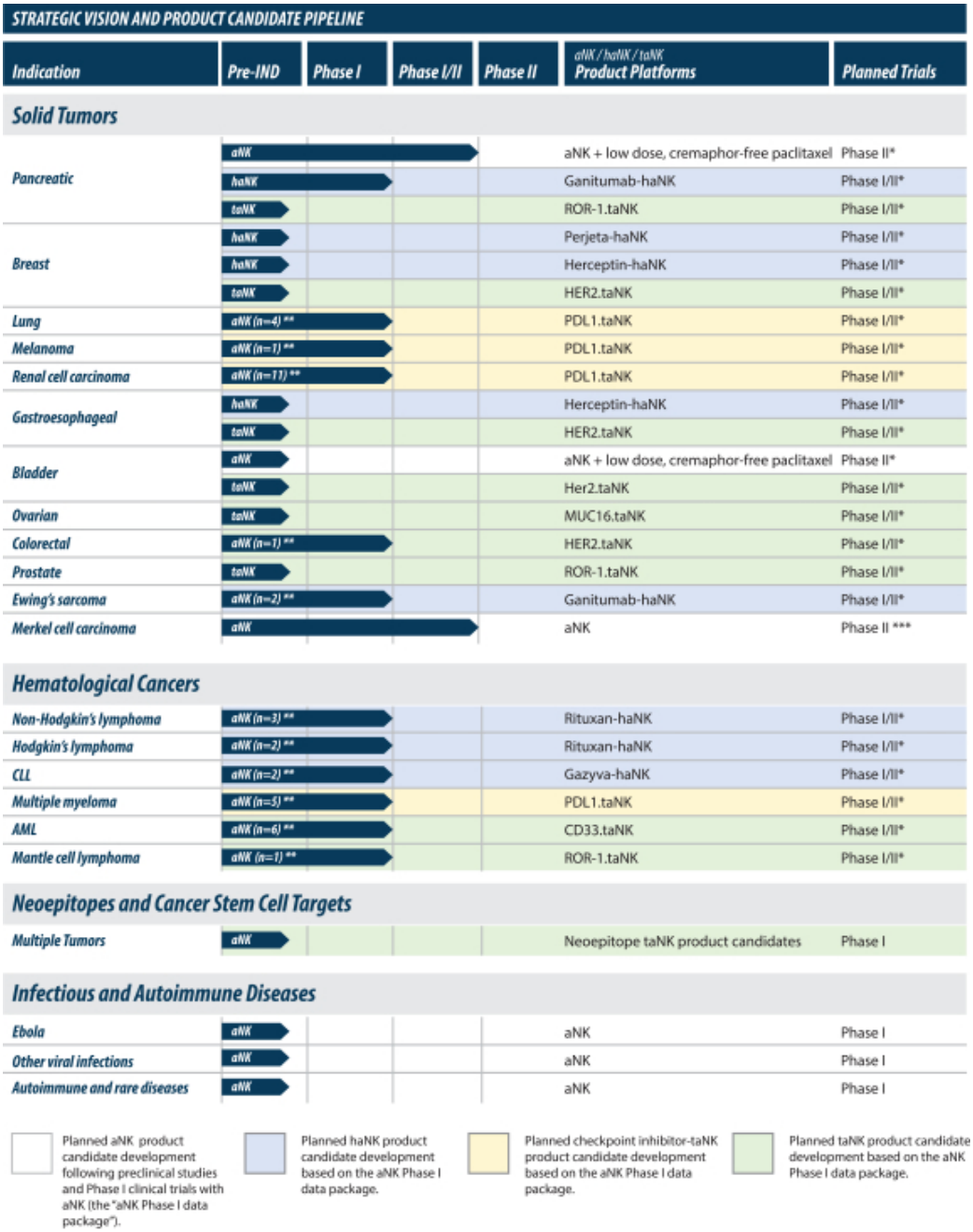
Product Candidate Pipeline. We plan to use these Phase I clinical trials of aNK cells conducted to date to serve as the foundation to our development strategy, along our three distinct modes of tumor cell killing, each with its own attributes, targeted therapeutic areas and pipeline.

Direct Killing. Our aNK cells have activation receptors that naturally bind to stress-induced proteins. They possess a unique property in that they lack viral binding CD16 receptors and therefore are resistant to viral counterattack. We are developing our aNK product candidates as monotherapies for the treatment of virally-induced cancers such as polyoma virus induced Merkel cell carcinoma, HPV virus induced cervical cancer and head and neck cancer as well as infectious diseases such as Ebola and other viral, fungal and bacterial infections. We are currently initiating a Phase II clinical trial for our aNK product candidate in Merkel cell carcinoma. Additionally, we intend to pursue combination therapies with low-dose metronomic cytotoxic agents and radiation therapy that may augment the ability of our aNK cells to attack cancer cells through these multiple combined points of attack.

Antibody-Mediated Killing. Our haNK cells are genetically engineered to express high-affinity CD16 receptors, designed to enhance the therapeutic efficacy of antibodies through ADCC. We intend to develop our haNK product candidates as combination therapies with widely-used FDA-approved mAbs, such as Herceptin, Erbitux and Rituxan. We plan to initiate a Phase I/II clinical trial for our product candidate Herceptin-haNK in 2016. We believe that our haNK product candidates may allow us to potentially address larger markets and earlier lines of treatment. Some biopharmaceutical companies have used our haNK cells as a lot release quality control test for their therapeutic antibodies. If these companies develop and launch these antibodies, we intend to leverage the development performed by our biopharmaceutical licensees by initiating studies of our haNK product candidates in combination with these antibodies, with the goal of the combination potentially enhancing the activity of these antibodies in patients with low affinity CD16 receptors. We believe this enhanced efficacy provides a rationale for studying haNK combinations with these new antibodies, whether during the development phase or after commercial launch by the biopharmaceutical company. We plan to accelerate clinical development of our aNK and haNK product candidates by entering into Phase II and Phase II/III clinical trials with our product candidates in combination with marketed drugs.

Tumor Target Activated Killing. Our taNK cells are genetically engineered to directly bind to tumor antigens by incorporating CARs to target specific antigens on the surface of abnormal cells. Our taNK cells are designed to directly bind to tumor-specific antigens in multiple bulky hematological cancers and solid tumors and induce cell death by the release of toxic granules directly into the tumor cell, by the release of cytokines and chemokines which recruit additional innate and adaptive immune responses and by the recruitment of cytotoxic T-cells. We intend to target the four classes of tumor specific antigens: (1) check-point inhibitors expressed on the surface of tumor cells such as PDL1; (2) well-established tumor antigens such as HER-2 and CD19; (3) newly discovered neoepitopes; and (4) novel surface receptors associated with cancer stem cells. We believe our taNK product candidates may be able to treat patients with bulky hematological cancers and solid tumors, areas in which other cell-based immunotherapies, such as CAR-T cell therapies, have been challenged. We plan to initiate Phase I/II clinical trials for our CD33.taNK product candidate for acute myeloid leukemia, or AML, and our PDL1.taNK product candidate for bulky hematological cancers and solid tumors, in 2016.

We are planning to advance a broad pipeline of aNK, haNK and taNK product candidates with the goal of addressing a wide spectrum of diseases ranging from orphan diseases to more prevalent indications. The following chart highlights some of our near-term opportunities.



* Planned trials based upon potential use of the aNK Phase 1 data package to accelerate start of planned aNK, haNK or taNK Phase I/II and Phase II clinical trials. Initiation of planned trials are contingent upon submission and allowance of an IND.

** Represents the number of subjects with the indicated disease who have received aNK cells in a Phase I clinical trial to date.

*** IND filed

Experienced Management Team

Since the founding of our company in 2002, we have assembled a team of proven, experienced and visionary leaders in biotechnology. Our team is led by Patrick Soon-Shiong, M.D., FRCS (C), FACS, our Chairman and Chief Executive Officer. Dr. Soon-Shiong, a renowned surgeon and scientist, has pioneered novel therapies for both diabetes and cancer, published over 100 scientific papers and issued over 95 patents on groundbreaking advancements spanning myriad fields. He performed the first encapsulated islet stem cell transplant in a diabetic patient in the United States. He invented, developed and launched the first nanoparticle delivery system of human albumin, Abraxane, now approved for metastatic breast, lung and pancreatic cancer and is expected to achieve sales of greater than $1.0 billion in 2015. Dr. Soon-Shiong was founder, Chairman and CEO of American Pharmaceutical Partners (sold to Fresenius SE for $5.7 billion in 2008), Abraxis BioScience (sold to Celgene Corporation for $3.7 billion in 2010) and NantWorks, an ecosystem of companies to create a transformative global health information and next generation pharmaceutical development network. Barry Simon, M.D., our President and COO, brings decades of drug development and executive leadership experience from Hoffmann-La Roche, Connetics Corp. and Immunomedics.

Vision and Mission Statement

Our vision is to be the premier immunotherapy company harnessing the power of the innate immune system and the NK cell to pioneer precision medicine in the treatment of cancer, infectious diseases and inflammatory diseases. Our mission is to leverage an integrated and extensive genomics and transcriptomics discovery engine to identify antibodies targeted to newly discovered neoepitopes and to mobilize the human immune system of cancer patients to kill tumor cells and facilitate long-term remission. We expect to regularly add newly discovered neoepitopes from our discovery engine, and we believe the thousands of newly discovered antigens selectively expressed on the cancer cells and not on the essential normal tissue will provide us with the ability to continue to create new and targeted libraries of antibodies to be potentially delivered as living drugs for metastatic cancer cells and cancer stem cells.

Our Strategy

Our goal is to become the leader in the field of immunotherapy by changing the paradigm of care to precision medicine through harnessing the power of the innate immune system, the natural killer cell, to treat cancer, infectious diseases and inflammatory diseases. The key elements of our strategy include:

- ***Utilize the multiple modes of killing by innate immune therapy.*** We plan to pursue a comprehensive clinical development plan designed to maximize the commercial potential and clinical knowledge of our aNK cells and the role of innate and adaptive immunotherapy as the backbone in the treatment of cancer, as monotherapy and in combination with chemotherapy, radiation and surgical therapies. We intend to pursue accelerated regulatory approval pathways and seek indications to attempt to obtain orphan drug status and breakthrough therapy designation where appropriate as well as pursue large market opportunities in many solid tumors.
    - *aNK.* Our initial aNK product candidates will focus on diseases with viral etiologies given that aNK cells already possess multiple activating receptors that detect stress antigens associated with viral infections. We also intend to pursue combination opportunities with therapeutics having synergistic mechanisms of action, such as in combination with cytotoxic agents such as paclitaxel and 5FU administered at low-dose.
    - *haNK.* Our haNK product candidates will aim to leverage the large addressable market of already approved monoclonal antibodies, such as Herceptin, Erbitux and Rituxan, in the treatment of multiple tumors. mAbs are prevalently used and generate over $50.0 billion in annual sales. We believe, based on currently available information, that only approximately 10% to 20% of the addressable patient population for mAb therapies carry high-affinity CD16 receptors. We expect to address the approximately 80% to 90% of patients who are receiving these mAbs but have

developed resistance and may benefit from our high affinity CD16 aNK administered in combination. We plan to submit an IND and initiate a Phase I/II clinical trial for our product candidate Herceptin-haNK in 2016.

- *taNK.* Our taNK product candidates will aim to address well-known tumor surface antigens, such as HER-2, CD33 and ROR1. We plan to combine a PDL1 antibody as a CAR in our NK cells, our product candidate named PDL1.taNK, to both activate T-cells and induce direct killing by NK cells simultaneously with the administration of a single living drug. Our taNK program will focus on addressing the large opportunity of newly discovered neoepitopes in metastatic cancer cells as well as cancer stem cells. We plan to submit INDs and initiate Phase I/II clinical trials for our product candidate CD33.taNK for acute myeloid leukemia, or AML, and our product candidate PDL1.taNK for bulky hematological cancers and solid tumors, in 2016.

- ***Leverage our integrated discovery engine to discover neoepitopes.*** Through our strategic collaborations with affiliates of NantWorks and with Sorrento, we plan to identify both known antigens on the surface of tumor cells and neoepitopes in clinical patients, identify the expression of the neoepitopes on the surface of the tumor cell and interrogate a large diverse library of human antibodies and extract an antibody matching the neoepitope. Through this cohesive and expansive discovery engine, we plan to identify antibodies to target newly discovered neoepitopes, thereby driving the development of our product candidate pipeline and establishing just in time precision medicine. We expect to regularly add newly discovered neoepitopes from our discovery engine, and we believe the thousands of newly discovered antigens selectively expressed on the cancer cells and not on the essential normal tissue will provide us with the ability to create new and targeted libraries of antibodies to be potentially delivered as living drugs for metastatic cancer cells and cancer stem cells.

- ***Pursue opportunities with pharmaceutical companies for commercially approved mAbs and select late-stage mAbs in development.*** We have out-licensed our haNK cells for non-therapeutic use to over 40 biopharmaceutical companies for them to select and validate their mAbs for development. Certain biopharmaceutical companies have also used our haNK cells as a lot release quality control test for their therapeutic antibodies. As we pursue these opportunities, we plan to leverage the development performed by our biopharmaceutical licensees by initiating studies of our haNK product candidates, with the combination potentially enhancing the activity of these antibodies in patients with low affinity CD16 receptors. We believe this potential for enhanced efficacy provides a rationale for studying haNK combinations with these new antibodies, whether during the development phase or after commercial launch by the biopharmaceutical company.

- ***Accelerate clinical development of aNK and haNK by entering into Phase II and Phase II/III clinical trials with our product candidates in combination with marketed drugs and select late-stage product candidates.*** A large number of monoclonal antibodies and chemotherapy drugs are being marketed for multiple indications. Published data show these mAbs generally have enhanced activity in patients with high-affinity NK cells. Published data also show that chemotherapy agents such as 5FU, cyclophosphamide and paclitaxel, when administered in low doses, generally enhance the immune system. We plan to accelerate clinical development of our haNK product candidates by entering into investigator-initiated and company-sponsored Phase II and Phase II/III clinical trials of our haNK product candidates administered in combination with commercially approved mAbs and select late-stage mAbs in development. We also plan to accelerate clinical development of our aNKs by entering into investigator-initiated and company-sponsored Phase II and Phase II/III clinical trials of our aNK product candidates administered in combination with approved chemotherapy agents. We believe this approach may accelerate the development and potential commercialization of our product pipeline.

- ***Establish low-cost, scalable manufacturing capabilities to support late-stage clinical trials and global commercialization.*** We believe our aNK cells offer a unique advantage of a simplified, on-demand manufacturing process that is relatively easy to scale. We are building a state-of-the-art, cell-based manufacturing facility with the capacity to support large-scale clinical trials and

commercialization. We are developing novel manufacturing methods, both in equipment utilizing state-of-the-art optics and proprietary media, designed to maximize the attributes of our NK platform.

- ***Extend our NK platform to address diseases beyond cancer.*** We believe our aNK cells have the potential to treat diseases beyond cancer such as infectious and inflammatory diseases because of the inherent role of NK cells to kill virally infected and abnormal cells. Preclinical studies in Ebola virus demonstrate this capability. In addition to Ebola, we plan to investigate and develop our aNK cells for the treatment of HIV, tuberculosis and influenza, among others.

Overview of Immunotherapy

The immune system is divided into two categories, innate and adaptive. The innate immune system is the body's first line of defense against an infection, providing immediate, non-specific responses to eliminate harmful cells in the body. Components of the innate immune system include the following: cytokines, chemokines, macrophages, neutrophils and NK cells, among others.

The adaptive immune system is often initially triggered by the innate immune system, mounts a delayed response against diseased cells and plays a role protecting against re-infection. An adaptive immune response is highly specific to a particular pathogen or antigen and is developed or learned from prior exposure. Key components of the adaptive immune system include the following: antibodies which bind to antigens and mark them for destruction by other immune cells, B-cells which produce these antibodies upon exposure to antigens, and T-cells which attack and eliminate the diseased cells.

The biopharmaceutical industry has made significant advances in harnessing specific components of innate and adaptive immune systems for therapeutic use. Some of these approaches are summarized below.

Cytokines. One of the early applications of immunotherapy is the use of cytokines, including interferons and IL-2. Interferons are molecules that inhibit the growth and replication of diseased cells and stimulate innate immune cells to attack them. They have been used as standard of care for hepatitis B and C and multiple sclerosis, and to a lesser extent, as treatment for certain cancers, including chronic myeloid leukemia, cutaneous T-cell lymphoma, myeloma and non-Hodgkin's lymphoma. However, the use of interferons has generally decreased over the years due to serious adverse events (*e.g.*, flu-like symptoms and dramatic weight loss) and introduction of new therapies with higher efficacy, better safety profile and more convenient administration. IL-2 activates T-cells and NK cells to attack diseased cells. It is used to treat select cancers, but due to its relatively poor safety profile, physicians often only resort to this therapy for the most advanced settings.

mAbs. mAbs represent an effective therapeutic modality and are important to the treatment paradigm of various diseases. Recent insights into the detailed mechanism of mAbs link their strong disease fighting potential to the immune system. Drug manufacturers have leveraged mAbs' ability to induce an ADCC effect to develop better treatments that prolong survival and quality of life of patients. In addition, mAbs designed to inhibit specific checkpoints in the immune system have demonstrated strong immune responses and therapeutic benefit in patients. However, the degree of efficacy of these therapies is heavily reliant on the immune system of patients, many of whom are severely immuno-compromised. For example, despite over $1.0 billion of sales generated by recently launched PD-1 and PDL1 checkpoint inhibitors, they are reported to be generally only effective in approximately 10% to 25% of the addressable patient population.

Dendritic Cell Therapies. This approach is designed to indirectly stimulate a patient's T-cells by leveraging the role of dendritic cells in presenting antigens to T-cells. Cancer vaccines are the most common application of dendritic cells. The only FDA-approved dendritic cell therapy is PROVENGE, which entails collecting monocytes from the patient, maturing them into dendritic cells, "loading" *ex vivo* with the patient's cancer antigens, and then re-infusing in the patient. Currently, this process is cumbersome and expensive, and again, relies on an intact and effective

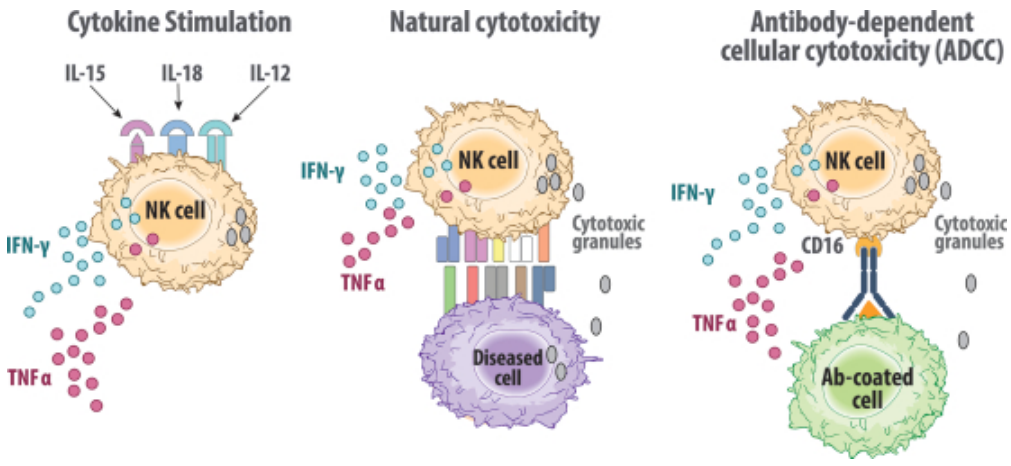
immune system of the patient. There are additional ongoing preclinical studies and clinical trials being conducted by our competitors aimed or addressing certain of the limitations associated with this approach. To date, current clinical results of dendritic cell therapies have been mixed.

CAR-T and TCR Therapies. T-cells recognize diseased cells by receptors engaging with antigens that are present on or inside the diseased cells. CAR-T therapy entails genetically engineering T-cells to express synthetic CARs that direct T-cells to antigens on the surface of cancer cells. TCR therapy modifies T-cells to express high-affinity tumor specific TCRs that recognize intra-cellular antigens that must be presented on the surface of target cells. In early clinical trials, CAR-T and TCR therapies have demonstrated impressive anti-tumor activity in a narrow spectrum of hematologic cancers and garnered significant attention by research institutions and biopharmaceutical companies. We believe a key limitation of adaptive autologous immunotherapy is the need to retrieve non-compromised immune cells from a cancer patient and require a complex and costly manufacturing process to develop the therapy. As a consequence of this need to harvest active T-cells, current Phase I clinical trials for autologous CAR-T cell therapy in large part enroll patients from highly selected, often relatively early-stage disease in a narrow spectrum of cancers, including bulky hematological cancers. In addition, Phase I clinical trials of CAR-T cell immunotherapy have reported severe adverse toxicities of cytokine release syndrome and neurotoxicity, requiring hospitalization, pre-conditioning and, in some instances, intensive care unit admission following side effects associated with cytokine release syndrome. As a result, though our competitors continue to develop their CAR-T and TCR product candidates with the goal of addressing certain of the limitations associated with these approaches, we believe these serious challenges may limit their potential and use in a variety of indications, including solid tumors.

NK Cells. NK cells typically represent approximately 10% to 15% of circulating lymphocytes and are a critical component of the immune system responsible for innate immunity. Unlike adaptive immune cells, they are ever present and ready to attack, having the inherent ability to detect and eliminate diseased cells without the need for co-stimulation, which is why they are called “natural killers.”

NK cells bind to stress ligands expressed by the diseased cells and directly eliminate them. This binding induces NK cells to release cytokines, including IL-12, IL-15, IL-18, interferons and GM-CSF, which are integral in recruiting additional innate and adaptive immune responses by the host. NK cells also represent a critical effector cell for ADCC, whereby target cells bound with human antibodies, whether made by the patient’s body or administered, are selectively destroyed by the NK cells.

Different Cytotoxic Mechanisms of NK Cells



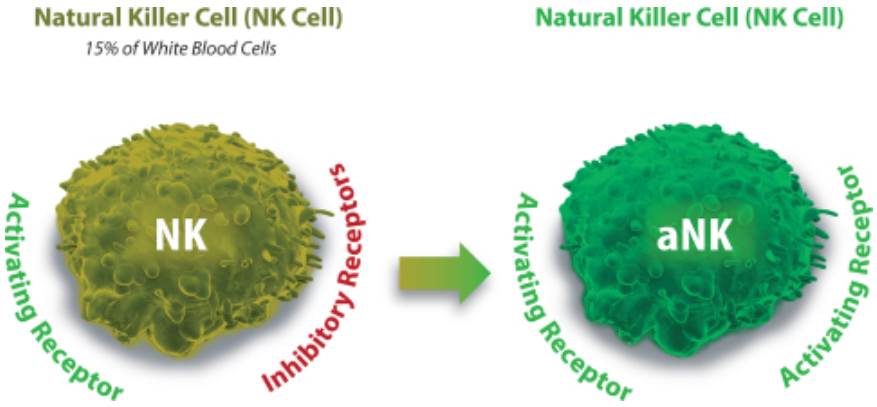
The figures above schematically illustrate the various mechanisms by which NK cells convey their therapeutic effects. Cytokines, such as IL-12, IL-15, IL-18, TNFa, and INFb recruit and modulate other immune cells, such

as T-cells, neutrophils, macrophages and others. NK cells also possess natural cytotoxicity via an array of activating receptors that detect a variety of stress antigens typically expressed on the surface of cancer or virally infected cells and signal for destruction of the target cell via cytokine granules. In addition, NK cells can also be activated and induce cell killing via ADCC, by binding with its CD16 receptors, to antibodies that are in turn targeted and bound to the diseased cells.

In clinical trials to date, NK cells have been well tolerated and are inherently hypo-immunogenic, or less immunogenic than most other cell types. As a result, clinical trials of allogeneic NK cells to date have not exhibited toxicities common with other immunotherapies, such as B-cell depletion, cardiovascular toxicities, cytokine release syndrome, neurologic toxicity and graft-versus-host disease, or GvHD.

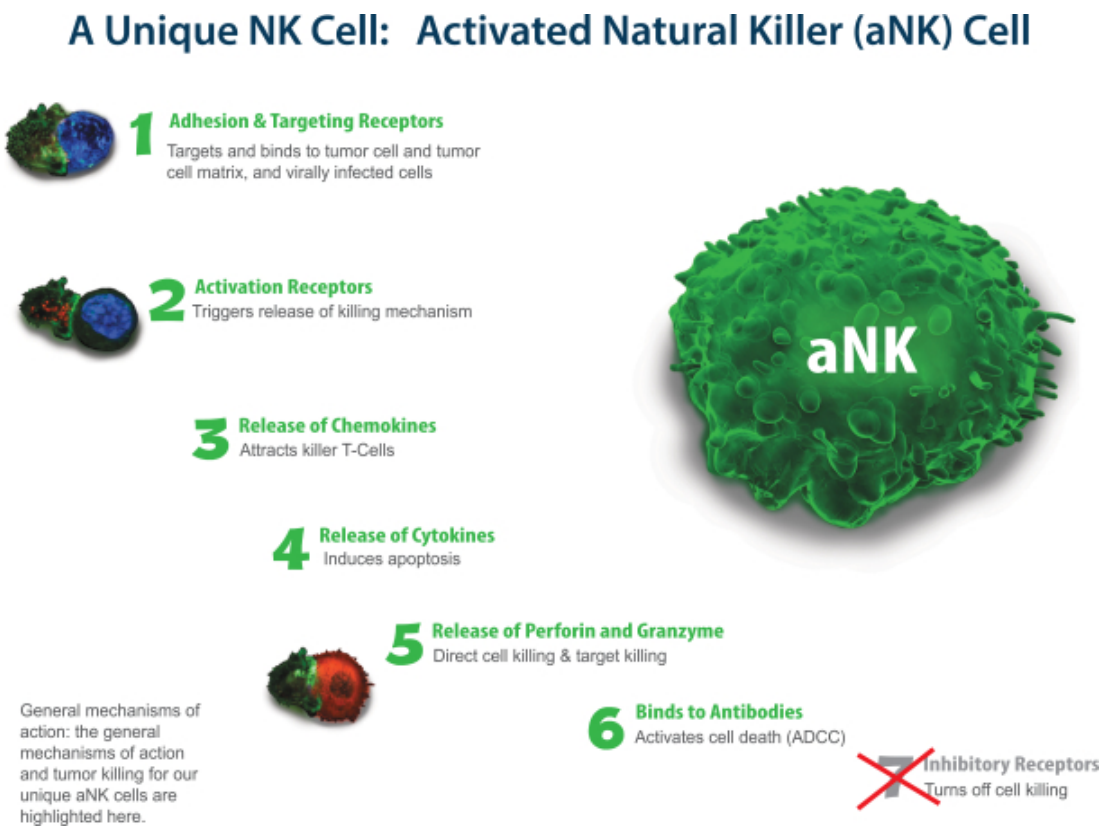
Unlocking the Innate Immunotherapeutic Potential of NK Cells

The image below compares a typical NK cell versus our unique aNK cell.



Absence of inhibitory receptors with preserved activating receptors. Our proprietary aNK cells differ from typical NK cells, as they have properties that we believe enhance potential therapeutic effects and make them capable of potentially being reproduced on a large scale for commercial use. For example, unlike typical NK cells, our aNK cells lack inhibitory receptors called killer cell immunoglobulin-like receptors, or KIRs, while highly expressing activating receptors, including NKG2D, NKp30, NKp44 and NKp46 receptors and natural cytotoxicity receptors, or NCRs, which recognize molecules and ligands on diseased cells. As a result, our aNK cells display superior *in vitro* potency against a broad spectrum of diseased cells compared to donor NK cells. Additionally, our aNK cells double approximately every 40 hours in culture, a property that we believe will facilitate manufacturing at a large scale.

General mechanisms of action. The general mechanisms of action for and tumor killing activities of our unique aNK cells are highlighted in the images below.



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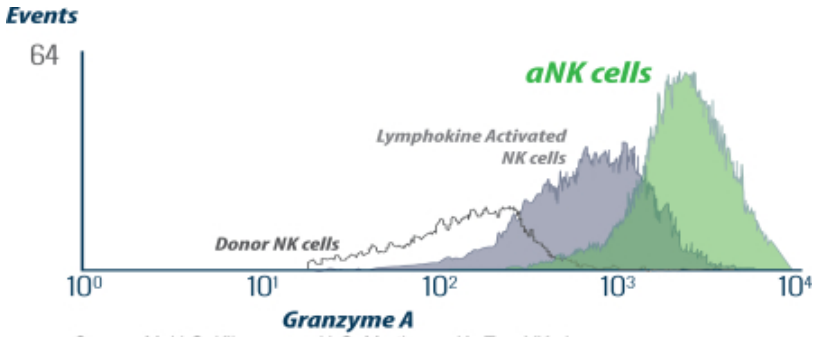
Abundant toxic molecules. The graph below shows data from an *in vitro* study comparing immune activity of aNK cells versus donor NK cells. Our aNK cells produced substantially more Granzyme A, a key protein responsible for destroying diseased cells, implying greater killing ability of aNK cells compared to donor NK cells.



Source: Maki G, Klingemann H-G. Martinson JA, Tam YK. J Hematoth Stem Cell Res 10: 369-383, 2001

Cytotoxicity of aNK cells against a spectrum of different diseased cells. Our aNK cells have shown *in vitro* activity against a spectrum of different diseased cells in virally-infected and fungal cells.

Preclinical Data Demonstrating aNK Activity

The table to the right shows data from a variety of hematopoietic cancer cell lines that were tested with aNK cells at various effector to target, or E:T, ratios. Results, measured as percentage cytotoxicity by chromium release assay, were compared with control peripheral blood mononuclear cells, or PBMC, which had been activated under optimal conditions with 500 U/ml of IL-2 for 4 days. These are called lymphokine-activated killer, or LAK, cells.

aNK cells generally lyse target cells more effectively than LAK cells, even at low E:T ratios. In most cases, cytotoxicity achieved with aNK cells was significantly higher than that observed with LAK cells.

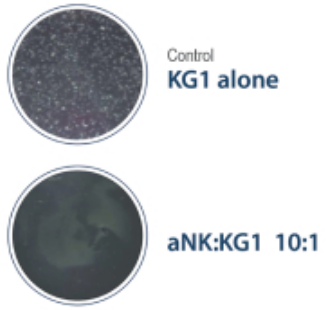
Effector : Target (E:T) Ratio

TARGET	Effector Cell	50 : 1	20 : 1	10 : 1	5 : 1	1 : 1
HL-60	aNK	97	90	77	46	40
	LAK	31	26	17	2	0
K562	aNK	68	68	64	59	50
	LAK	63	73	67	51	19
KG1a	aNK	90	91	80	67	39
	LAK	15	II	12	6	0
U937	aNK	99	98	96	91	85
	LAK	57	43	23	13	2
DHL-10	aNK	95	95	92	94	80
	LAK	60	40	24	19	5
Daudi	aNK	94	87	71	48	39
	LAK	65	57	29	16	6
Jurkat	aNK	100	100	98	93	80
	LAK	67	50	36	27	4
Ly3	aNK	63	59	53	42	28
	LAK	47	35	18	6	0
Ly8	aNK	67	65	62	59	44
	LAK	95	104	102	88	42
Ly13.2	aNK	104	105	100	97	67
	LAK	61	63	52	4	13
Raji	aNK	81	75	74	70	54
	LAK	32	67	57	35	13
NCIH929	aNK	94	89	89	86	51
	LAK	75	55	39	24	5
RPMI8226	aNK	82	72	70	72	41
	LAK	95	83	81	67	25
U226	aNK	84	77	85	81	53
	LAK	84	74	73	56	21

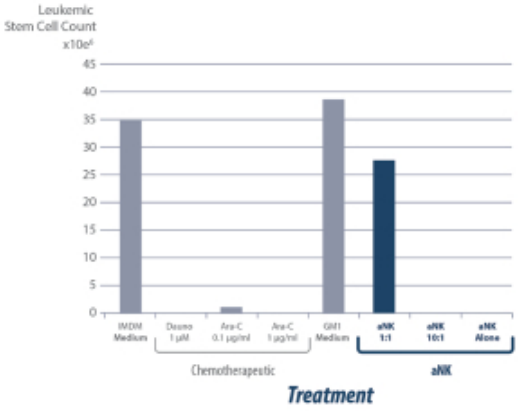
Source: Biol Blood Bone Marrow Transplant, 1996

Activity against cancer stem cells. Our *in vitro* studies demonstrated that our aNK cells may be able to deter the growth of cancer stem cells by eliminating early tumor progenitor cells.

Preclinical Data Demonstrating aNK Activity



aNK eliminates leukemic stem cells: in the following in vitro study, KG1 cells were exposed to aNK cells overnight, and growth of surviving cells was determined using a methylcellulose-based assay. The control shows KG1 without the presence of aNK cells.



As with Ara-C, aNK inhibits clonal expansion of leukemic stem cells in a dose-dependent fashion.

Source: Keating A et al. Cytotherapy 2010, 12: 951

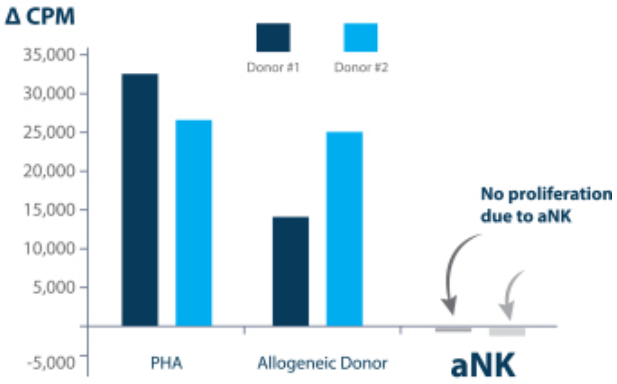
Hypo-immunogenecity and safety. Despite being allogeneic, our aNK cells do not stimulate a patient's immune response. The low immunogenicity of our aNK cells were supported in *in vitro* mixed lymphocyte cultures, or MLC, where our aNK cells were co-cultured for seven days with lymphocytes from normal donors. No proliferation of lymphocytes from aNK cell exposure was observed.

Preclinical Data Demonstrating Lack of Immunogenicity for aNK Cells

Mixed lymphocyte culture: no lymphocyte proliferation was detected when co-incubated with aNK cells.

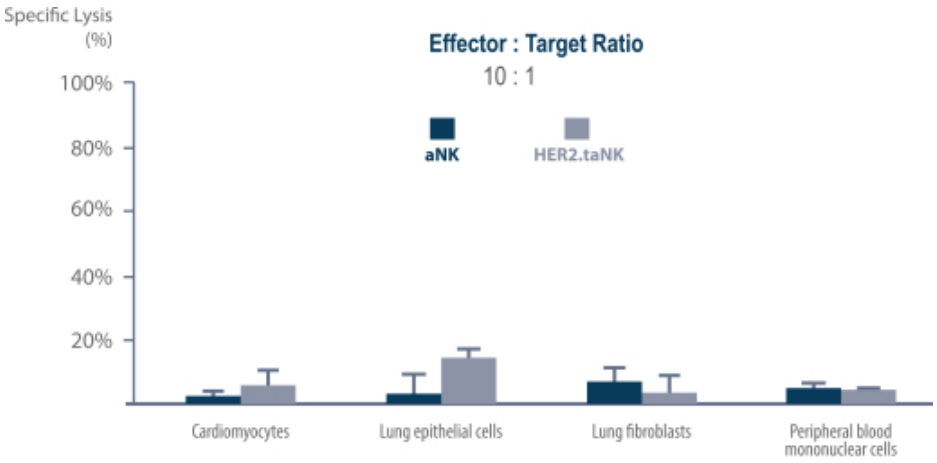
Lymphocyte proliferation was detected in the presence of allogeneic donor cells.

Positive control with phytohemaglutin (PHA).



Source: Rush University, data on file

In vitro targeted killing of abnormal cells only. In an *in vitro* study, our aNK cells target diseased cells and did not appear to affect normal cells.

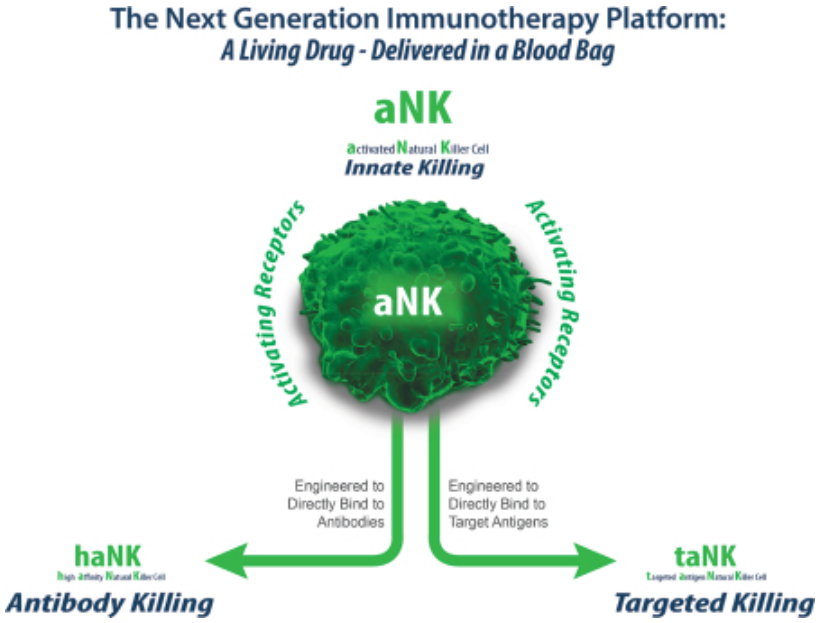


Primary cells from various healthy human tissues were used to test HER2.taNK's potential reactivity against normal tissues. There was only minimal HER2.taNK cytotoxicity towards lung epithelial cells, and no cytotoxicity above background values towards cardiomyocytes, lung fibroblasts, and peripheral blood mononuclear cells.

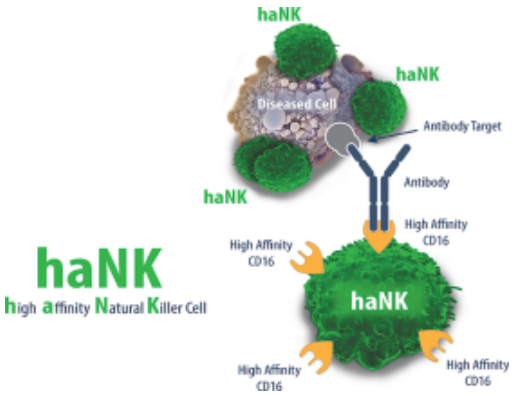
Source: Schönfeld et al., Mol Ther. 23(2):330-8, 2015

Our aNK Platform as the Foundation for our haNK and taNK Product Candidates

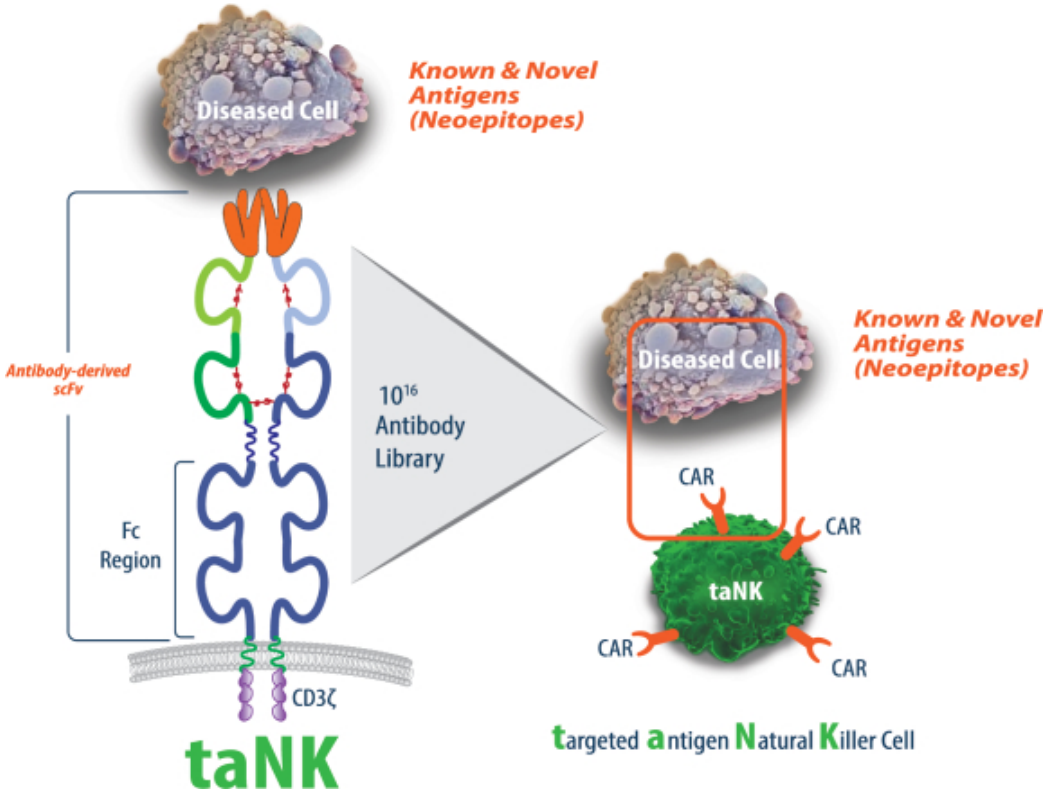
Based on the unique characteristics of NK cells described above, we are aiming to expand the potential therapeutic applications of our aNK platform through molecular engineering of our aNK cells designed to leverage the multiple modes of killing available to aNKs, including antibody-mediated killing, our haNK platform, and antigen targeted killing, our taNK platform, described below.



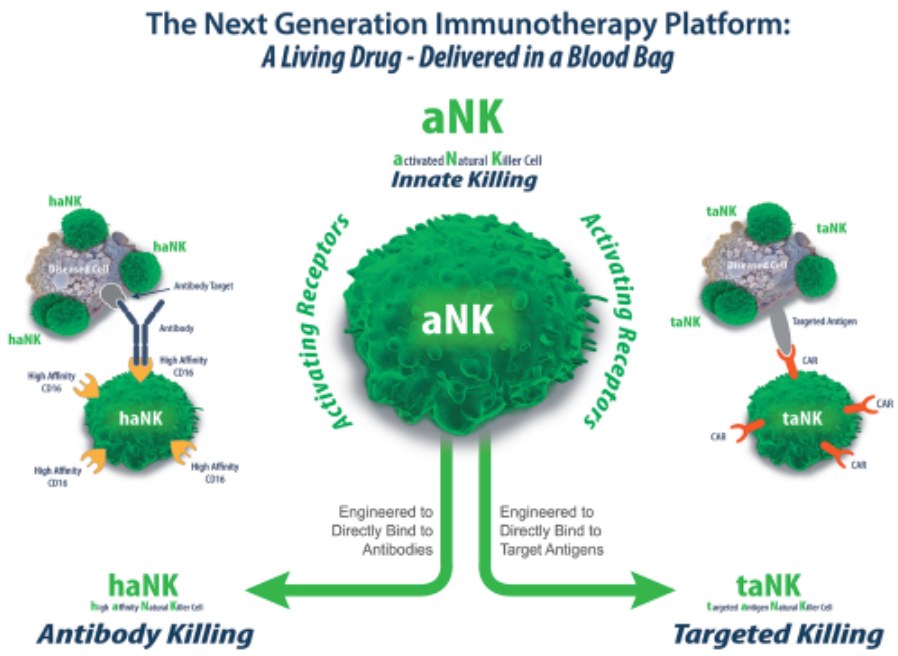
Antibody-Mediated Killing: haNK Platform. As shown below, we have genetically modified our aNKs cells to incorporate high-affinity CD16 receptors, which bind to antibodies. These haNK cells are designed to directly bind to co-administered antibodies such as Herceptin, Erbitux and Rituxan and potentially enhance the cancer killing effect of the co-administered antibody, enabling targeted cell killing through ADCC.



Tumor Target Activated Killing: taNK Platform. As shown below, we have genetically modified our aNK cells to incorporate chimeric antigen receptors, or CARs, to target specific antigens on the surface of abnormal cells. These taNK cells are designed to directly bind to tumor-specific antigens in multiple bulky hematological cancers and solid tumors and induce cell death by the release of toxic granules directly into the tumor cell, by the release of cytokines and chemokines which recruit additional innate and adaptive immune responses and by the recruitment of cytotoxic T-cells. These tumor-specific antigens can be divided into the following four classes, which can be targeted by our taNK platform: (1) checkpoint inhibitors expressed on the surface of tumor cells such as PDL1; (2) well-established tumor antigens such as HER-2; (3) neoepitopes; and (4) novel surface receptors associated with cancer stem cells.



Safety studies of our aNK cells in multiple Phase I clinical trials have been conducted in a variety of bulky hematological cancers and solid tumor types in over 40 patients to date, with encouraging evidence of activity and durable remissions. Based on these clinical trials, we plan to develop the therapeutic applications of this aNK platform through molecular engineering of our aNK cells designed to leverage the multiple modes of killing available to aNKs, including antibody-mediated killing, our haNK platform, and antigen targeted killing, our taNK platform, as shown in the image below.



Our aNK, haNK and taNK Development Strategy and Product Candidate Pipeline

Our aNK, haNK and taNK Development Strategy

We believe our innate immunotherapy platform is uniquely positioned to pioneer the field of immuno-oncology by focusing on harnessing innate immune therapy and adaptive immune therapy. Within each aNK, haNK and taNK family of product candidates, we are developing a product candidate pipeline strategy designed to utilize aNK as the platform and accelerate haNK and taNK development based on safety, dosing regimens and manufacturing capabilities established in Phase I clinical trials of aNK to date. We plan to advance a broad pipeline of aNK, haNK and taNK product candidates to potentially address a wide spectrum of diseases ranging from orphan diseases to more prevalent indications.

aNK and haNK accelerated development strategy

- *mAb combinations.* We plan to accelerate our aNK and haNK programs by pursuing opportunities with pharmaceutical companies for commercially approved mAbs and select late-stage mAbs in development. We have out-licensed our haNK cells for non-therapeutic use to over 40 biopharmaceutical companies for them to select and validate their monoclonal antibodies for development. Certain biopharmaceutical companies have also used our haNK cells as a lot release quality control test for their therapeutic antibodies, as well as a method to select antibodies to develop

which elicit an enhanced ADCC effect. Consequently, we plan to leverage the development performed by our biopharmaceutical licensees by initiating studies of our haNK product candidates in combination with these antibodies, which may potentially enhance the activity of these antibodies in patients with low affinity CD16 receptors. We believe this provides a rationale for studying haNK combinations with these new antibodies, whether during the development phase or after commercial launch, and upon receipt of regulatory approval, by the biopharmaceutical company.

- *Chemotherapy combinations*. We also intend to accelerate our aNK and haNK programs by entering into Phase II and Phase II/III clinical trials with our product candidates in combination with marketed drugs. A large number of mAbs and chemotherapy drugs are being marketed for multiple indications. Published data shows these mAbs have generally enhanced activity in patients with high-affinity NK cells. Published data also shows that chemotherapy agents such as 5FU, cyclophosphamide and paclitaxel, when administered in low doses, generally enhance the immune system. We plan to accelerate clinical development of our haNK product candidates by entering into investigator-initiated and company-sponsored Phase II and Phase II/III trials of the product candidates administered in combination with commercially marketed drugs and select late-stage product candidates in development. We also plan to accelerate clinical development of our aNK product candidates by entering into investigator-initiated and company-sponsored Phase II and Phase II/III trials of these product candidates administered in combination with approved chemotherapy agents. We believe this approach may accelerate the development and potential commercialization of our product candidate pipeline.

taNK/neoepitope development strategy

Through our strategic collaborations, we intend to identify both known antigens on the surface of tumor cells and neoepitopes in clinical patients, identify the expression of the neoepitopes on the surface of the tumor cell and interrogate a large diverse library of human antibodies and extract an antibody matching the neoepitope. Through this cohesive and expansive discovery engine, we plan to identify antibodies to target newly discovered neoepitopes, thereby driving the development of our product candidate pipeline and establishing just in time precision medicine. We expect to regularly add newly discovered neoepitopes from our discovery engine, and we believe the thousands of newly discovered antigens selectively expressed on the cancer cells and not on the essential normal tissue may provide us with the ability to create new and targeted libraries of antibodies to be potentially delivered as living drugs.

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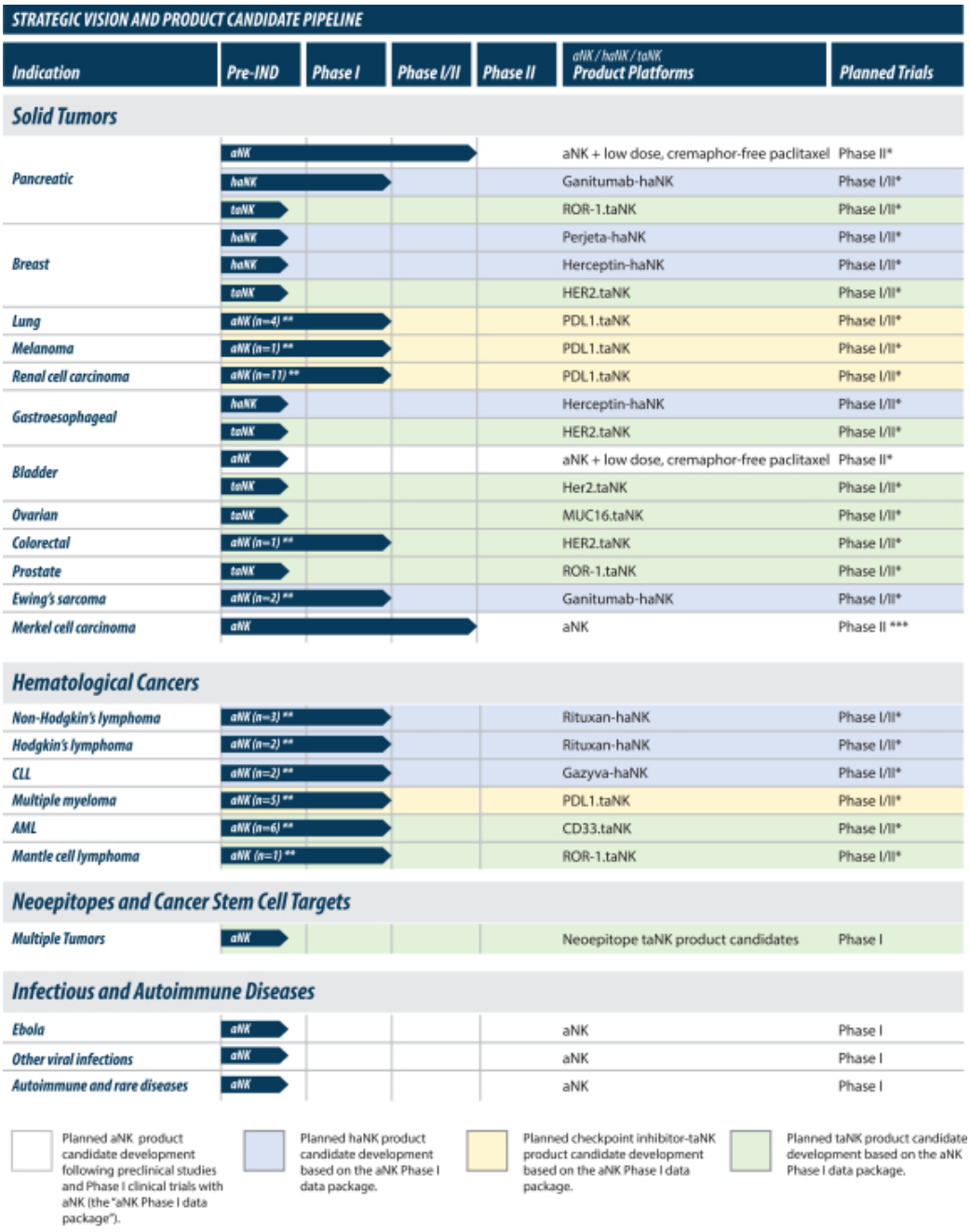
The following chart highlights some of our near-term opportunities.



* Planned trials based upon potential use of the aNK Phase 1 data package to accelerate start of planned aNK, haNK or taNK Phase I/II and Phase II clinical trials. Initiation of planned trials are contingent upon submission and allowance of an IND.

** Represents the number of subjects with the indicated disease who have received aNK cells in a Phase I clinical trial to date.

*** IND filed

The table below describes our accelerated clinical development plan for aNK and haNK by entering into Phase II and Phase II/III clinical trials with our product candidates in combination with commercially marketed drugs and select late-stage product candidates in development.

Strategic Vision for Combination Therapy Product Candidate Pipeline

Product Candidate	Indication	Combination Regimen	Planned Trials
aNK Combination	Pancreas	Low dose cremaphor-free paclitaxel cytotoxic combination*	Phase II/III**
	Ovarian	Intraperitoneal and systemic cytotoxic combination*	Phase II/III**
	Bladder	Intravesicular and systemic low dose cytotoxic combination*	Phase II/III**
	Gastric	Low dose cytotoxic combination*	Phase II/III**
haNK Combination	Ewing's sarcoma	Ganitumab combination	Phase II/III**

* Commercially available standard of care products.

** Planned Phase II/III clinical trial based upon potential use of (1) preclinical study and Phase I clinical trial data with aNK and (2) the fact that these are planned combination trials with commercially approved products, or in the case of haNK combination, a Phase III product candidate. Initiation of planned trials are contingent upon submission and allowance of an IND.

Our aNK, haNK and taNk Product Candidates

aNK

Our aNK product candidates are unmodified aNK cells with natural affinity to stress-induced ligands of diseased cells. Our aNK product candidates have shown preclinical activity in treating diverse potential indications including certain virally-induced cancers such as Merkel cell carcinoma as well as viral infections, such as Ebola and Epstein-Barr virus, or EBV. In addition, we intend to pursue combination therapies with low dose cytotoxic agents for which we believe there is rationale for synergistic effect.

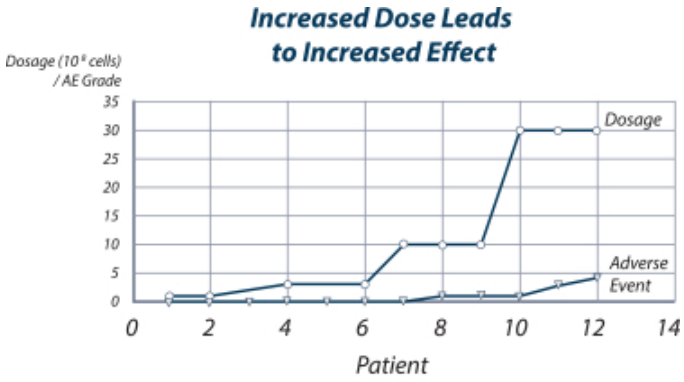
aNK: Phase I Dose-ranging Safety Clinical Trials

aNK cells have been evaluated in over 40 patients to date in four Phase I clinical safety trials. The aNK cells were administered as monotherapy. Unlike many other cell-based immunotherapy clinical trials, pre-conditioning agents such as IL-2 and cyclophosphamide were not administered to enhance therapeutic effect. All patients had very advanced cancer refractory to or having failed standard therapy, and were not preselected. Although the primary objective of the Phase I clinical trials were to evaluate safety and tolerability of aNK cells, promising activity was observed in a number of solid tumors as well as hematologic malignancies. The safety profile demonstrated no dose limiting toxicities even though certain patients received as many as 18 administrations of aNK cells.

Rush University Clinical Trial

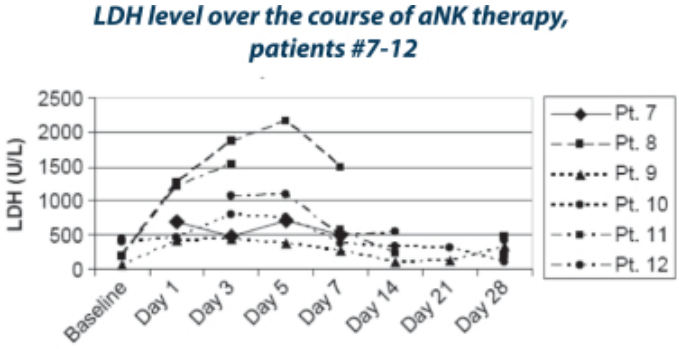
This Phase I safety trial was conducted at the Rush University Medical Center in Chicago, IL under an investigator-sponsored IND that originally became effective in June 2000 and was subsequently transferred in 2004 to ZelleRx, which was renamed Conkwest in 2010. 11 metastatic RCC patients and one refractory malignant melanoma patient, all of whom failed standard therapy, including surgery, radiation and chemotherapy, were treated with aNK cells in this single-center, open-label, dose-escalation clinical trial. Three patients were treated at each dose level: $1x10^8$ cells/m^2, $3x10^8$ cells/m^2, $1x10^9$ cells/m^2, and $3x10^9$ cells/m^2. Each patient received one course of treatment, which consisted of three cell infusions over 48 hours on days 1, 3, and 5.

Out of the 12 patients, we observed four incidences of stable disease and two partial responses. 83% (five out of six) of the RCC patients receiving higher cell doses ($1x10^9$ cells/m^2 or $3x10^9$ cells/m^2) had stable disease following an aNK infusion. In contrast, only 17% (1/6) of RCC patients receiving a lower cell dose ($1x10^8$ cells/m^2 or $3x10^8$ cells/m^2) had a response, suggesting a potential dose response effect. No significant adverse events were observed, except for one case of transient grade 4 hypoglycemia likely due to tumor lysis syndrome, which resolved with administration of IV D50. Self-resolving mild-to-moderate fevers were additionally seen in five out of six patients receiving the higher 10^9 cells/m^2 dose, suggesting that increased aNK dosing correlates with fever as well as overall activity.



* Adverse Event: Mild fever/tumor lysis syndrome-induced hypoglycemia

We also observed a trend of elevated LDH in patients receiving the higher aNK dose, coincidental with the administration of aNK. LDH levels returned to baseline following treatment, which may indicate that the initial elevation was due to aNK-mediated tumor cell lysis.



Trend of LDH elevation during aNK infusion starting at $1x10^9/m^2$ cell dose. After an initial increase during treatment, the LDH values return to baseline by day 14.

Source: Cytotherapy. 2008;10(6):625-32.

Of the 11 RCC patients evaluated in this clinical trial, six patients in the high dose group experienced an average survival of 776 days and the five patients in the low dose group experienced an average survival of 493 days. Comparatively, though not part of the same study, similar patients from National Cancer Institute's Surveillance Epidemiology End Results, or SEER, databases experienced an average survival of 390 days.

University of Frankfurt Clinical Trial

A Phase I clinical safety trial was conducted at the University of Frankfurt in Germany as an investigator-sponsored study not under our IND. A total of 15 patients with very late-stage disease and chemotherapy resistant cancer with no response to standard therapies and no further viable treatment options were evaluated. The pediatric study was comprised of pediatric sarcoma patients and the adult study enrolled adults with multiple cancers, and both were single arm, open-label dose escalation studies. These clinical trials utilized a two-dose regimen with infusions occurring on days 1 and 3, with the starting dose corresponding to the higher dose levels given in the Rush clinical trial. The pediatric patients were administered the following doses: $1x10^9$ cells/m^2, $3x10^9$ cells/m^2 and $5x10E^9$ cells/m^2. The adult patients received $1x10^9$ cells/m^2, $3x10^9$ cells/m^2 and $1x10^{10}$ cells/m^2.

No toxicities were reported in the seven pediatric patients aside from one report of mild fever and a report of sustained renal back pain. No toxicities were reported in the eight adult patients. Even the highest dose, $1x10^{10}$ cells/m^2, our aNK treatment was well tolerated with the exception of the one pediatric patient with back pain. One adult patient with B-cell non-Hodgkin's lymphoma additionally received five additional aNK infusions over a period of six months, and reported no notable side effects.

Notably, three out of the four lung cancer patients who had failed chemotherapy, surgery and radiotherapy (two with small cell lung cancer, or SCLC, and two with non-small cell lung cancer, or NSCLC) experienced stabilization of disease (one) or partial response (two). Of particular note, two SCLC patients had metastases (one supra-clavicular lymph node and one lung) that notably diminished on imaging following the two aNK infusions. While we are currently planning to target SCLC with a taNK, not an aNK, we believe this data provides a rationale for this development, as we believe that the taNK will still retain many of the properties of an unmodified aNK.

University of Toronto Clinical Trial

This Phase I clinical safety trial is currently ongoing at the University of Toronto in Canada under an investigator-sponsored clinical trial authorization and not under our IND. 12 patients with late-stage hematological cancers that relapsed after standard chemotherapy and autologous stem cell transplant have been treated so far with aNK cells in this single-center, open-label, dose-escalation clinical trial. Patients were treated with aNK doses up to $5x10^9$ cells/m^2. This study was designed to demonstrate safety of multiple infusions of our aNK cells over a prolonged course of time. Patients in this study received as many as six cycles and 18 infusions (each cycle consisting of three infusions), for a total of as many as $1.5x10^{11}$ cells/m^2 in one diffuse large B cell lymphoma patient, or DLBCL, and $1.1x10^{11}$ cells/m^2 in a CLL with Richter's transformation patient.

No treatment-related SAEs have been reported in this study to date, even in the patients receiving extremely high aNK doses. Furthermore, all patients receiving five to six cycles of aNK infusions had either stable disease or a response, despite having failed standard therapy, and one Hodgkin's lymphoma patient who had a sustained complete response for more than five years since treatment. Activity was noted in Hodgkin's lymphoma, DLBCL, CLL with Richter's transformation and myeloma.

University of Pittsburgh Clinical Trial

This Phase I clinical safety trial is currently ongoing at the University of Pittsburgh under our IND. Five patients with AML who progressed or relapsed after two regimens of therapy have received aNK infusions to date, and up to nine will be treated. This is a single-arm, open-label clinical trial utilizing a two-dose regimen with infusions occurring on days 1 and 3. Similar to the Toronto clinical trial, patients receive $1x10^9$ cells/m^2, $3x10^9$ cells/m^2 or $1x10^{10}$ cells/m^2.

Five patients have been treated at the $1x10^9$ cells/m^2 dose and at the $3x10^9$ cells/m^2 dose, and no significant adverse events have been reported to date. The study is currently ongoing, and is expected to be completed in the second half of 2015.

aNK: Viral Induced Cancers—Planned Phase II Clinical Trial for Merkel Cell Carcinoma, an Orphan Disease

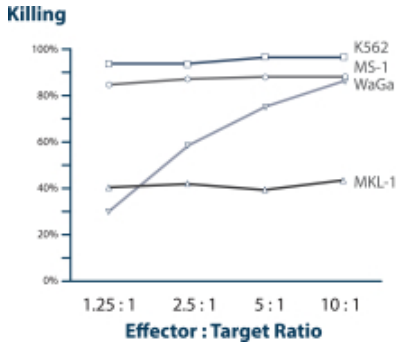
Our initial aNK product candidate is for the treatment of Merkel cell carcinoma, or MCC. MCC is a rare, rapidly growing and aggressive skin cancer with approximately 1,500 new cases diagnosed in the United States in 2014. The five year survival rate is approximately 60%. MCC impacts predominantly the elderly as well as patients with acquired or medically-induced immune suppression for the treatment for autoimmune diseases, lymphohematopoietic malignancies or for the prevention of organ transplant rejection. In a study conducted at the University of Pittsburgh, Merkel cell polyoma virus, or MCV was discovered to be an etiopathogenic factor in approximately 80% of patients with MCC. Ultraviolet exposure is also considered an independent risk factor contributing to the rising incidence of MCC. Once metastatic to regional lymph nodes or distant organs, five-year overall survival, or OS, decreases significantly. In particular, distant metastatic stage IV MCC has reported OS rates of 18% or less. No systemic therapy has been shown to prolong OS in patients with distant metastatic MCC to date. In addition, there is currently no FDA-approved treatment for this disease.

We are planning to initiate a multi-center, open-label, Phase II clinical trial for our aNK product candidate for Merkel cell carcinoma under which we plan to enroll 24 patients. We plan to seek orphan drug designation for this product candidate.

Preclinical Data in Merkel Cell Carcinoma

In an *in vitro* study, our aNK product candidate has demonstrated the ability to kill polyomavirus positive MCC cell lines. The following chart shows results of cytotoxicity after overnight exposure of aNK to three MCC cell lines: MKL-1, Waga and MS-1 at different effector to target ratios. K562, a human CML cell line, serves as a control, as it is consistently killed by our product candidate.

aNK Cytotoxicity After Overnight Exposure to Three MCC Cell Lines



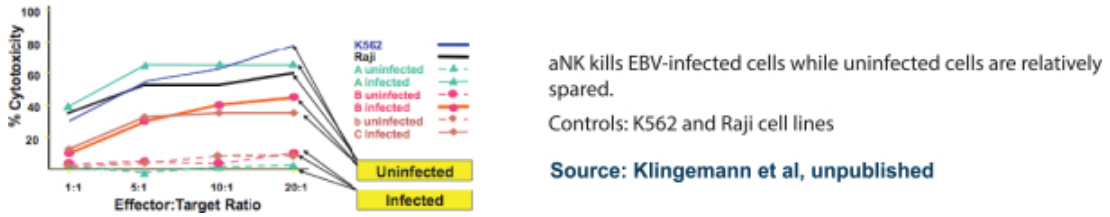
aNK shows in vitro killing against a variety of MCC cell lines

Control: K562 cell line

Source: Conkwest data, unpublished

An *in vivo* study found that our aNK product candidate was able to lyse polyomavirus-induced tumors through a natural killer group 2, member D (NKG2D)-dependent mechanism, and that Merkel cell tumor growth was enhanced in NK cell-deficient mice. Taken together, these findings provide important cumulative evidence for the protective role of NK cells against polyomavirus-induced tumors, and suggest NK cell-based therapy may have potential as a novel therapeutic for the treatment of MCC.

EBV-infected cells are killed by aNK



Planned Phase II Clinical Trial Design for Merkel Cell Carcinoma

We are planning to initiate a multi-center, open-label, Phase II clinical trial in a two stage design. Such a design detects efficacy, allows for early assessment and avoids enrolling too large a number of patients. Patients with unresectable stage III or distant MCC will receive aNK-001 intravenously.

The primary objectives of this clinical trial are the following:

- Determine the effect of aNK infusions on the four-month (» 16 weeks) progression-free survival, or PFS, rate in patients with unresectable stage IIIB or distant metastatic stage IV MCC; and
- Assess toxicity of aNK in patients with distant metastatic MCC in which immunosuppression and several comorbid factors coexist.

We also plan to assess the objective overall response rate, or ORR, of aNK, defined as complete response, or CR, plus partial response, or PR, plus stable disease, or SD, based on the RECIST criteria v1.1 for overall survival.

aNK: Infectious Disease—Preclinical Studies for Ebola Virus

aNK for Ebola

We are developing our product candidate aNK for the treatment of Ebola. Ebola typically infects macrophages and dendritic cells first. Infected dendritic cells are unable to mature and signal other immune cells, resulting in poor immune activity by NK cells, which are critical for early protection against Ebola. In an acute infection, the virus depletes host NK cell levels and prevents NK cell activation. In addition, the virus uses surface glycoprotein, or sGP, to bind CD16, allowing it to specifically target NK cells and neutrophils. However, aNK is intrinsically activated and does not express CD16, thus providing substantial rationale that aNK supplementation may bolster a patient's innate immune system and treat Ebola patients.

Ebola is a rare and deadly disease caused by infection with a strain of Ebola virus. Symptoms of the disease include devastating hemorrhagic fever, fatigue, impaired liver and renal function, and often internal and/or external bleeding. Ebola is spread through direct contact with blood and body fluids of a person already showing symptoms of Ebola. The 2014 Ebola epidemic is the largest outbreak in history and is still currently ongoing in multiple countries in West Africa. As of April 2015, the total number of Ebola cases related to this outbreak was over 26,000 with over 10,800 recorded deaths. While several therapeutics including vaccines and antibodies are in development, there are no FDA-approved treatments.

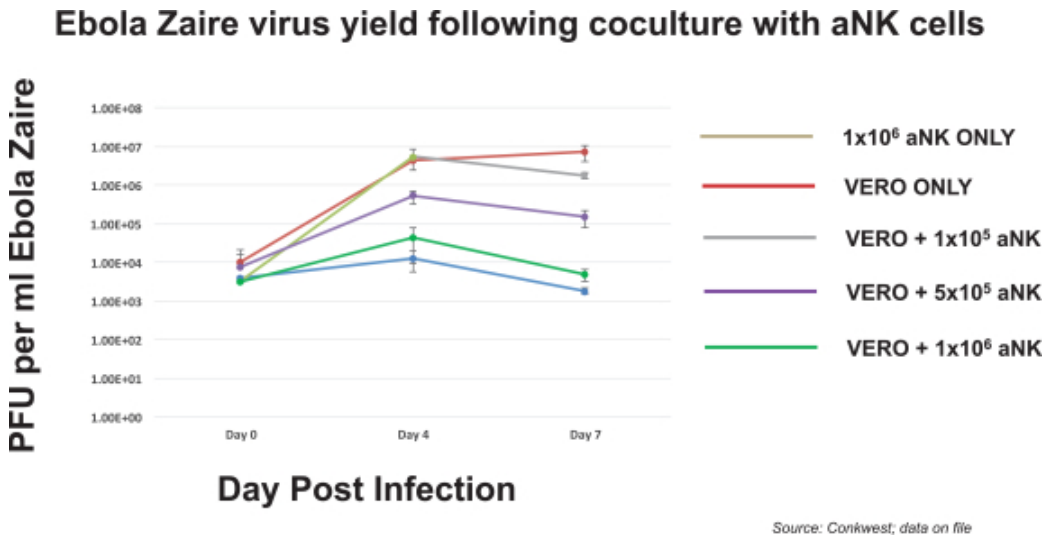
In addition to the significant impact Ebola has had, it also represents a source of concern in terms of national security. Ebola is listed as a Category A pathogen by the Centers for Disease Control and Prevention, or CDC, and the U.S.

Department of Defense since the virus can be easily disseminated or transmitted, result in high mortality rates, have the potential for a major public health impact, and may cause public panic and social disruption.

Our aNK product candidate for the treatment of Ebola is currently in preclinical studies. We intend to complete IND-enabling studies in late 2015 and submit an IND an initiate a Phase I clinical trial in the second half of 2016. We are currently conducting further preclinical studies with additional viral strains with the goal of optimizing co-culture conditions, time of introduction of our aNK product candidate for the treatment of Ebola after infection, duration of exposure to our aNK product candidate for the treatment of Ebola, and optimal ratio of our aNK product candidate for the treatment of Ebola to realize antiviral effect as some of the objectives. Rodent and non-human primate studies may be conducted to further validate the approach and to facilitate clinical development.

Preclinical Studies to Date in Ebola

We have conducted initial *in vitro* studies at a biosafety level 4 (BSL-4) laboratory investigating co-culture conditions that would support our aNK product candidate for the treatment of Ebola's antiviral efficacy and further development. Ebola (Zaire strain) replicated to titers of approximately 3x10^6/ml by day 7 under monoculture conditions in permissive Vero cells. In contrast, our aNK product candidate for the treatment of Ebola monocultures remain at input virus levels suggesting that our aNK product candidate for the treatment of Ebola may not support Ebola virus replication. When aNK-002 was co-cultured with the permissive Vero cells, there was a dose-dependent suppression of viral titers to a notable degree. At the high dose, there was an approximately 1,000 fold decrease of viral load compared to untreated Vero cells.

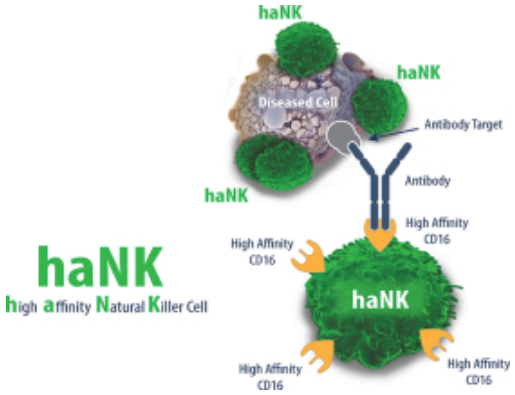


Source: Conkwest; data on file

haNK

haNK product candidates are aNK cells genetically engineered to express high-affinity CD16, a receptor that allows direct binding of NK cells to antibodies, potentially enhancing their cancer killing effects through ADCC. We expect that our haNK product candidates will initially be used in combination with widely-used therapeutic mAbs such as Herceptin, Erbitux and Rituxan. Therapeutic mAbs represent an important pillar of immunotherapy and are integral to the treatment paradigm of a variety of diseases. However, the actual cancer

cell-killing efficacy of many of these mAbs is largely dependent on ADCC, which involves mAbs' recruitment of NK and other immune cells to kill the antibody-bound cancer cells. If the patient's immune system is compromised, the efficacy of mAbs is limited. As such, there is strong rationale to administer additional immune cells via haNK in combination with mAbs to induce higher ADCC and therapeutic effect in these patients. We plan to develop haNK product candidates in combination with mAbs in order to potentially address larger markets and earlier lines of treatment.



Validating haNK through non-clinical applications and in vitro studies

Non-clinical applications

haNK cells have been widely utilized by over 40 biopharmaceutical companies to date for *in-vitro* ADCC testing of their antibodies in development and in certain instances their commercially available antibody products. For example, our haNK cells have been adapted for use in commercial assays such as Biotek's automated Delfia ADCC assay system and Roche and Acea's xCELLigence system. haNK cells have also been deployed under unsolicited non-exclusive, non-clinical licenses for commercial ADCC assay testing applications by most of the large pharmaceutical developers of mAbs.

In vitro studies

The graphs below depict the increasing ADCC killing activity of our haNK cells in the presence of increasing concentrations of either Herceptin or Rituxan observed in *in vitro* studies. The comparative killing activity of low-affinity 176F expressing aNK, or laNK, cells and aNK alone observed are also depicted below.

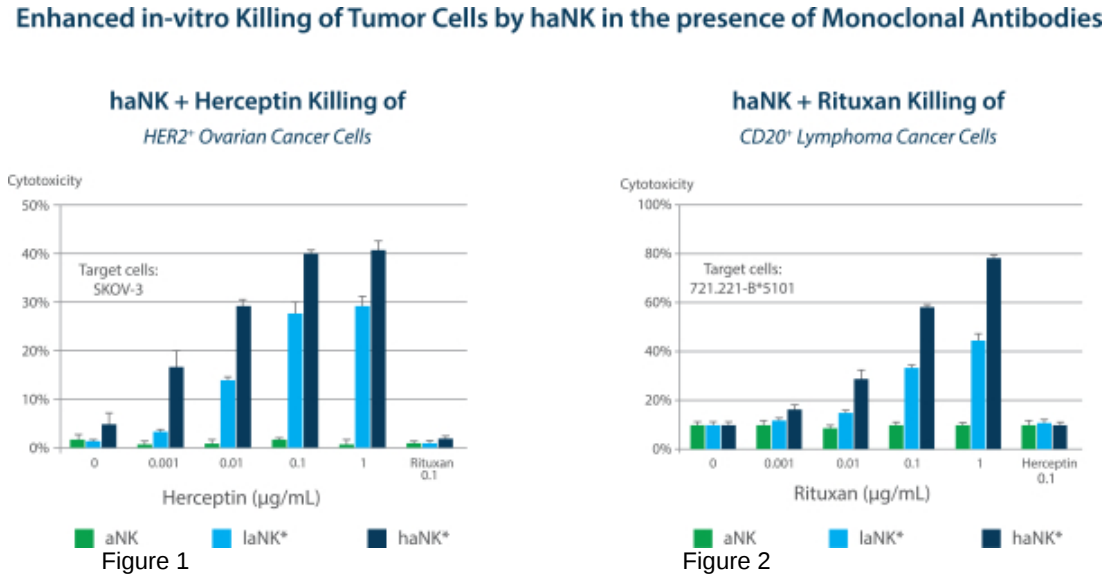


Figure 1

Figure 2

Figure 1. aNK, laNK and haNK cells were tested separately in killing of SK-OV-3 ovarian cancer cells in the presence of varying concentrations of Herceptin. The assay was performed by loading the tumor cells with radioactive chromium-51 and measuring the release by cytotoxicity in a 4 hour assay.

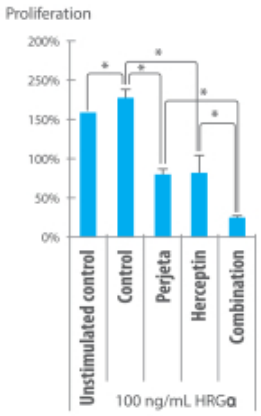
aNK cells expressing the high-affinity 176V variant responded to lower dose of Herceptin (0.001 ug/mL) and exhibited stronger maximal killing response, as compared to cells expressing the low-affinity 176F variant. Parental aNK cells, lacking CD16 expression, did not exhibit any ADCC response toward the SK-OV-3 cells and Rituxan did not trigger any ADCC response since this antibody was not designed to target SKOV3 cells.

Figure 2. aNK cells expressing the high-affinity 176V variant responded to a lower dose of Rituxan (0.001 ug/mL) and exhibited stronger maximal killing response, as compared to cells expressing the low-affinity 176F variant. Parental aNK cells, lacking CD16 expression, did not exhibit any ADCC response toward the 721.221 B-cell lymphoma cells and Herceptin did not trigger any ADCC response since this antibody was not designed to target 721.221 cells.

Source: J Immunol. 2008 May 1;180(9):6392-401.

In addition, the graphs below depict the synergistic activity of the combination of Herceptin and Perjeta (Her2/Her3) to mediate ADCC killing observed in *in vitro* studies. Through the application of haNK cells to kill Her2+ gastric carcinoma cells, the activity observed in the combination of Herceptin and Perjeta was significantly greater than either agent alone.

Proliferation Inhibition of HER2+ Gastric Carcinoma Cells in the Presence of haNK + mAbs



Source: Clin Cancer Res, 2011 August 1;17(15) 5060-5070

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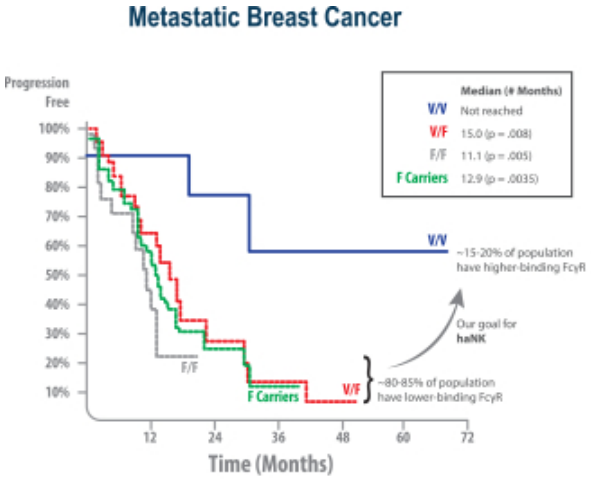
Rationale for developing high affinity NK cells (haNK) in combination with approved mAbs and potentially any therapeutic antibody that utilizes the ADCC killing pathway

In multiple clinical trials conducted by third parties, patients who were homozygous for high affinity CD16 (V/V) generally experienced better responses to exogenous mAb therapy than patients who were carriers of a low affinity CD16 allele (F carriers or F/F or V/F). The illustration from one study below shows the difference in progression-free survival between HER2+ breast cancer patients treated with Herceptin who have the homozygous high affinity form of CD16 and those who have the low affinity form to be as much as 20% at 48 months.



* A p-value is the probability that the reported result was achieved purely by chance, such that a p-value of less than or equal to 0.05 or 0.01 means that there is a 5.0% or 1.0% or less probability, respectively, that the difference between the control group and the treatment group is purely due to chance. A p-value of 0.05 or less typically represents a statistically significant result.

54 patients / HERCEPTIN

54 patients treated with Herceptin. PFS (progression-free survival) was >72 months for V/V group – PFS only 11-15 months for other patients. At 12.9 months, P = 0.0035 for V/V vs F carriers.*

Musolino et al, J. Clin Oncol, 26, 1789, 2008

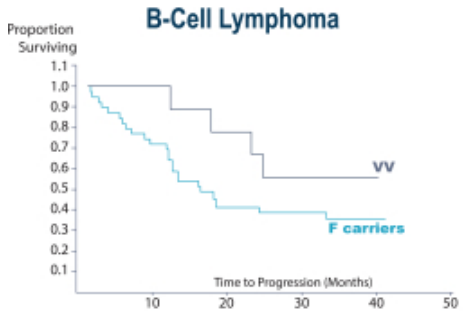
V/V: homozygous high-affinity CD16

V/F: heterozygous low-affinity CD16

F/F: homozygous low-affinity CD16

Musolino et al, J. Clin Oncol, 26, 1789, 2008

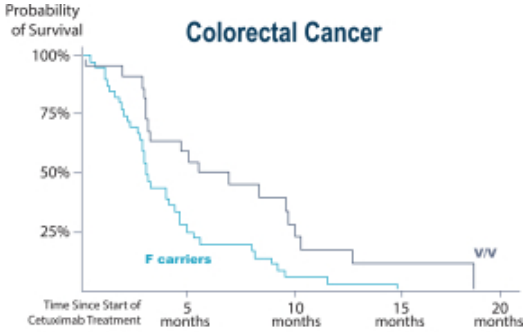
Data from three clinical trials demonstrating this point are shown below. The rationale therefore for combining high affinity CD16 NKs (haNKs) with Rituxan and Herceptin in patients with low affinity CD16 alleles (F carriers or F/F or V/F), should enhance the killing effect of these mAbs and achieve the results for patients with V/V alleles.



49 patients / RITUXAN

49 patients treated with Rituxan. Response rates at months 2 and 12 were 100% and 90% respectively for V/V patients.

Cartron et al, Blood, 99, 754-758, 2002



69 patients / ERBITUX

69 patients treated with Erbitux. Patients with V/V had longer PFS (5.5 v 3.0 months; P = 0.005).*

Bibeau et al, J. Clin Oncol, 27, 1122, 2009

mAbs are prevalently used and generate over $50.0 billion in reported annual sales. It has been reported that perhaps only approximately 10% to 20% of the addressable patient population for mAb therapies carry high-affinity CD16 receptors. This implies that our haNK product candidates may have significant market potential for these and potentially all mAb products that kill via the ADCC pathway as a combination therapy to address a large number of patients who have poor responses with mAbs.

Advance clinical development of aNK and haNK by entering into Phase II and Phase II/III clinical trials with our product candidates in combination with commercially approved mAbs and select late-stage mAbs in development.

mAb combinations. We plan to pursue opportunities for our aNK and haNK programs with pharmaceutical companies for approved and select late-stage mAbs. We have out-licensed our haNK cells for non-therapeutic use to over 40 biopharmaceutical companies for them to select and validate their monoclonal antibodies for development. Certain biopharmaceutical companies have also used our haNK cells as a lot release quality control test for their therapeutic antibodies.

ADCC contributes to clinical efficacy of a broad range of antibody therapeutics. In 2011, F. Hoffmann-LaRoche Ltd. reported the development of an *in vitro* ADCC method based on our natural killer cell line as effectors to measure the ADCC activity of a humanized IgG1 antibody directed against the human CD20 antigen. Their data show that this assay is capable of measuring small changes in ADCC and can therefore be used to test therapeutic antibodies against cell-surface targets for their depleting activity. We believe this report supports our approach and the therapeutic potential of our haNK platform. As a result, our accelerated strategy is to leverage the development performed by our biopharmaceutical licensees by initiating Phase II and Phase II/III clinical trials of our haNK product candidates in combination with commercially approved mAbs and select late-stage mAbs in development, the combination potentially enhancing the activity of these antibodies in patients with low affinity CD16 receptors. The following table lists many of the commercial mAb products that can potentially be paired up with haNK therapy.

mAbs Approved for Cancer Treatment

Generic Name	Type	Target and Location	Indications	Year of FDA/ EMA Approval	Mode of Action	Patient Selection
Rituximab	Chimeric IgG1	CD20 (B cells)	CLL, NHL (first line)	1997/1998	CDC and ADCC	Based on disease stage and type CD20 positive
Ofatumumab	Human IgG1k	CD20 (B cells)	CLL	2009/2010	CDC and ADCC	Not available
Obinutuzumab	Humanized IgG1	CD20 (B cells)	CLL	2013/2012	ADCC	Not available
Alemtuzumab	Humanized IgG1	CD52 (lymphoid cells)	CLL	2001/2001	CDC and ADCC	Not available; evidence suggesting patients with 17p deletion or p53 mutation benefit more
Trastuzumab	Humanized IgG1	HER2 (tumor cell membrane)	BC, adjuvant and metastatic advanced gastric cancer (first line)	1998/2000	Downregulation of HER2 signal transduction; ADCC	Based on HER2 expression (positive by IHC and/or FISH)
Pertuzumab	Humanized IgG1	HER2 (tumor cell membrane)	BC	2012/2013	Inhibition of HER2 dimerization	Based on HER2 expression (positive by IHC and/or FISH)
Bevacizumab	Humanized IgG1	VEGF (microenvironment)	CRC, RCC, NSCLC (nonsquamous), GBM	2004/2005	Inhibition of VEGF signaling	Not available
Ramucirumab	Fully human IgG1	VEGFR2 (microenvironment)	Gastric cancer	2014/—*	Inhibition of VEGF signaling	Not available
Cetuximab	Chimeric IgG1	EGFR (tumor cell membrane)	CRC, HNSCC	2004/2004	Downregulation of EGFR signaling; ADCC	CRC: based on EGFR expression (positive) and *KRAS* mutation status (wild type); HNSCC (high EGFR expression): no selection
Panitumumab	Human IgG2	EGFR (tumor cell membrane)	CRC	2006/2007	Downregulation of EGFR signaling; ADCC	EGFR expression (positive) and *KRAS* mutation status (wild type)
Ipilimumab	Human IgG1k	CTLA-4 (T cells)	Melanoma	2011/2011	Induces immune response by CTLA-4	Not available
MPDL2380A	Human IgG1	PD-L1 (tumor cell membrane)	Bladder cancer	2014/—†	Induces immune response by blocking PDL1 and PD-1 interaction	Based on PDL1 expression
Catumaxomab	Mouse and rat IgG	EpCAM (tumor cell); CD3 and FcyRs (immune effector cells)	Malignant ascites	—/2009§	Inducing immune response	Not available

* Ramucirumab was granted orphan status by EMA in 2012 for hepatocellular carcinoma and gastric cancer.

† MDPL3280A was granted breakthrough therapy designation by FDA in May 2014 for metastatic urothelial bladder cancer.

§ Catumaxornab was granted orphan status by FDA in 2006 for ovarian cancer and in 2009 for gastric cancer.

Abbreviations: ADCC, antibody-dependent cellular cytotoxicity; BC, breast cancer, CDC, complement-dependent cytotoxicity; CLL, chronic lymphocytic leukemia; CRC, colorectal cancer; CTLA-4, cytotoxic T-lymphocyte–associated antigen 4; EGFR, epidermal growth factor receptor; EMA, European Medicines Agency; EpCAM, epithelial cell adhesion molecule; FcyRs, Fc receptor for immunoglobulin G; FDA, US Food and Drug Administration; FISH, fluorescent in situ hybridization; GBM, glioblastoma; HER2, human epidermal growth factor receptor 2; HL, Hodgkin lymphoma; HNSCC, head and neck squamous cell carcinoma; IgG, immunoglobulin G; IHC, immunohistochemistry; NHL, non-Hodgkin lymphoma; NSCLC, non–small-cell lung cancer; PD-1, programmed death receptor 1; PDL1, programmed death receptor 1 ligand; RCC, renal cell cancer; VEGF, vascular endothelial growth factor; VEGFR2, vascular endothelial growth factor receptor 2.

Source: J Clin Oncol. 2015 May 1;33(13):1491-504. doi: 10.1200/JCO.2014.57.8278. Epub 2015 Mar 16.

Phase I/II haNK Product Candidates

Solid Tumors—Herceptin-haNK. Our product candidate Herceptin-haNK is our aNK cell genetically engineered to express high-affinity CD16 and dosed in combination with Herceptin which we intend to develop for the treatment of HER2 expressing tumors. HER2 is expressed in a variety of solid tumors including breast, ovarian, gastric, and brain cancers. It is reported that approximately 20% of breast cancers are HER2 positive and Herceptin is part of the standard of care for these tumors, but about 70% of patients receiving Herceptin for the treatment of breast cancer demonstrate or develop resistance to the drug. We believe there is strong rationale for combining haNK with Herceptin to potentially augment efficacy via enhanced ADCC against tumors cells. We plan to initially target breast cancer and gastroesophogeal cancer with our Herceptin-haNK product candidate and expect to submit an IND and initiate Phase I/II clinical trials in these two indications in 2016.

Solid Tumors—Perjeta-haNK. Our product candidate Perjeta-haNK is our aNK cell genetically engineered to express high-affinity CD16 and dosed in combination with Perjeta which we intend to develop for the treatment of HER3 expressing tumors. We plan to initially target breast cancer with our Herceptin-haNK product candidate and expect to submit an IND and initiate a Phase I/II clinical trials for this indication in 2016.

Solid Tumors—Ganitumab-haNK. We plan to develop haNK in combination with Ganitumab, which we intend to develop for the treatment of solid tumors known to overexpress IGF-1R. We plan to initially target pancreatic cancer and Ewing's sarcoma, a pediatric bone cancer, with our Ganitumab-haNK product candidate and expect to initiate a Phase I/II clinical trial for this indication in 2016.

Bulky Hematological Cancers—Rituxan-haNK. We plan to initially target Hodgkin's lymphoma and CLL with Richter's transformation with our Rituxan.haNK product candidate and expect to submit an IND and initiate Phase I/II clinical trials for these indications in 2017.

Bulky Hematological Cancers—Adcetris-haNK. We plan to initially target non-Hodgkin's lymphoma with our Adcetris-haNK product candidate and expect to submit an IND and initiate a Phase I/II clinical trial for this indication in 2017.

Chemotherapy combinations. We plan to advance our aNK and haNK programs by entering into Phase II and Phase II/III clinical trials with our product candidates in combination with marketed drugs and select late-stage product candidates. A large number of monoclonal antibodies and chemotherapy drugs are being marketed for multiple indications. Published data show these mAbs have generally enhanced activity in patients with high-affinity NK cells. Published data also show that chemotherapy agents such as 5FU, cyclophosphamide and paclitaxel, when administered in low doses, generally enhance the immune system. We plan to accelerate clinical development of our haNK product candidates by entering into investigator-initiated and company-sponsored Phase II and Phase II/III clinical trials of our haNK product candidates administered in combination with approved mAbs and select late-stage product candidates. We also plan to accelerate clinical development of our aNK product candidates by entering into investigator-initiated and company-sponsored Phase II and Phase II/III

clinical trials of these product candidates administered in combination with approved chemotherapy agents. We believe this approach may accelerate the development and potential commercialization of our product candidate pipeline. The table below describes our accelerated clinical development plan for aNK and haNK by entering into Phase II and Phase II/III clinical trials with our product candidates in combination with marketed drugs and select late-stage product candidates in late-stage development.

Strategic Vision for Combination Therapy Product Candidate Pipeline

Product Candidate	Indication	Combination Regimen	Planned Trials
aNK Combination	Pancreas	Low dose cremaphor-free paclitaxel cytotoxic combination*	Phase II/III**
	Ovarian	Intraperitoneal and systemic cytotoxic combination*	Phase II/III**
	Bladder	Intravesicular and systemic low dose cytotoxic combination*	Phase II/III**
	Gastric	Low dose cytotoxic combination*	Phase II/III**
haNK Combination	Ewing's sarcoma	Ganitumab combination	Phase II/III**

* Commercially available standard of care products.

** Planned Phase II/III clinical trial based upon potential use of (1) preclinical study and Phase I clinical trial data with aNK and (2) the fact that these are planned combination trials with commercially approved products, or in the case of haNK combination, a Phase III product candidate. Initiation of planned trials are contingent upon submission and allowance of an IND.

haNK Pharmaceutical Opportunities

We have out-licensed our haNK cells for non-therapeutic use to over 40 biopharmaceutical companies for them to select and validate their monoclonal antibodies for development. Certain biopharmaceutical companies have also used our haNK cells as a lot release quality control test for their therapeutic antibodies. As we pursue these opportunities, we plan to leverage the development performed by our biopharmaceutical licensees by initiating studies of our haNKs in combination with these antibodies, the combination potentially enhancing the activity of these antibodies in patients with low affinity CD16 receptors. We believe this enhanced efficacy provides a rationale for studying haNK combinations with these new antibodies, whether during the development phase or after commercial launch by the biopharmaceutical company.

taNK

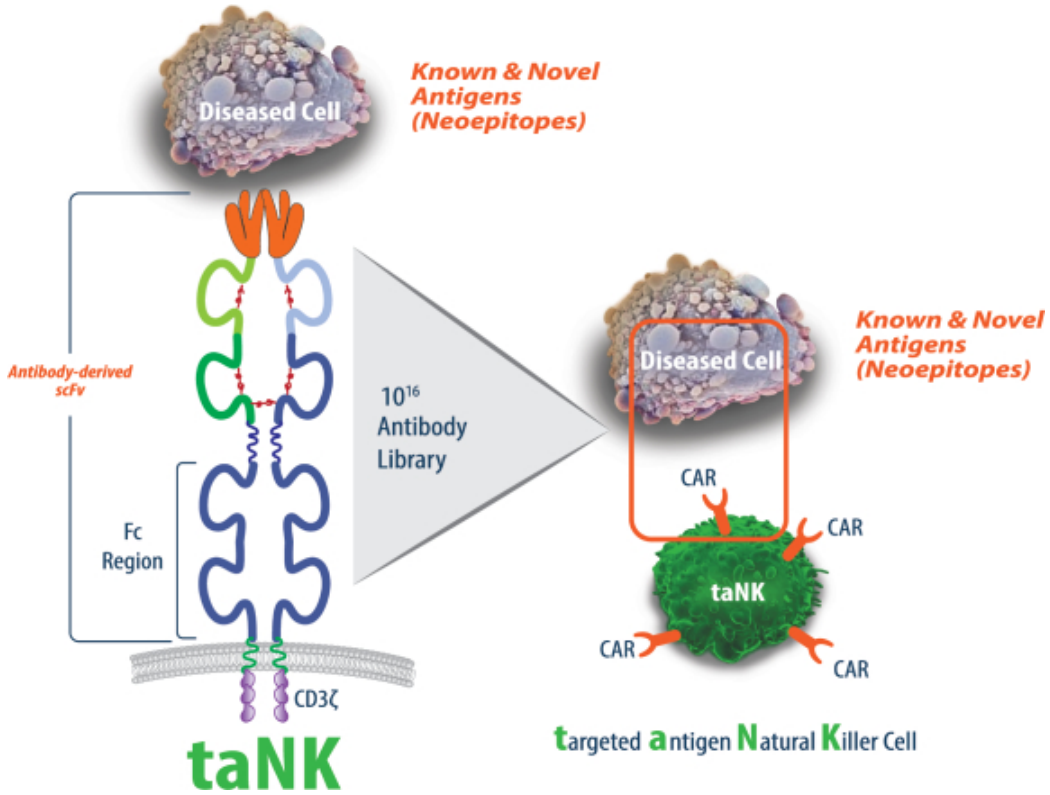
We have genetically modified our aNKs to incorporate chimeric antigen receptors, or CARs, to target specific antigens on the surface of abnormal cells, including CD33, EGFR, HER2/neu, PDL1 and PSMA, among others. These taNK cells are designed to directly bind to tumor-specific antigens in multiple bulky hematological cancers and solid tumors and induce cell death by the release of toxic granules directly into the tumor cell, by the release of cytokines and chemokines which recruit additional innate and adaptive immune responses and by the recruitment of cytotoxic T-cells. These tumor-specific antigens can be divided into the following four classes, which can be targeted by our taNK platform: (2) checkpoint inhibitors expressed on the surface of tumor cells such as PDL1, (2) well-established tumor antigens such as HER-2, (3) newly discovered neoepitopes and (4) novel surface receptors associated with cancer stem cells.

A typical CAR construct includes the following components:

- A single-chain Fv fragment, or scFv, which is derived from a human antibody and recognizes the target antigen on the surface of a diseased cell; and
- CD3z chain which provides the initial signal to the taNK cell and activates its mechanisms when the receptor binds to an antigen.

The construct of our taNK product candidates is depicted schematically below. As illustrated below, we believe access to the antibody library from Sorrento will allow for the selection of antibodies that can in turn be

converted in CARs that selectively target and bind to known or novel tumor antigens. The antibody-derived scFv region (which includes the Fc region) is expected to bind the targeted antigen, while a CD3z segment inside the taNK cell induces the taNK to release cytotoxic compounds to destroy the targeted diseased cell.



Unlike CAR-T and TCR therapies, our taNK cells can incorporate but do not require a co-stimulatory domain, such as CD28 or 4-1BB, which is another signaling component for immune cell activation and survival.

Phase I/II taNK Product Candidates

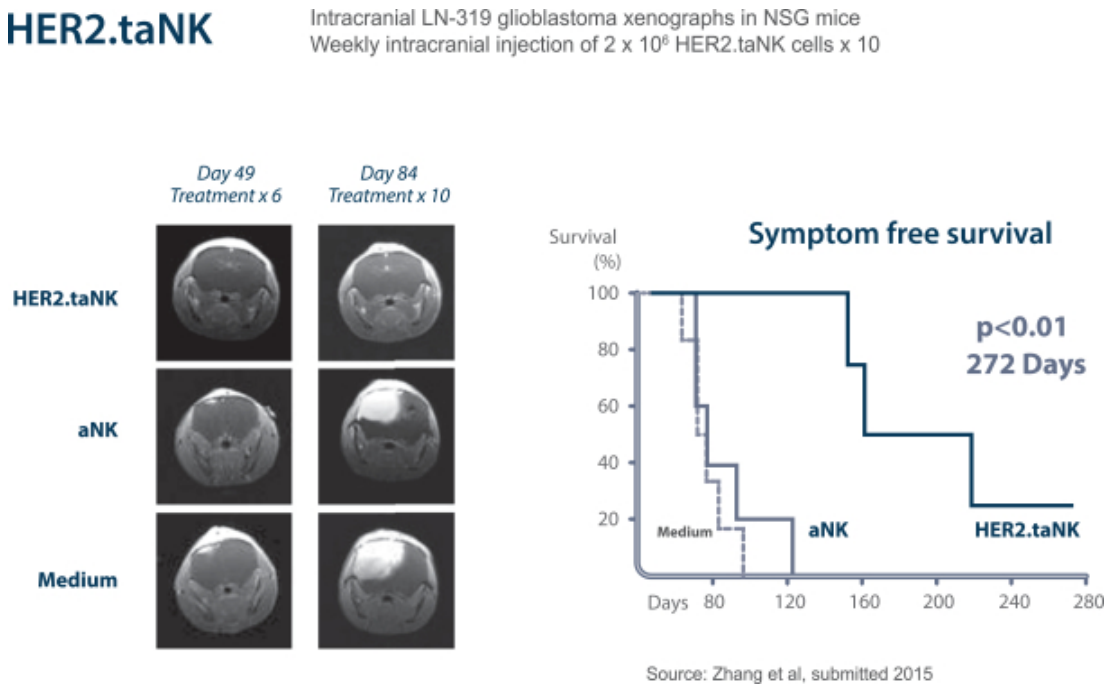
Solid Tumors

PDL1.taNK for Triple Negative Breast, NSCLC, Renal and Melanoma. PDL1 (Programmed death-ligand 1) is a transmembrane protein that has been associated with suppressing the immune system. PDL1 binds to its receptor, PD-1, found on activated T-cells, B cells, and myeloid cells, to modulate activation or inhibition. Many tumors upregulate PDL1 expression in order to evade the host immune system and the high expression of PDL1 on various cancers has been linked to poorer prognosis and risk of death. By combining a PDL1 antibody as a CAR in our NK cells, a PDL1.taNK, we have the unique ability to both activate T-cells and induce direct killing by NK cells simultaneously with the administration of a single living drug. We plan to submit an IND and initiate a phase I/II clinical trial for PDL1.taNK for solid tumors in late 2016.

HER2.taNK for HER2-expressing Solid Tumors. We are developing HER2.taNK for the treatment of solid tumors expressing the HER2 antigen, including breast and bladder cancers. Amplification or overexpression of HER2 has been shown to play an important role in the development and progression of certain aggressive types of cancer including breast, bladder, head and neck, stomach, and uterine cancers. This antigen is expressed in up

to 20% of breast and up to 30% of bladder cancer patients. The overall HER2 cancer market was over $7.0 billion in 2014 based on annual sales of Herceptin reported by PDL Biopharma, Inc. We have generated compelling proof-of-principle *in vivo* pre-clinical data below for HER2.taNK, and we plan to complete IND-enabling studies and submit an IND and initiate a Phase I/II clinical trial in 2016.

The data below demonstrate *in vivo* results for HER2.taNK in glioblastoma xenograft immune-compromised mice model. The images on the bottom left show reduction in tumor burden from day 49 to day 84. The symptom-free survival curve on the bottom right shows statistically significant greater effect in the HER2.taNK treated arm compared to treatment with unmodified aNK cells and placebo.



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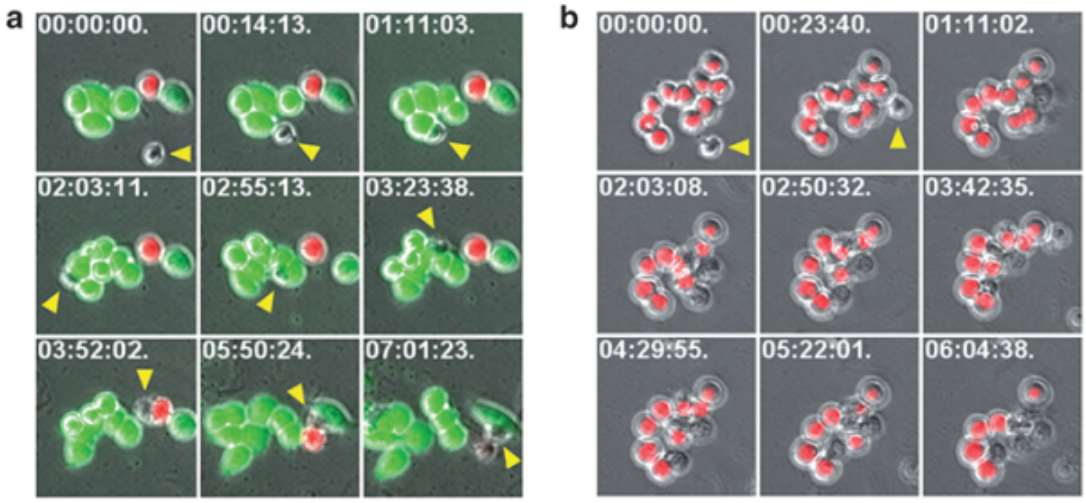
The images below shows targeted killing of HER2+ breast cancer cells (red cells) by our HER2.taNK (gray cell).



Kinetics of target cell killing by HER2.taNK cells.

(a) To investigate selectivity and kinetics of target cell killing, live cell imaging experiments were performed with cocultures of clonal HER2.taNK (yellow arrowhead) cells and mixtures of tdTOMATO-expressing HER2+ MDA-MB453 (red fluorescence) and EGFP-expressing HER2- MDA-MB468 (green fluorescence) breast carcinoma cells. MDA-MB468 cells were not affected in their growth despite multiple contacts with the HER2.taNK cell and continued to divide during the observation time.

(b) Serial images of a microscopic field with a single HER2.taNK cell (yellow arrowhead) and 10 MDA-MB453 cells (red fluorescence). Serial killing of five MDA-MB453 target cells by the single HER2.taNK cell was completed ~5 hours and 40 minutes after initial contact (last image of the series).

Source: Mol Ther. 2015 Feb;23(2):330-8.

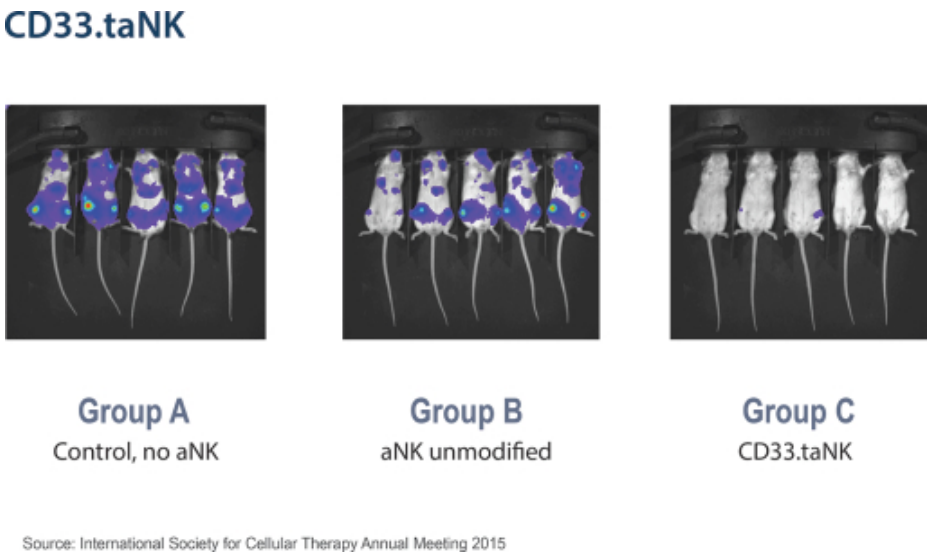
MUC16.taNK for Ovarian Cancer. MUC-16 is overexpressed in the majority of ovarian cancers, but is not found on the surface of normal ovary cells. CA-125 is a protein found in the blood of ovarian cancer patients that results from the cleavage of MUC-16. CA-125 levels in the blood are a common test for ovarian cancer progression because they correlate with cancer progression. We plan to submit an IND and initiate Phase I/II clinical trials for our product candidate *MUC16.taNK* for ovarian cancer in 2017.

ROR-1.taNK for Various Solid Tumors. ROR-1 is overexpressed on the cell surface of a wide variety of cancers, including a subset of non-small-cell lung cancer, triple negative breast cancer, pancreatic cancer, and prostate cancer. It is expressed on B-cell chronic lymphocytic leukemia and mantle cell lymphoma. In non-cancerous tissues, it is predominantly found at low levels on adipocytes, or fat cells, and briefly on precursors to B-cells, or pre-B-cells, during normal B-cell maturation. We plan to initiate Phase I/II clinical trials for our product candidate *ROR-1.taNK* for various solid tumors in 2017.

Bulky Hematological Cancers

CD33.taNK for AML. Our product candidate CD33.taNK is our aNK cell modified to express the CD33 CAR for the treatment of AML. CD33 is cell surface antigen that is typically expressed on myeloid cells, and is highly expressed in approximately 85% to 90% of patients with AML. It is estimated that in 2015 there will be 21,000 new cases of AML in the United States, occurring mostly in adults. Prognosis is poor with five year survival rate of approximately 10% in patients over 60 years of age, and continues to represent an unmet medical need. We believe CD33.taNK has demonstrated promising proof-of-principle *in vivo* data, and we expect to complete IND-enabling studies and submit an IND and initiate Phase I/II clinical trials for AML in late 2016.

Promising CD33.taNK preclinical data were noted. Fifteen immuno-compromised mice were intravenously injected with human leukemia cells. Three days after the introduction of leukemia cells, each group of five mice was given no treatment, unmodified aNK cells or CD33.taNK cells. The treated mice were given four weekly infusions. The xenogen scans shown below were taken on day 25 after leukemia cell introduction to measure remaining cancer cell load, represented in blue. The group treated with unmodified aNK cells demonstrated reduced cancer cell load compared to the untreated group. The group treated with CD33.taNK cells demonstrated markedly greater cancer cell reduction compared to the untreated and the unmodified aNK treatment groups.



Neoepitopes and Cancer Stem Cells

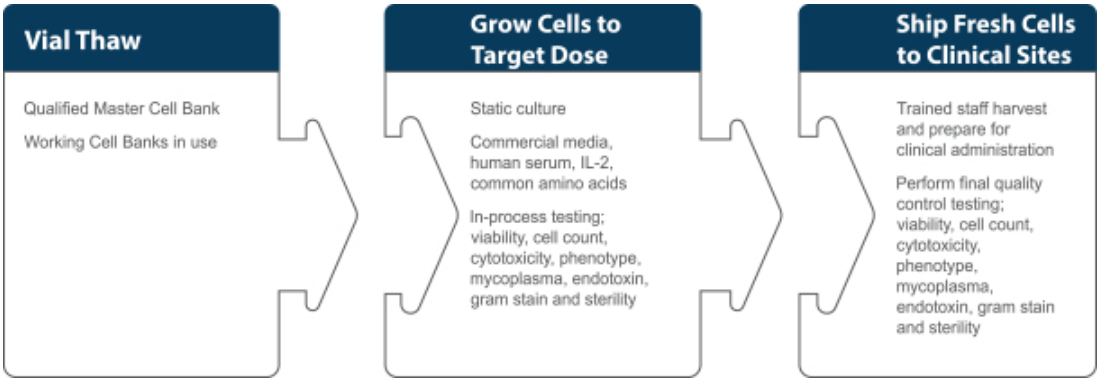
We are integrating the following ecosystem to help drive the development of genetically modified NK cells targeting neoepitopes and cancer stem cells: (1) a high-speed supercomputing infrastructure to help identify both known antigens on the surface of tumor cells and neoepitopes in clinical patients suffering from cancer, in a timely manner and at large scale; (2) a next-generation genomic and transcriptomic sequencing infrastructure to help identify the expression of the neoepitopes on the surface of the tumor cell; (3) a diverse library of human antibodies from which to interrogate and extract an antibody matching the neoepitope; and (4) an NK cell potentially capable of being produced as a scalable cell-based “off-the-shelf” therapy. We expect to regularly add newly discovered neoepitopes from our discovery engine, and we believe the thousands of newly discovered antigens selectively expressed on the cancer cells and not on the essential normal tissue may provide us with the ability to create new and targeted libraries of antibodies to be potentially delivered as living drugs for metastatic cancer cells and cancer stem cells.

Manufacturing

Our manufacturing strategy is being designed to meet the demand needs of clinical supply and commercial launch. We are establishing our own manufacturing facility and we currently use facilities operated by one or more third party clinical manufacturing organizations, or CMOs. We are building out a state-of-the-art, cell-based manufacturing facility with the capacity to support large-scale clinical trials and commercialization. We are developing novel manufacturing methods, both in equipment utilizing state-of–the-art optics and proprietary media to maximize the attributes of our NK platform. We believe that this automated, closed platform manufacturing process will give us the ability to conduct manufacturing in a non-classified, lower cost manufacturing environment.

Unlike the manufacturing process involved in autologous adaptive immunotherapy of CAR-T cells, which can have high unit manufacturing costs and complex processes, including harvesting T cells from patients, genetically engineering the T cells *ex vivo*, multiplying the T cells to obtain the desired dose, and ultimately infusing the T cells back into a patient's body, manufacturing our allogeneic "off-the-shelf" aNK cells involves a rapid, scalable and cost efficient process. The cells are stored and maintained in qualified master cell banks in cryopreserved form. The cells are thawed into small scale cell culture and repeatedly doubled in number until the desired dose is achieved. The process is accomplished using all disposables. The cells are grown in a commercially available media, supplemented with IL-2, human AB serum and other amino acids. In-process testing for cleanliness and identity are performed.

Clinical product final formulation occurs at each clinical site where the local site laboratory prepares the final formulation for administration to the patient. The laboratory tests for cleanliness, identity and potency. A single manufacturing run can sufficiently produce multiple patient cycles.



Clinical manufacturing occurs today at Baylor University and Center for Cell and Gene Therapy, or CAGT. We are building our own aNK cell production facility in 2015 with the goal of meeting our anticipated product candidate needs for the foreseeable future. Additionally, we are in the process of potentially further increasing capacity by engaging a commercial, international contract manufacturing organization to provide more product candidate production capacity as well as potentially provide us with process development capabilities for scale up into large scale production and cryopreservation final form. We plan to develop this commercial relationship with a CMO for their manufacturing expertise and global reach.

Competition

The biopharmaceutical industry is characterized by intense and dynamic competition to develop new technologies and proprietary therapies. Any product candidates that we successfully develop and commercialize will have to compete with existing therapies and new therapies that may become available in the future. We believe that our proprietary aNK platform, differentiated aNK, haNK and taNK product candidates, strategic collaborations and cell-based immunotherapy expertise may provide us with competitive advantages. However,

we face potential competition from various sources, including larger and better-funded pharmaceutical, specialty pharmaceutical and biotechnology companies, as well as from academic institutions, governmental agencies and public and private research institutions. The key competitive factors affecting the success of any approved product will include the efficacy, safety profile, pricing, method of administration and level of promotional activity.

Our aNK, haNK and taNK product candidates will compete with other cell-based immunotherapy approaches using T- and dendritic cells. We are aware of companies developing product candidates focused on NK cells. These companies include Bristol-Myers Squibb and Innate Pharma. Companies that are currently focused on T-cell based treatments include Adaptimmune Limited, Amgen Inc., Bellicum Pharmaceuticals, Inc., bluebird bio, Inc., Celgene Corporation, Cellectis SA, GlaxoSmithKline plc, Intrexon Corporation, Juno Therapeutics, Inc., Kite Pharma, Inc., Novartis AG, Pfizer Inc. and Ziopharm Oncology, Inc. There is currently one approved dendritic cell-based cancer vaccine, PROVENGE, which is marketed by Valeant Pharmaceuticals for the treatment of metastatic castrate-resistant prostate cancer. Other companies focused on developing dendritic cell-based product candidates include Argos Therapeutics, Inc., Biovest International, Inc., ImmunoCellular Therapeutics, Ltd., Immune Design, Inc., Inovio Pharmaceuticals, Inc., Intrexon Corporation and Northwest Biotherapeutics, Inc.

Many of our competitors, either alone or with their strategic partners, have substantially greater financial, technical and human resources than we do and significantly greater experience in the discovery and development of product candidates, obtaining FDA and other regulatory approvals of treatments and commercializing those treatments. Accordingly, our competitors may be more successful than us in obtaining approval for treatments and achieving widespread market acceptance. Our competitors' treatments may be more effective, or more effectively marketed and sold, than any treatment we may commercialize and they may render our treatments obsolete or non-competitive before we can recover the expenses of developing and commercializing any of our treatments.

Mergers and acquisitions in the biotechnology and pharmaceutical industries may result in even more resources being concentrated among a smaller number of our competitors. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical study sites and subject registration for clinical studies, as well as in acquiring technologies complementary to, or necessary for, our programs. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

We anticipate that we will face intense and increasing competition as new therapies enter the market and advanced technologies become available. We expect any treatments that we develop and commercialize to compete on the basis of, among other things, efficacy, safety, convenience of administration and delivery, price, the level of generic competition and the availability of reimbursement from government and other third-party payers.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have a better safety profile, 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, we expect that our therapeutic products, if approved, will be priced at a significant premium over competitive generic products and our ability to compete may be affected in many cases by insurers or other third-party payers seeking to encourage the use of generic products.

Intellectual Property

We strive to protect and enhance the proprietary technology, inventions, and improvements that are commercially important to our business, including seeking, maintaining, and defending patent rights, whether developed internally or licensed from third parties. Our policy is to seek to protect our proprietary position by,

among other methods, filing patent applications in the United States and in jurisdictions outside of the United States related to our proprietary technology, inventions, improvements, and product candidates that are important to the development and implementation of our business. We also rely on trade secrets and know-how relating to our proprietary technology and product candidates, continuing innovation, and in-licensing opportunities to develop, strengthen, and maintain our proprietary position in the field of NK cell-based immunotherapy. We expect to rely on data exclusivity, market exclusivity, patent term adjustment and patent term extensions when available, as well as on regulatory protection afforded through orphan drug designations. Our commercial success may depend in part on our ability to obtain and maintain patent and other proprietary protection for our technology, inventions, and improvements; to preserve the confidentiality of our trade secrets; to maintain our licenses to use intellectual property owned by third parties; to defend and enforce our proprietary rights, including our patents; and to operate without infringing on the valid and enforceable patents and other proprietary rights of third parties.

We have developed and in-licensed numerous patents and patent applications and we possess substantial know-how and trade secrets relating to the development and commercialization of NK cell-based immunotherapy product candidates, including related manufacturing processes and technology. As of the date of this prospectus, our owned and licensed patent portfolio consists of two licensed U.S. issued patents, two licensed U.S. pending patent applications, one owned U.S. issued patent, and approximately 24 owned U.S. pending patent applications covering certain of our proprietary technology, inventions, and improvements and our most advanced product candidates, as well as approximately 15 licensed patents and eight owned patents issued in jurisdictions outside of the United States, four licensed patent applications and three owned patent applications pending in jurisdictions outside of the United States that, in many cases, are counterparts to the foregoing U.S. patents and patent applications, as well as an additional two pending Patent Cooperation Treaty, or PCT, patent applications. For example, these patents and patent applications include claims directed to:

- Natural Killer Cell Lines and Methods of Use;
- Genetically Modified Human Natural Killer Cell Lines;
- Treatment of Viral and Bacterial Diseases using Natural Killer Cell Lines;
- Treatment of Specific Diseases using Natural Killer Cell Lines;
- Treatment of Cancer using Natural Killer Cell Lines;
- Protocol and Media for Storage and Transport of NK-92 Cell Line; and
- Combination Therapy using Natural Killer Cell Lines.

As for the NK cell-based immunotherapy products and processes we develop and commercialize, in the normal course of business, we intend to pursue, when possible, composition, method of use, dosing and formulation patent protection. We may also pursue patent protection with respect to manufacturing and drug development processes and technology. The patents and patent applications outside of the United States in our portfolio are held primarily in Europe, Canada and Australia.

Individual patents extend for varying periods of time, depending upon the date of filing of the patent application, the date of patent issuance, and the legal term of patents in the countries in which they are obtained. Generally, patents issued for applications filed in the United States are effective for 20 years from the earliest effective filing date. The patent term may be adjusted to compensate for delayed patent issuance, when such delays are caused by the patent office or successful appeals against patent office actions. There is no limit on this patent term adjustment. In addition, in certain instances, a patent term can be extended to recapture a portion of the term effectively lost as a result of the FDA regulatory review period. The restoration period cannot be longer than five years and the total patent term, including the restoration period, must not exceed 14 years following FDA approval. The duration of patents outside of the United States varies in accordance with provisions of applicable local law, but typically is also 20 years from the earliest effective filing date. Our issued patents will expire on dates ranging from 2018 to 2026. If patents are issued on our pending patent applications, the resulting patents are projected to expire on dates ranging from 2018 to 2036. However, the actual protection afforded by a

patent varies on a product-by-product basis, from country-to-country, and depends upon many factors, including the type of patent, the scope of its coverage, the availability of regulatory-related extensions, the availability of legal remedies in a particular country, and the validity and enforceability of the patent.

The patent positions of companies like ours are generally uncertain and involve complex legal and factual questions. No consistent policy regarding the scope of claims allowable in patents in the field of immunotherapy has emerged in the United States. The patent situation outside of the United States is even more uncertain. Changes in either the patent laws or their interpretation in the United States and other countries may diminish our ability to protect our inventions and enforce our intellectual property rights, and more generally could affect the value of our intellectual property. In particular, our ability to stop third parties from making, using, selling, offering to sell, or importing products that infringe our intellectual property will depend in part on our success in obtaining and enforcing patent claims that cover our technology, inventions, and improvements. With respect to both licensed and company-owned intellectual property, we cannot be sure that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications filed by us in the future, nor can we be sure that any of our existing patents or any patents that may be granted to us in the future will be commercially useful in protecting our products and the methods used to manufacture those products. Moreover, even our issued patents do not guarantee us the right to practice our technology in relation to the commercialization of our products. However, the area of patent and other intellectual property rights in biotechnology is an evolving one with many risks and uncertainties, and third parties may have blocking patents that could be used to prevent us from commercializing our patented product candidates and practicing our proprietary technology. Our issued patents and those that may issue in the future may be challenged, invalidated, or circumvented, which could limit our ability to stop competitors from marketing related products or limit the length of the term of patent protection that we may have for our product candidates. In addition, the rights granted under any issued patents may not provide us with protection or competitive advantages against competitors with similar technology. Furthermore, our competitors may independently develop similar technologies. For these reasons, we may have competition for our product candidates. Moreover, because of the extensive time required for development, testing and regulatory review of a potential product, it is possible that, before any particular product candidate can be commercialized, any related patent may expire or remain in force for only a short period following commercialization, thereby reducing any advantage of the patent.

Our registered trademark portfolio currently contains four registered trademarks, 16 pending trademark applications in the United States, and two pending trademark applications in foreign jurisdictions. We may also rely, in some circumstances, on trade secrets to protect our technology. However, trade secrets are difficult to protect. We seek to protect our technology and product candidates, in part, by entering into confidentiality agreements with those who have access to our confidential information, including our employees, contractors, consultants, collaborators, and advisors. We also seek to preserve the integrity and confidentiality of our proprietary technology and processes by maintaining physical security of our premises and physical and electronic security of our information technology systems. Although we have confidence in these individuals, organizations, and systems, agreements or security measures may be breached and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or may be independently discovered by competitors. To the extent that our employees, contractors, consultants, collaborators, and advisors use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions. For this and more comprehensive risks related to our proprietary technology, inventions, improvements and products, please see the section on “Risk Factors—Risks Related to Intellectual Property.”

Licenses. We hold the worldwide rights, title and interest to the NK-92 cell line and we believe that we control commercial use of our NK-92 cells in key territories. We also maintain and exclusively control the only clinical grade master cell bank for NK-92. The original NK-92 cell line was isolated by Hans G. Klingemann, M.D., Ph.D., our founder and Vice President of Research and Development, and all patents and patent applications pertaining to this cell line are now in the name of Conkwest, Inc. or ZelleRx Corporation, our former name. In February 2003, we obtained an exclusive, worldwide license from Dr. Klingemann to the NK-92 cell line, and related NK-92 patents and know-how, including the NK-92 cell line, that had been assigned to him by

the British Columbia Cancer Agency, to manufacture, use and sell products covered by the scope of any valid claim in any of the licensed patents. Dr. Klingemann subsequently assigned the cell line and those patents to us, but we are still obligated to pay a single-digit royalty on sales of licensed products to Dr. Klingemann, as well as to pay the British Columbia Cancer Agency a small percentage of our profits from the sale of the NK-92 cell line that Dr. Klingemann obtained from them.

In July 2004, we entered into an exclusive license agreement with Fox Chase Cancer Center or Fox Chase, pursuant to which we were granted an exclusive, worldwide, sublicensable license under certain patents and know-how pertaining to CD16 receptors-bearing NK-92 cell lines. We agreed to pay Fox Chase low single-digit royalties on sales of licensed products. We are also obligated to pay Fox Chase a percentage of the royalties and other compensation we receive from sublicensees of our rights from Fox Chase. Fox Chase is obligated to assign the licensed patents to us if we commence a Phase III clinical trial of a licensed product and, if this does not occur, our license expires when the last of the licensed patents expires.

In March 2004, we entered into a license agreement with Rush University Medical Center pursuant to which Rush granted us an exclusive, worldwide, sublicensable license to certain intellectual property related to clinical use of NK-92 to develop and commercialize products and processes for the treatment of melanoma renal cancer, or for the diagnosis or treatment of non-melanoma and non-renal cancer. In consideration for the license, we are obligated to pay to Rush single-digit royalties on sales of licensed products with a minimum royalty payment of $25,000 per year, as well as non-material milestone payments upon completion of certain clinical, regulatory and commercialization milestones. We also agreed to pay to Rush a portion of certain payments that we receive under sublicensing arrangements. The license has a term of 12 years from the year in which royalty payments are first made, and includes customary termination rights for us and Rush.

In May 2005, we entered into a license agreement with University Health Network pursuant to which we obtained from University Health Network an exclusive, worldwide, sublicensable license to certain intellectual property relating to NK-92 clinical trials data from University Health Network to develop and commercialize products and processes for the diagnosis and treatment of certain hematological malignancies. Our license from University Health Network will automatically expire if we have not filed for regulatory approval or launched a licensed product within specified periods of time, and also includes other customary termination rights for both us and University Health Network.

In December 2014, we entered into a joint development and license agreement with Sorrento Therapeutics to collaborate on the development and commercialization of therapeutic applications of certain effector cell lines as may be agreed between the parties. Pursuant to this agreement, the parties have agreed to use certain of our NK-92 cells exclusively with Sorrento's CARs and certain other CARs not excluded under the agreement to develop and commercialize joint products. To fund our joint research and development efforts, Sorrento has agreed to make research credit payments that are not material in each of December 2015 and 2016, which amounts would be reduced by certain expenses for which we are responsible under the agreement. The research credit payments will be paid in the form of full-time employee expense credits by Sorrento, for our portion of any development costs, and a laboratory credit for maintaining a laboratory on Sorrento's premises. Each joint product developed by the parties will be driven by one party, as mutually agreed upon by a designated steering committee comprised of three representatives from each party. That designated party, in each circumstance, will initiate and control development, testing, out-licensing, regulatory approval, and commercialization, and will bear all costs associated with the development of the joint cell line or joint product, unless the other party shares in such costs. Revenues generated from each joint cell line or joint product will be apportioned between Sorrento and us, depending upon the stage of development and each party's contribution towards the development costs. Each of the parties will own an undivided interest in and to all rights, title and interest in and to the joint product rights. The agreement expires upon the later of the completion of the series of our collaborative research and development efforts or three years. We and Sorrento each have the right to terminate the agreement and licenses if the other party is dissolved or is declared bankrupt or insolvent or remains in default of any material obligations following a sixty day cure period to remedy the default.

In February 2010, we entered into a 17-year agreement with Intrexon Corporation pursuant to which we granted to Intrexon a worldwide, sublicensable license which may be exclusive with respect to certain indications designated by Intrexon, under certain patents relating to NK-92 cells to develop and commercialize modified NK-92 cells that express Intrexon's proprietary gene sequences for use as therapeutic and prophylactic agents in humans in specified therapeutic areas. Intrexon paid us a one-time license fee and is also obligated to pay non-material milestone payments with respect to specific indications, a royalty on net sales of the licensed products and a portion of the revenue Intrexon receives from third party sublicensees of its rights from us. Intrexon has the right to terminate the agreement upon 180 days' notice and both Intrexon and we have the right to terminate the agreement for the other's uncured breach of the agreement.

We have licensed or sub-licensed our cell lines and intellectual property to numerous other pharmaceutical and biotechnology companies for non-clinical uses such as laboratory testing. Such licenses generally require the licensee to pay an upfront fee and annual research and commercial fees for products sold using our intellectual property and cell lines.

Government Regulation

The FDA and other regulatory authorities at federal, state, and local levels, as well as in foreign countries, extensively regulate, among other things, the research, development, testing, manufacture, quality control, import, export, safety, effectiveness, labeling, packaging, storage, distribution, record keeping, approval, advertising, promotion, marketing, post-approval monitoring, and post-approval reporting of biologics such as those we are developing. We, along with third-party contractors, will be required to navigate the various preclinical, clinical and commercial approval requirements of the governing regulatory agencies of the countries in which we wish to conduct studies or seek approval or licensure of our product candidates. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local, and foreign statutes and regulations require the expenditure of substantial time and financial resources.

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

- completion of preclinical laboratory tests and animal studies performed in accordance with the FDA's current Good Laboratory Practices, or GLP, regulation;
- submission to the FDA of an IND, which must become effective before clinical trials may begin and must be updated annually or when significant changes are made;
- approval by an independent Institutional Review Board, or IRB, or ethics committee for each clinical site before the clinical trial is begun;
- performance of adequate and well-controlled human clinical trials to establish the safety, purity and potency of the proposed biologic product candidate for its intended purpose;
- preparation of and submission to the FDA of a Biologics License Application, or BLA, after completion of all required clinical trials;
- a determination by the FDA within 60 days of its receipt of a BLA to file the application for review;
- satisfactory completion of an FDA Advisory Committee review, if applicable;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities at which the proposed product is produced to assess compliance with current Good Manufacturing Practices, or cGMP, and to assure that the facilities, methods and controls are adequate to preserve the biological product's continued safety, purity and potency, and of selected clinical investigational sites to assess compliance with current Good Clinical Practices, or cGCPs; and
- FDA review and approval of the BLA to permit commercial marketing of the product for particular indications for use in the United States, which must be updated annually and when significant changes are made.

The testing and approval process requires substantial time, effort and financial resources, and we cannot be certain that any approvals for our product candidates will be granted on a timely basis, if at all. Prior to beginning the first clinical trial with a product candidate, we must submit an IND to the FDA. An IND is a request for authorization from the FDA to administer an investigational new drug product to humans. The central focus of an IND submission is on the general investigational plan and the protocol(s) for clinical studies. The IND also includes results of animal and in vitro studies assessing the toxicology, pharmacokinetics, pharmacology, and pharmacodynamic characteristics of the product; chemistry, manufacturing, and controls information; and any available human data or literature to support the use of the investigational product. An IND must become effective before human clinical trials may begin. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises safety concerns or questions about the proposed clinical trial. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before the clinical trial can begin. Submission of an IND therefore may or may not result in FDA authorization to begin a clinical trial.

When a clinical trial using genetically engineered cells is conducted at, or sponsored by, institutions receiving NIH funding for recombinant DNA research, prior to the submission of an IND to the FDA, a protocol and related documentation is submitted to and the study is registered with the NIH Office of Biotechnology Activities, or OBA, pursuant to the NIH Guidelines for Research Involving Recombinant DNA Molecules, or NIH Guidelines. Compliance with the NIH Guidelines is mandatory for investigators at institutions receiving NIH funds for research involving recombinant DNA, and many companies and other institutions not otherwise subject to the NIH Guidelines voluntarily follow them. The NIH is responsible for convening the Recombinant DNA Advisory Committee, or RAC, a federal advisory committee, that discusses protocols that raise novel or particularly important scientific, safety, or ethical considerations at one of its quarterly public meetings. The OBA will notify the FDA of the RAC's decision regarding the necessity for full public review of a protocol. RAC proceedings and reports are posted to the OBA web site and may be accessed by the public. If the FDA allows the IND to proceed, but the RAC decides that full public review of the protocol is warranted, the FDA will request at the completion of its IND review that sponsors delay initiation of the protocol until after completion of the RAC review process.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with cGCPs, which include the requirement that all research subjects provide their informed consent for their participation in any clinical study. Clinical trials are conducted under protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development and for any subsequent protocol amendments. Furthermore, an independent Institutional Review Board, or IRB, for each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial begins at that site, and must monitor the study until completed. Regulatory authorities, the IRB or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk or that the trial is unlikely to meet its stated objectives. Some studies also include oversight by an independent group of qualified experts organized by the clinical study sponsor, known as a data safety monitoring board, which provides authorization for whether or not a study may move forward at designated check points based on access to certain data from the study and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy. There are also requirements governing the reporting of ongoing clinical studies and clinical study results to public registries.

For purposes of BLA approval, human clinical trials are typically conducted in three sequential phases that may overlap.

- *Phase I.* The biological product is initially introduced into healthy human subjects and tested for safety. In the case of some products for severe or life-threatening diseases, the initial human testing is often conducted in patients.

- *Phase II*. The biological product is evaluated in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance, optimal dosage and dosing schedule.
- *Phase III*. Clinical trials are undertaken to further evaluate dosage, clinical efficacy, potency, and safety in an expanded patient population at geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk to benefit ratio of the product and provide an adequate basis for product labeling.
- *Phase IV*. In some cases, the FDA may require, or companies may voluntarily pursue, additional clinical trials after a product is approved to gain more information about the product. These so-called Phase IV studies may be made a condition to approval of the BLA.

Phase I, Phase II and Phase III testing may not be completed successfully within a specified period, if at all, and there can be no assurance that the data collected will support FDA approval or licensure of the product. Concurrent with clinical trials, companies may complete additional animal studies and develop additional information about the biological characteristics of the product candidate, and must finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. To help reduce the risk of the introduction of adventitious agents with use of biological products, the Public Health Service Act, or PHSA, emphasizes the importance of manufacturing control for products whose attributes cannot be precisely defined. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, must develop methods for testing the identity, strength, quality and purity of the final product, or for biologics, the safety, purity and potency. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

BLA Submission and Review by the FDA

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development, nonclinical studies and clinical trials are submitted to the FDA as part of a BLA requesting approval to market the product for one or more indications. The BLA must include all relevant data available from pertinent preclinical and clinical studies, including negative or ambiguous results as well as positive findings, together with detailed information relating to the product's chemistry, manufacturing, controls, and proposed labeling, among other things. Data can come from company-sponsored clinical studies intended to test the safety and effectiveness of a use of the product, or from a number of alternative sources, including studies initiated by investigators. The submission of a BLA requires payment of a substantial User Fee to FDA, and the sponsor of an approved BLA is also subject to annual product and establishment user fees. These fees are typically increased annually. A waiver of user fees may be obtained under certain limited circumstances.

Within 60 days following submission of the application, the FDA reviews a BLA to determine if it is substantially complete before the agency accepts it for filing. The FDA may refuse to file any BLA that it deems incomplete or not properly reviewable at the time of submission and may request additional information. In this event, the BLA must be resubmitted with the additional information. Once a BLA has been filed, the FDA's goal is to review the application within ten months after it accepts the application for filing, or, if the application relates to an unmet medical need in a serious or life-threatening indication, six months after the FDA accepts the application for filing. The review process is often significantly extended by FDA requests for additional information or clarification. The FDA reviews a BLA to determine, among other things, whether a product is safe, pure and potent and the facility in which it is manufactured, processed, packed, or held meets standards designed to assure the product's continued safety, purity and potency. The FDA may convene an advisory committee to provide clinical insight on application review questions. Before approving a BLA, the FDA will typically inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. For human cells, tissues, and cellular and tissue based products, or HCT/Ps, the FDA also will not approve the

product if the manufacturer is not in compliance with the Good Tissue Practices, or GTPs, to the extent applicable. These are FDA regulations and guidance documents that govern the methods used in, and the facilities and controls used for, the manufacture of HCT/Ps intended for implantation, transplant, infusion, or transfer into a human recipient. The primary intent of the GTP requirements is to ensure that cell and tissue based products are manufactured in a manner designed to prevent the introduction, transmission and spread of communicable disease. FDA regulations also require tissue establishments to register and list their HCT/Ps with the FDA and, when applicable, to evaluate donors through screening and testing. Additionally, before approving a BLA, the FDA will typically inspect one or more clinical sites to assure compliance with cGCP. If the FDA determines that the application, manufacturing process or manufacturing facilities are not acceptable, it will outline the deficiencies in the submission and often will request additional testing or information. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

The testing and approval process requires substantial time, effort and financial resources, and each may take several years to complete. The FDA may not grant approval on a timely basis, or at all, and we may encounter difficulties or unanticipated costs in our efforts to secure necessary governmental approvals, which could delay or preclude us from marketing our products. After the FDA evaluates a BLA and conducts inspections of manufacturing facilities where the investigational product and/or its drug substance will be produced, the FDA may issue an approval letter or a Complete Response Letter. An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications. A Complete Response Letter indicates that the review cycle of the application is complete and the application is not ready for approval. A Complete Response Letter may request additional information or clarification. The FDA may delay or refuse approval of a BLA if applicable regulatory criteria are not satisfied, require additional testing or information and/or require post-marketing testing and surveillance to monitor safety or efficacy of a product.

If regulatory approval of a product is granted, such approval may entail limitations on the indicated uses for which such product may be marketed. For example, the FDA may approve the BLA with a Risk Evaluation and Mitigation Strategy, or REMS, plan to mitigate risks, which could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. The FDA also may condition approval on, among other things, changes to proposed labeling or the development of adequate controls and specifications. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing regulatory standards is not maintained or if problems occur after the product reaches the marketplace. The FDA may require one or more Phase IV post-market studies and surveillance to further assess and monitor the product’s safety and effectiveness after commercialization, and may limit further marketing of the product based on the results of these post-marketing studies. In addition, new government requirements, including those resulting from new legislation, may be established, or the FDA’s policies may change, which could delay or prevent regulatory approval of our products under development.

A sponsor may seek approval of its product candidate under programs designed to accelerate FDA’s review and approval of new drugs and biological products that meet certain criteria. Specifically, new drugs and biological products are eligible for fast track designation if they are intended to treat a serious or life-threatening condition and demonstrate the potential to address unmet medical needs for the condition. For a fast track product, the FDA may consider sections of the BLA for review on a rolling basis before the complete application is submitted if relevant criteria are met. A fast track designated product candidate may also qualify for priority review, under which the FDA sets the target date for FDA action on the BLA at six months after the FDA accepts the application for filing. Priority review is granted when there is evidence that the proposed product would be a significant improvement in the safety or effectiveness of the treatment, diagnosis, or prevention of a serious condition. If criteria are not met for priority review, the application is subject to the standard FDA review period of 10 months after FDA accepts the application for filing. Priority review designation does not change the scientific/medical standard for approval or the quality of evidence necessary to support approval.

Under the accelerated approval program, the FDA may approve a BLA on the basis of either a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. Post-marketing studies or completion of ongoing studies after marketing approval are generally required to verify the biologic's clinical benefit in relationship to the surrogate endpoint or ultimate outcome in relationship to the clinical benefit. In addition, the Food and Drug Administration Safety and Innovation Act, or FDASIA, which was enacted and signed into law in 2012, established breakthrough therapy designation. A sponsor may seek FDA designation of its product candidate as a breakthrough therapy if the product candidate is intended, alone or in combination with one or more other drugs or biologics, to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the therapy may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. Sponsors may request the FDA to designate a breakthrough therapy at the time of or any time after the submission of an IND, but ideally before an end-of-phase II meeting with FDA. If the FDA designates a breakthrough therapy, it may take actions appropriate to expedite the development and review of the application, which may include holding meetings with the sponsor and the review team throughout the development of the therapy; providing timely advice to, and interactive communication with, the sponsor regarding the development of the drug to ensure that the development program to gather the nonclinical and clinical data necessary for approval is as efficient as practicable; involving senior managers and experienced review staff, as appropriate, in a collaborative, cross-disciplinary review; assigning a cross-disciplinary project lead for the FDA review team to facilitate an efficient review of the development program and to serve as a scientific liaison between the review team and the sponsor; and considering alternative clinical trial designs when scientifically appropriate, which may result in smaller or more efficient clinical trials that require less time to complete and may minimize the number of patients exposed to a potentially less efficacious treatment. Breakthrough designation also allows the sponsor to file sections of the BLA for review on a rolling basis. We may seek designation as a breakthrough therapy for some or all of our product candidates.

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

Orphan Drugs

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

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

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

Post-Approval Requirements

Any products manufactured or distributed by us pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to record-keeping, reporting of adverse experiences, periodic reporting, distribution, and advertising and promotion of the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There also are continuing, annual user fee requirements 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. Biologic manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with GMP, which impose certain procedural and documentation requirements upon us and our third-party manufacturers. Changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP and impose reporting requirements upon us and any third-party manufacturers that we may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance. We cannot be certain that we or our present or future suppliers will be able to comply with the cGMP regulations and other FDA regulatory requirements. If our present or future suppliers are not able to comply with these requirements, the FDA may, among other things, halt our clinical trials, require us to recall a product from distribution, or withdraw approval of the BLA.

Future FDA and state inspections may identify compliance issues at our facilities or at the facilities of our contract manufacturers that may disrupt production or distribution, or require substantial resources to correct. In addition, discovery of previously unknown problems with a product or the failure to comply with applicable requirements may result in restrictions on a product, manufacturer or holder of an approved BLA, including withdrawal or recall of the product from the market or other voluntary, FDA-initiated or judicial action that could delay or prohibit further marketing.

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

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters or holds on post-approval clinical studies;
- refusal of the FDA to approve pending applications or supplements to approved applications, 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.

The FDA closely regulates the marketing, labeling, advertising and promotion of biologics. A company can make only those claims relating to safety and efficacy, purity and potency that are approved by the FDA and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. Physicians may prescribe legally available products for uses that are not described in the product's labeling and that differ from those tested by us and approved by the FDA. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer's communications on the subject of off-label use of their products.

Other Healthcare Laws and Compliance Requirements

Our sales, promotion, medical education, clinical research and other activities following product approval will be subject to regulation by numerous regulatory and law enforcement authorities in the United States in addition to FDA, including potentially the Federal Trade Commission, the Department of Justice, the Centers for Medicare and Medicaid Services, or CMS, other divisions of the U.S. Department of Health and Human Services and state and local governments. Our promotional and scientific/educational programs must comply with the federal Anti-Kickback Statute, the civil False Claims Act, physician payment transparency laws, privacy laws, security laws, and additional federal and state laws similar to the foregoing.

The federal Anti-Kickback Statute prohibits, among other things, the knowing and willing, direct or indirect offer, receipt, solicitation or payment of remuneration in exchange for or to induce the referral of patients, including the purchase, order or lease of any good, facility, item or service that would be paid for in whole or part by Medicare, Medicaid or other federal health care programs. Remuneration has been broadly defined to include anything of value, including cash, improper discounts, and free or reduced price items and services. The federal Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on one hand and prescribers, purchasers, formulary managers, and beneficiaries on the other. Although there are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution, the exceptions and safe harbors are drawn narrowly. Practices that involve remuneration that may be alleged to be intended to induce prescribing, purchases or recommendations may be subject to scrutiny if they do not qualify for an exception or safe harbor. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor does not make the conduct per se illegal under the federal Anti-Kickback Statute. Instead, the legality of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all its facts and circumstances. Several courts have interpreted the statute's intent requirement to mean that if any one purpose of an arrangement involving remuneration is to induce referrals of federal healthcare covered business, the federal Anti-Kickback Statute has been violated. The government has enforced the federal Anti-Kickback Statute to reach large settlements with healthcare companies based on sham research or consulting and other financial arrangements with physicians. Further, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it to have committed a violation. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act. Many states have similar laws that apply to their state health care programs as well as private payors.

Federal false claims and false statement laws, including the federal civil False Claims Act, or FCA, imposes liability on persons or entitites that, among other things, knowingly present or cause to be presented claims that are false or fraudulent or not provided as claimed for payment or approval by a federal health care program. The FCA has been used to prosecute persons or entities that "cause" the submission of claims for payment that are inaccurate or fraudulent, by, for example, providing inaccurate billing or coding information to customers, promoting a product off-label, submitting claims for services not provided as claimed, or submitting claims for services that were provided but not medically necessary. Actions under the FCA may be brought by the Attorney General or as a qui tam action by a private individual in the name of the government. Violations of the FCA can result in significant monetary penalties and treble damages. The federal government is using the FCA, and the

accompanying threat of significant liability, in its investigation and prosecution of pharmaceutical and biotechnology companies throughout the country, for example, in connection with the promotion of products for unapproved uses and other illegal sales and marketing practices. The government has obtained multi-million and multibillion dollar settlements under the FCA in addition to individual criminal convictions under applicable criminal statutes. In addition, certain companies that were found to be in violation of the FCA have been forced to implement extensive corrective action plans, and have often become subject to consent decrees or corporate integrity agreements, restricting the manner in which they conduct their business.

The federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, created additional federal criminal statutes that prohibit, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payors; knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services; and willfully obstructing a criminal investigation of a healthcare offense. Like the federal Anti-Kickback Statute, the Affordable Care Act amended the intent standard for certain healthcare fraud statutes under HIPAA such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

Given the significant size of actual and potential settlements, it is expected that the government will continue to devote substantial resources to investigating healthcare providers' and manufacturers' compliance with applicable fraud and abuse laws. Also, many states have similar fraud and abuse statutes or regulations that may be broader in scope and may apply regardless of payor, in addition to items and services reimbursed under Medicaid and other state programs. Additionally, to the extent that our products, once commercialized, are sold in a foreign country, we may be subject to similar foreign laws.

In addition, there has been a recent trend of increased federal and state regulation of payments made to physicians and other healthcare providers. The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively, the Affordable Care Act, among other things, imposed new reporting requirements on certain manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program, with specific exceptions, for payments or other transfers of value made by them to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. Covered manufacturers are required to collect and report detailed payment data and submit legal attestation to the accuracy of such data to the government each year. Failure to submit required information may result in civil monetary penalties of up to an aggregate of $150,000 per year (or up to an aggregate of $1 million per year for "knowing failures"), for all payments, transfers of value or ownership or investment interests that are not timely, accurately and completely reported in an annual submission. Additionally, entities that do not comply with mandatory reporting requirements may be subject to a corporate integrity agreement. Certain states also mandate implementation of commercial compliance programs, impose restrictions on covered manufacturers' marketing practices and/or require the tracking and reporting of gifts, compensation and other remuneration to physicians and other healthcare professionals.

We may also be subject to data privacy and security regulation by both the federal government and the states in which we conduct our business. HIPAA, as amended by the Health Information Technology and Clinical Health Act, or HITECH, and their respective implementing regulations, imposes specified requirements on certain health care providers, plans and clearinghouses (collectively, "covered entities") and their "business associates," relating to the privacy, security and transmission of individually identifiable health information. Among other things, HITECH makes HIPAA's security standards directly applicable to "business associates," defined as independent contractors or agents of covered entities that create, receive, maintain or transmit protected health information in connection with providing a service for or on behalf of a covered entity. HITECH also increased the civil and criminal penalties that may be imposed against covered entities, business associates and possibly other persons, and gave state attorneys general new authority to file civil actions for damages or

injunctions in federal courts to enforce HIPAA and seek attorney's fees and costs associated with pursuing federal civil actions. In addition, certain states have their own laws that govern the privacy and security of health information in certain circumstances, many of which differ from each other and/or HIPAA in significant ways and may not have the same effect, thus complicating compliance efforts.

If our operations are found to be in violation of any of such laws or any other governmental regulations that apply to us, we may be subject to penalties, including, without limitation, civil and criminal penalties, damages, fines, disgorgement, the curtailment or restructuring of our operations, exclusion from participation in federal and state healthcare programs, imprisonment, contractual damages, reputational harm, and diminished profits and future earnings, any of which could adversely affect our ability to operate our business and our financial results.

In addition to the foregoing health care laws, we are also subject to the U.S. Foreign Corrupt Practices Act and similar worldwide anti-bribery laws, which generally prohibit companies and their intermediaries from making improper payments to foreign officials for the purpose of obtaining or retaining business. We cannot assure you that our internal control policies and procedures will protect us from reckless or negligent acts committed by our employees, future distributors, partners, collaborators or agents. Violations of these laws, or allegations of such violations, could result in fines, penalties or prosecution and have a negative impact on our business, results of operations and reputation.

Coverage and Reimbursement

Sales of pharmaceutical products depend significantly on the extent to which coverage and adequate reimbursement are provided by third-party payors. Third-party payors include state and federal government health care programs, managed care providers, private health insurers and other organizations. Although we currently believe that third-party payors will provide coverage and reimbursement for our product candidates, if approved, we cannot be certain of this. Third-party payors are increasingly challenging the price, examining the cost-effectiveness, and reducing reimbursement for medical products and services. In addition, significant uncertainty exists as to the reimbursement status of newly approved healthcare products. The U.S. government, state legislatures and foreign governments have continued implementing cost containment programs, including price controls, restrictions on coverage and reimbursement and requirements for substitution of generic products. Adoption of price controls and cost containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit our net revenue and results. We may need to conduct expensive clinical studies to demonstrate the comparative cost-effectiveness of our products. The product candidates that we develop may not be considered cost-effective and thus may not be covered or sufficiently reimbursed. It is time consuming and expensive for us to seek coverage and reimbursement from third-party payors, as each payor will make its own determination as to whether to cover a product and at what level of reimbursement. Thus, one payor's decision to provide coverage and adequate reimbursement for a product does not assure that another payor will provide coverage or that the reimbursement levels will be adequate. Moreover, a payor's decision to provide coverage for a drug product does not imply that an adequate reimbursement rate will be approved. Reimbursement may not be available or sufficient to allow us to sell our products on a competitive and profitable basis.

Healthcare Reform

The United States and some foreign jurisdictions are considering or have enacted a number of legislative and regulatory proposals to change the healthcare system in ways that could affect our ability to sell our 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. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives.

By way of example, in March 2010, the Affordable Care Act was signed into law, intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud

and abuse, add new transparency requirements for the healthcare and health insurance industries, impose new taxes and fees on the health industry and impose additional health policy reforms. Among the provisions of the Affordable Care Act of importance to our potential drug candidates are:

- an annual, nondeductible fee on any entity that manufactures or imports specified branded prescription drugs and biologic agents, apportioned among these entities according to their market share in certain government healthcare programs;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program to 23.1% and 13.0% of the average manufacturer price for branded and generic drugs, respectively;
- a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected;
- a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for a manufacturer's outpatient drugs to be covered under Medicare Part D;
- extension of a manufacturer's Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals and by adding new mandatory eligibility categories for certain individuals with income at or below 133% of the federal poverty level, thereby potentially increasing a manufacturer's Medicaid rebate liability;
- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program; and
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research.

In addition, other legislative changes have been proposed and adopted since the Affordable Care Act was enacted. These changes include, among others, the Budget Control Act of 2011, which mandates aggregate reductions to Medicare payments to providers of up to 2% per fiscal year effective April 1, 2013, and, due to subsequent legislative amendments, will remain in effect through 2024 unless additional Congressional action is taken. In January 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, which, among other things, further reduced Medicare payments to several providers, including hospitals and cancer treatment centers, increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These new laws may result in additional reductions in Medicare and other healthcare funding, which could have a material adverse effect on customers for our product candidates, if approved, and, accordingly, our financial operations.

We expect that the Affordable Care Act, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and lower reimbursement, and in additional downward pressure on the price that we receive for any approved product. Any reduction in reimbursement from Medicare or other government-funded programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability or commercialize our drugs.

Foreign Regulation

In addition to regulations in the United States, we will be subject to a variety of foreign regulations governing clinical trials and commercial sales and distribution of our products to the extent we choose to develop or sell any products outside of the United States. The approval process varies from country to country and the

time may be longer or shorter than that required to obtain FDA approval. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from country to country.

Employees

As of March 31, 2015, we had eleven employees. Our ability to manage growth effectively will require us to continue to implement and improve our management systems, recruit and train new employees and select qualified independent contractors. None of our employees is represented by a labor union or covered by collective bargaining agreements, and we believe our relationship with our employees is good.

Facilities

We lease a total of approximately 2,550 square feet of office space at 2533 South Coast Highway 101, Cardiff-by-the-Sea, California, 92007, for general office use, pursuant to an operating lease. The term of the amended lease is from September 1, 2013 to August 31, 2016. Our total monthly lease payment is currently $11,904 per month, subject to a 3.5% annual increase.

Legal Proceedings

In March 2009, we received a final rejection in one of our original patent applications pertaining to methods of use claims for NK-92 from the U.S. Patent and Trademark Office, or the USPTO. We filed a Notice of Appeal to the USPTO Board of Appeals and Interferences, or the USPTO Board, and a Decision on Appeal was rendered in the fall of 2013. That decision reversed the Examiner’s rejection of the claim to certain methods of use. In December 2013, we brought an action in the U.S. District Court for the Eastern District of Virginia to review the decision of the USPTO as we disagreed with the decision as to the non-allowed claims. A trial before the district court judge is scheduled for July 2015.

From time to time, we may be involved in various other claims and legal proceedings relating to claims arising out of our operations. We are not currently a party to any other legal proceedings that, in the opinion of our management, are likely to have a material adverse effect on our business. Regardless of outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

MANAGEMENT

Executive Officers, Key Employees and Directors

The following table sets forth the names, ages and positions of our executive officers, key employees and directors as of April 30, 2015.

Name	Age	Position(s)
Executive Officers		
Patrick Soon-Shiong, M.D., FRCS (C), FACS	62	Chairman of the Board of Directors and Chief Executive Officer
Barry J. Simon, M.D.	50	President, Chief Operating Officer and Director
Richard Gomberg	51	Chief Financial Officer
Key Employees		
Hans G. Klingemann, M.D., Ph.D.	65	Vice President, Research and Development and Director
Tien Lee, M.D.	40	Vice President of Operations and Corporate Development
Non-Employee Directors		
Steve Gorlin	77	Vice Chairman of the Board of Directors
Henry Ji, Ph.D.	50	Director
Richard Kusserow(1)(2)	74	Director
John T. Potts, Jr., M.D.(2)	83	Director
Robert Rosen(1)	59	Director
John C. Thomas, Jr.(1)(2)	61	Director

(1) Member of the audit committee
(2) Member of the compensation committee
(3) Member of the corporate governance and nominating committee

Executive Officers

Patrick Soon-Shiong, M.D., FRCS (C), FACS was appointed Chairman of our board of directors and Chief Executive Officer in March 2015. Dr. Soon-Shiong previously served as our Co-Chairman of our board of directors from December 2014 to March 2015 and as our Chief Medical Officer from January 2015 to March 2015. In 2011, he founded NantWorks, an ecosystem of companies to create a transformative global health information and next generation pharmaceutical development network, for the secure sharing of genetic and medical information. Dr. Soon-Shiong, a physician, surgeon and scientist, has pioneered novel therapies for both diabetes and cancer, published over 100 scientific papers, and has over 95 issued patents on groundbreaking advancements spanning myriad fields. Dr. Soon-Shiong performed the world's first encapsulated human islet transplant, the first engineered islet cell transplant and the first pig to man islet cell transplant in diabetic patients. He invented and developed Abraxane, the nation's first FDA approved protein nanoparticle albumin-bound delivery technology for the treatment of cancer. Abraxane was approved by the FDA for metastatic breast cancer in 2005, lung cancer in 2012, and pancreatic cancer in 2013. Abraxane is now approved in many countries across the globe and sales are expected to reach $1.0 billion in 2015. From 1997 to 2010, Dr. Soon-Shiong served as founder, Chairman and CEO of two global pharmaceutical companies, American Pharmaceutical Partners (sold to Fresenius SE for $5.7 billion in 2008) and Abraxis BioScience (sold to Celgene Corporation for $3.7 billion in 2010). Dr. Soon-Shiong serves as Chairman of the Chan Soon-Shiong Family Foundation and Chairman and CEO of the Chan Soon-Shiong Institute of Molecular Medicine, a non-profit medical research organization. He currently co-chairs the CEO Council for Health and Innovation at the Bipartisan Policy Center and is a member of the Global Advisory Board of Bank of America. He is an Adjunct Professor of Surgery at UCLA, a visiting Professor at the Imperial College of London, the Executive Director of the UCLA Wireless Health Institute, a

board member of the California Telehealth Network, and global director for Cancer Services and Bioinformatics at Providence Health. The Friends of the National Library of Medicine has honored him with their Distinguished Medical Science Award. Dr. Soon-Shiong holds a degree in medicine from the University of the Witwatersrand and a M.Sc. in science from the University of British Columbia. Dr. Soon-Shiong is a board certified surgeon and a fellow of the American College of Surgeons and of the Royal College of Physicians and Surgeons of Canada. We believe that Dr. Soon-Shiong is qualified to serve as a member of our board of directors due to his depth of expertise as chairman and chief executive officer of multiple multi-billion dollar companies in the life sciences industry, his broad experience in research and development of pioneering technologies and his educational background.

Barry J. Simon, M.D. has served as our President, Chief Operating Officer, and a member of our board of directors since March 2015. From 2007 to March 2015, Dr. Simon was also our President, Chief Executive Officer and member of our board of directors. Prior to joining us, he held various senior management and advisory positions at Roche Labs, F. Hoffmann-La Roche, a global healthcare company, Connetics Corp., a specialty pharmaceutical company, Immunomedics, Inc., a biopharmaceutical company, Immusol, Inc., a biopharmaceutical company, HealthPro BioVentures, LLC, a healthcare and lifesciences investment bank, and NorthSound Capital, LLC, a hedge fund. Dr. Simon has attended corporate training programs by the London School of Business and the Amos Tuck School of Business at Dartmouth College. He is trained clinically in infectious diseases, anesthesiology and internal medicine, and received his M.D. from the SUNY Downstate, Health Sciences Center in New York. We believe that Dr. Simon is qualified to serve as a member of our board due to his extensive medical and scientific knowledge and experience, and senior management experience in the biopharmaceutical industry.

Richard Gomberg is our Chief Financial Officer, a position he has held since January 2010. He began his career as a CPA at Deloitte & Touche. Since 2009, Mr. Gomberg has been employed by CFO Connect, a firm that provides comprehensive business management, through which he provided services to companies including Sorrento Therapeutics, Inc., a biopharmaceutical company, Transgenomic, a global biotechnology company, and PaxVax, a fully integrated specialty vaccine company. From 2006 to 2008, he served as Vice President and Chief Financial Officer of Sound Health Solutions, a weight management programs company. Mr. Gomberg also has held management positions at various early- to mid-stage technology and life science companies including DermTech International, a molecular diagnostic company, EPIC Solutions, a software solutions company, St. Bernard Software, a computer security company, and Ventura Software, a desktop publishing company. He received his B.A. from the University of Illinois and is a California certified public accountant (inactive).

Key Employees

Hans G. Klingemann, M.D., Ph.D. co-founded our Company in 2002. He has served as our Vice President, Research and Development since January 2015 and a director of our Company since our inception in 2002. Dr. Klingemann previously served as our Chief Medical Science Officer from 2002 to January 2015. Dr. Klingemann is the inventor of the original NK-92 cell line. Dr. Klingemann received his M.D. from the University of Würzburg Medical School, Germany, and his Ph.D. from the University of Marburg, Germany. He received specialty training in Stem Cell Transplantation under Nobel Laureate Dr. ED. Thomas at the Fred Hutchinson Cancer Research Center in Seattle, Washington. Before co-founding our Company, Dr. Klingemann was the Director of the Bone Marrow and Stem Cell Transplant Program and the Director for Hematological Malignancies at Tufts Medical Center. Dr. Klingemann also served as Director of the Section of Bone Marrow Transplant & Cell Therapy at Rush University Medical Center in Chicago, Illinois. He maintains an academic appointment at Tufts University Medical School. Dr. Klingemann is also a director and member of the compensation committee of Osiris Therapeutics. We believe that Dr. Klingemann is qualified to serve as a member of our board of directors due to his perspective and experience as our founder, including his extensive knowledge of our technology as the inventor of the original NK-92 cell line, and his extensive medical and scientific knowledge and experience.

Tien Lee, M.D. has served as our Vice President of Operations & Corporate Development since March 2014. Dr. Lee also serves as a consultant to Sorrento Therapeutics since January 2013 and currently on an ad hoc basis. Dr. Lee served as the Director of Business Development for Simcere Pharmaceutical Group from March 2011 to December 2012. Prior to then, he served as Vice President of Business Development of Onkor Pharmaceuticals from January 2008 to March 2011. He has also been a physician at a private medical clinic since 2009. Dr. Lee earned his M.D. degree from UC San Diego and received post-graduate training in Internal Medicine through UC Los Angeles and Physical Medicine and Rehabilitation at UC Irvine.

Directors

Biographical information pertaining to Drs. Soon-Shiong, Simon and Klingemann may be found in the above sections entitled “Executive Officers and Key Employees.”

Steve Gorlin was appointed Vice Chairman of our board in December 2014. Mr. Gorlin previously served as our Executive Chairman from January 2014 to December 2014. He cofounded MiMedx Group Inc., a biotechnology company, or MiMedx, in October 2005, and served as its chairman from November 2006 to June 2013. Mr. Gorlin previously served as the chairman of the board of directors and chief executive officer of DARA BioSciences, Inc., a specialty pharmaceutical company, or DARA, from July 2002 to January 2007, and continued to serve as co-chairman of the board of directors until January 2009. Over the past 40 years, he has founded several biotechnology and pharmaceutical companies, including Hycor Biomedical, Inc., a clinical diagnostics company (acquired by Agilent), Theragenics Corporation, a medical device company, CytRx Corporation, a biopharmaceutical company, Medicis Pharmaceutical Corporation, a medical cosmetics company (acquired by Valeant for approximately $2.6 billion), EntreMed, Inc., a biopharmaceutical company, MRI Interventions, Inc., a medical device company, DARA, MiMedx, and Medivation, Inc., a biopharmaceutical company. Mr. Gorlin previously served on the Business Advisory Council to the Johns Hopkins School of Medicine and The Johns Hopkins BioMedical Engineering Advisory Board. He also serves on the board of the Andrews Institute. He was a founder of a number of non-medical related companies, including Perma-Fix, Inc., a waste management services company; Pretty Good Privacy, Inc., a data security company (acquired by Network Associates, Inc.), Judicial Correction Services, Inc., a probation services company (acquired by Correctional Healthcare), and NTC China, Inc., or NTC, a manufacturing company. He started The Touch Foundation, a nonprofit organization for the blind and was a principal financial contributor to the founding of Camp Kudzu for diabetic children. He presently serves as the executive chairman of the board of directors of DemeRx, Inc., a pharmaceutical company, and serves on the board of directors of NTC. We believe Mr. Gorlin is qualified as a member of our board due to his extensive biotechnology and pharmaceutical industry knowledge and substantial experience serving on other boards of directors.

Henry Ji, Ph.D. has served as a member of our board of directors since December 2014. He co-founded and has served as a director of Sorrento Therapeutics, a pharmaceutical company, since January 2006, and as its Chief Executive Officer and President since September 2012. Dr. Ji previously served as Sorrento Therapeutic’s Chief Scientific Officer from November 2008 to September 2012, and as its Interim Chief Executive Officer from April 2011 to September 2012. In 2002, Dr. Ji founded and was President of BioVintage, a biopharmaceutical company. From 2001 to 2002, Dr. Ji served as a Vice President of CombiMatrix, a clinical diagnosis laboratory, and was responsible for strategic technology alliances. From 1999 to 2001, Dr. Ji served as Director of Business Development, and in 2001 as Vice President of Stratagene (later acquired by Agilent Technologies), a biotechnology company. In 1997, Dr. Ji co-founded Stratagene Genomics, a wholly owned subsidiary of Stratagene Corporation, a biotechnology company, and served as its President and Chief Executive Officer from its founding until 1999. Dr. Ji obtained his Ph.D. in Animal Physiology from the University of Minnesota and a B.S. in Biochemistry from Fudan University. We believe Dr. Ji is qualified to serve as a member of our board of directors due to his extensive knowledge of the biopharmaceutical industry and strategic alliances, and substantial experience serving on other boards of directors.

Richard Kusserow has served as a member of our board of directors since April 2014. He is the President and Chief Executive Officer of Strategic Management Systems, Inc., a firm specializing in the development,

implementation and measurement of effective compliance program operations, a position he has held since 1997, and the Chief Executive Officer of Strategic Management Systems and Integrity Management Services, a firm that provide a variety of services to the federal government, including audits and investigations, statistical analysis and data analysis, a position he has held since 1992. Mr. Kusserow founded and served as the President of the Fraud Control Information Systems, a provider of sanction screening services, from 1993 to 1997, and founded and served as President and Executive Consultant of National Hotline Services Inc., a phone-based ethics hotline services provider, from 1993 to 2005. One of the leading experts in the country on compliance programs, Mr. Kusserow served as the Inspector General of the U.S. Department of Health and Human Services from 1981 to 1992. Mr. Kusserow specializes in strategic planning, problem solving and the support of decision making in the changing regulatory environment. Mr. Kusserow was a Member of the Attorney General's Economic Crime Council and was appointed by President Bush as a Member of the National Advisory Commission on Law Enforcement. Before his appointment to Inspector General, Mr. Kusserow was a Special Agent/Supervisor for the FBI, where he coordinated and supervised the seven squads constituting the Organized Crime Program in Chicago, and served as a specialist in program fraud and corruption investigations. We believe that Mr. Kusserow is qualified to serve as a member of our board of directors because of his extensive regulatory and compliance knowledge, particularly as it relates to the healthcare industry.

John T. Potts, Jr., M.D. has served as a member of our board of directors since April 2014. Dr. Potts currently serves as the Distinguished Jackson Professor of Clinical Medicine at the Massachusetts General Hospital, or MGH, and Harvard Medical School and on the MPM BioVentures Medical & Scientific Advisory Board. Dr. Potts has been with MGH since 1968. Dr. Potts served as a director of Cell Genesys, Inc., a therapeutic products company from May 1997 to October 2009 when Cell Genesys merged with BioSante Pharmaceuticals, Inc., a pharmaceutical products company, or BioSante. Dr. Potts served as a director of BioSante from October 2009 to July 2013. After medical training at the University of Pennsylvania, he completed his internship and residency at the MGH from 1957 to 1959, and then went to the National Institutes of Health, or NIH, to work with Nobel Laureate Christian Anfinsen in protein chemistry. Dr. Potts remained at the NIH from 1959 to 1968, when he returned to the MGH as Chief of the Endocrine Unit. He served as Chairman of the Department of Medicine and Physician-in-Chief from 1981 to 1996, and as Director of Research from 1995 to 2004. Dr. Potts has authored or co-authored over 500 scientific publications, is the recipient of the Fred Conrad Koch Award of the Endocrine Society, and is a member of the National Academy of Sciences, the Institute of Medicine, and the American Academy of Arts and Sciences. He holds active and honorary memberships in numerous scientific and professional organizations. We believe that Dr. Potts is qualified to serve as a member of our board of directors due to his distinguished medical background and his extensive medical and scientific understanding of clinical medicine.

Robert H. Rosen has served as a member of our board of directors since December 2014. He has served as President of Heron Therapeutics since May 2013, after initially joining the company as Senior Vice President and Chief Commercial Officer in October 2012. He is also a member of the board of directors of Heron Therapeutics, a position he has held since July 2012. Mr. Rosen has been a member of the board of directors of La Jolla Pharmaceutical Company, a biopharmaceutical company, since July 2014. From March 2012 to October 2012, Mr. Rosen served as Managing Partner of Scotia Nordic LLC, a life sciences advisory firm. From April 2011 to March 2012, Mr. Rosen served as Senior Vice President of Global Commercial Operations at Dendreon Corporation, a biotechnology company. From 2005 to 2011, he served as Global Head of Oncology at Bayer HealthCare Pharmaceuticals, where he was responsible for the development of the global oncology business unit for regions that included the Americas, Europe, Japan, and Asia Pacific. From 2002 to 2005, Mr. Rosen was Vice President of the Oncology Business Unit at Sanofi-Synthèlabo, a pharmaceutical company, where he was responsible for the development of Sanofi's U.S. oncology business and the launch of Eloxatin (oxaliplatin) for colon cancer. Mr. Rosen received his B.S. degree in pharmacy from Northeastern University. We believe that Mr. Rosen is qualified to serve as a member of our board of directors due to his extensive drug development and commercialization experience with other biotechnology and pharmaceutical companies.

John C. Thomas, Jr. has served as a member of our board of directors since April 2014. Since 2001, Mr. Thomas has served as Chief Financial Officer, Secretary and Director of CorMatrix Cardiovascular, a privately held medical device company. He has also served as Chief Financial Officer, Secretary and a director of Motion Reality, Inc., a motion capture and simulation company, since 1991. Since 2012, Mr. Thomas has been serving as a director of QLT, Inc., a public biotechnology company focused on innovative ocular products and is a member of QLT's Audit and Risk and Compensation Committees. During the past ten years, Mr. Thomas served as acting Chief Financial Officer for DemeRx, Inc., MRI Interventions, Inc., MiMedx Group, Inc. and DARA BioSciences, and as a director of MRI Interventions, Inc. Previously, between 1999 and 2012, Mr. Thomas also served as a Trustee and subsequently the Chairman of the Finance Committee of The Walker School, a private school. Mr. Thomas is a Certified Public Accountant and graduated from the University of Virginia, McIntire School of Commerce. We believe that Mr. Thomas is qualified to serve on our board of directors due to his significant financial and accounting knowledge and experience serving on boards of directors of public companies.

Board Composition

Our business and affairs are managed under the direction of our board of directors. The number of directors will be fixed by our board of directors, subject to the terms of our amended and restated certificate of incorporation and amended and restated bylaws that will become effective upon the completion of this offering. Our board of directors currently consists of nine directors, of whom will qualify as "independent" under NASDAQ listing standards.

In December 2014, we entered into a subscription and investment agreement with Sorrento, or the Sorrento Subscription Agreement. Pursuant to the Amended Sorrento Subscription Agreement, Sorrento shall have the right to designate one director to our board of directors for so long as Sorrento, directly or indirectly, owns more than 250,000 shares of the issued and outstanding shares of our Class A common stock, subject to adjustment for stock splits, stock dividends, recapitalizations and similar transactions. Dr. Henry Ji, who is the Chief Executive Officer, President and a director of Sorrento, was selected by Sorrento to hold this board seat. The Sorrento director nominee shall be nominated and recommended for election to the board of directors by our nominating committee, subject to any applicable limitations imposed by the DGCL, the board of directors' fiduciary duties to our stockholders and any other applicable law. Sorrento's right to have a designee nominated or appointed to serve on our board of directors shall automatically terminate whenever Sorrento owns less than 250,000 shares of our issued and outstanding shares of common stock.

On December 23, 2014, we entered into a subscription and investment agreement with Cambridge Equities, LP, or Cambridge, which we refer to as the Cambridge Subscription Agreement. Pursuant to the Cambridge Subscription Agreement, Cambridge has the right to designate one director who shall be nominated by our corporate governance and nominating committee for election to our board of directors for so long as Cambridge or its affiliates directly own more than 20% of the issued and outstanding shares of our common stock, subject to adjustment for stock splits, stock dividends, recapitalizations and similar transactions. Dr. Soon-Shiong, who controls the entity that is the general partner of Cambridge, was selected by Cambridge to hold this board seat. The Cambridge director nominee shall be nominated and recommended for election to the board of directors by our nominating committee, subject to any applicable limitations imposed by the DGCL, the board of directors' fiduciary duties to our stockholders and any other applicable law. Cambridge's right to have a designee nominated or appointed to serve on our board of directors shall automatically terminate whenever Cambridge owns less than 20% of our issued and outstanding shares of common stock.

All directors elected at an annual meeting are elected to serve from the time of election and qualification until the earlier of the next annual meeting of stockholders following such election or their resignation or removal. At each annual meeting of stockholders, the terms of each of our incumbent directors expire and all members of our board of directors are elected.

Under Delaware law, our directors may be removed for cause by the affirmative vote of the holders of a majority of our outstanding voting stock. Directors may not be removed by our stockholders without cause.

Director Independence

Prior to the closing of this offering, we anticipate that our common stock will be listed on The NASDAQ Global Select Market. Under the rules of NASDAQ, independent directors must comprise a majority of a listed company's board of directors within one year of the company's listing date. In addition, the rules of NASDAQ require that, subject to specified exceptions, each member of a listed company's audit, compensation and nominating and governance committees be independent. Audit committee members and compensation members must also satisfy separate independence criteria set forth in Rule 10A-3 and Rule 10C-1, respectively, under the Securities Exchange Act of 1934, as amended, or the Exchange Act. Under the rules of NASDAQ, a director will only qualify as an "independent director" if, among other things, in the opinion of that company's board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director.

To be considered independent for purposes of Rule 10A-3 and under the rules of NASDAQ, a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, board of directors, or any other board committee: (1) accept, directly or indirectly, any consulting, advisory, or other compensatory fee from the listed company or any of its subsidiaries; or (2) be an affiliated person of the listed company or any of its subsidiaries.

To be considered independent for purposes of Rule 10C-1 and under the rules of NASDAQ, the board of directors must affirmatively determine that the member of the compensation committee is independent, including a consideration of all factors specifically relevant to determining whether the director has a relationship to the company which is material to that director's ability to be independent from management in connection with the duties of a compensation committee member, including, but not limited to: (i) the source of compensation of such director, including any consulting, advisory or other compensatory fee paid by the company to such director; and (ii) whether such director is affiliated with the company, a subsidiary of the company or an affiliate of a subsidiary of the company.

Our board of directors undertook a review of its composition, the composition of its committees and the independence of our directors and considered whether any director has a material relationship with us that could compromise his or her ability to exercise independent judgment in carrying out his or her responsibilities. Based upon information requested from and provided by each director concerning his background, employment and affiliations, including family relationships, our board of directors has determined that each of Dr. Potts and Messrs. Kusserow, Rosen, Thomas, and representing of our nine directors, is "independent" as that term is defined under the rules of NASDAQ.

In making these determinations, our board of directors considered the current and prior relationships that each non-employee director has with our company and all other facts and circumstances our board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director, and the transactions involving them described in the section titled "Certain Relationships and Related Party Transactions."

There are no family relationships among any of our directors or executive officers.

Role of Board in Risk Oversight Process

One of the key functions of our board of directors is informed oversight of our risk management process. Our board of directors does not have a standing risk management committee, but rather administers this oversight function directly through the board of directors as a whole, as well as through its standing committees that

address risks inherent in their respective areas of oversight. In particular, our board of directors is responsible for monitoring and assessing strategic risk exposure. Our audit committee is responsible for reviewing and discussing our major financial risk exposures and the steps our management has taken to monitor and control these exposures, including guidelines and policies with respect to risk assessment and risk management. Our audit committee also monitors compliance with legal and regulatory requirements and reviews related party transactions, in addition to oversight of the performance of our external audit function. Our corporate governance and nominating committee monitors the effectiveness of our corporate governance guidelines. Our compensation committee assesses and monitors whether any of our compensation policies and programs has the potential to encourage excessive risk-taking.

Committees of the Board of Directors

Our board of directors has an audit committee, a compensation committee, and a corporate governance and nominating committee, each of which has the composition and the responsibilities described below.

Audit Committee

Our audit committee is comprised of Richard Kusserow, Robert Rosen, and John C. Thomas, Jr. Mr. Thomas serves as the chairperson of our audit committee. All members of our audit committee meet the requirements for independence and financial literacy of audit committee members under current NASDAQ listing standards and SEC rules and regulations. Our board of directors has determined that Mr. Thomas is an audit committee financial expert as defined under the applicable rules of the SEC and has the requisite financial sophistication as defined under NASDAQ listing standards. The responsibilities of our audit committee include, among other things:

- selecting and hiring the independent registered public accounting firm to audit our financial statements;
- helping to ensure the independence and performance of the independent registered public accounting firm;
- approving audit and non-audit services and fees;
- reviewing financial statements and discussing with management and the independent registered public accounting firm our annual audited and quarterly financial statements, the results of the independent audit and the quarterly reviews, and the reports and certifications regarding internal controls over financial reporting and disclosure controls;
- preparing the audit committee report that the SEC requires to be included in our annual proxy statement;
- reviewing reports and communications from the independent registered public accounting firm;
- reviewing the adequacy and effectiveness of our internal controls and disclosure controls and procedures;
- reviewing our policies on risk assessment and risk management;
- reviewing related party transactions; and
- establishing and overseeing procedures for the receipt, retention and treatment of accounting related complaints and the confidential submission by our employees of concerns regarding questionable accounting or auditing matters.

Our audit committee will operate under a written charter, to be effective prior to the completion of this offering, which satisfies the applicable rules of the SEC and the listing standards of NASDAQ.

Compensation Committee

Our compensation committee is comprised of Richard Kusserow, John T. Potts, Jr., M.D., and John C. Thomas, Jr. Dr. Potts serves as the chairperson of our compensation committee. All members of our compensation committee meet the requirements for independence under current NASDAQ listing standards and SEC rules and regulations. Each member of the compensation committee is also a non-employee director, as defined pursuant to Rule 16b-3 promulgated under the Exchange Act, and an outside director, as defined pursuant to Section 162(m) of the Internal Revenue Code, as amended. The purpose of our compensation committee is to oversee our compensation policies, plans and benefit programs and to discharge the responsibilities of our board of directors relating to compensation of our executive officers. The responsibilities of our compensation committee include, among other things:

- overseeing our overall compensation philosophy and compensation policies, plans and benefit programs;
- reviewing and approving or recommending to the board for approval compensation for our executive officers and directors;
- preparing the compensation committee report that the SEC will require to be included in our annual proxy statement; and
- administering our equity compensation plans.

Our compensation committee will operate under a written charter, to be effective prior to the completion of this offering, which satisfies the applicable rules of the SEC and the listing standards of NASDAQ.

Corporate Governance and Nominating Committee

Our corporate governance and nominating committee is comprised of , and, . serves as the chairperson of our corporate governance and nominating committee. All members of our corporate governance and nominating committee meet the requirements for independence under current NASDAQ listing standards and SEC rules and regulations. The responsibilities of our corporate governance and nominating committee include, among other things:

- identifying, evaluating and making recommendations to our board of directors regarding nominees for election to our board of directors and its committees;
- considering and making recommendations to our board of directors regarding the composition of our board of directors and its committees;
- reviewing developments in corporate governance practices;
- evaluating the adequacy of our corporate governance practices and reporting; and
- evaluating the performance of our board of directors and of individual directors.

Our corporate governance and nominating committee will operate under a written charter, to be effective prior to the completion of this offering, which satisfies the applicable rules of the SEC and the listing standards of NASDAQ. We intend to comply with future requirements to the extent they become applicable to us.

Compensation Committee Interlocks and Insider Participation

None of our executive officers serves, or in the past has served, as a member of the board of directors or compensation committee, or other committee serving an equivalent function, of any entity that has one or more executive officers who serve as members of our board of directors or our compensation committee. None of the members of our compensation committee is, or has ever been, an officer or employee of our company.

Code of Ethics and Business Conduct

Our board of directors has adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions and agents and representatives, including consultants. Following this offering, a copy of the code of business conduct and ethics will be available on our website at www.conkwest.com. We intend to disclose future amendments to such code, or any waivers of its requirements, applicable to any principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions or our directors on our website identified above. The inclusion of our website address in this prospectus does not include or incorporate by reference the information on our website into this prospectus.

EXECUTIVE AND DIRECTOR COMPENSATION

Our named executive officers for 2014, which consist of our principal executive officer and the next two most highly compensated executive officers, are:

- Barry J. Simon, M.D., President and Chief Operating Officer;
- Steve Gorlin, Vice Chairman; and
- Hans G. Klingemann, M.D., Ph.D., Vice President, Research and Development.

2014 Summary Compensation Table

The following table provides information regarding the compensation of our named executive officers during the year ended December 31, 2014.

Name and Principal Position	Year	Salary ($)(4)	Bonus ($)(5)	Option Awards ($)(6)	All Other ($)(7)	Total ($)
Barry J. Simon, M.D. President and Chief Operating Officer(1)	2014	443,504	465,055	439,281	248,265	$ 1,596,105
Steve Gorlin Vice Chairman(2)	2014	159,016	250,000	374,319		783,335
Hans G. Klingemann, M.D., Ph.D. Vice President, Research and Development(3)	2014	253,885	225,735	477,184		956,804

(1) Dr. Simon served as our Chief Executive Officer (and principal executive officer) from 2007 to March 2015. In March 2015, Dr. Soon-Shiong was appointed our Chief Executive Officer (and principal executive officer).

(2) Mr. Gorlin served as our Executive Chairman from January 2014 to December 2014. He was appointed as our Vice Chairman in December 2014.

(3) Dr. Klingemann served as our Chief Medical and Science Officer from 2002 to January 2015. He was appointed as our Vice President, Research & Development in December 2014.

(4) Amounts in this column include payment of accrued paid time off in the amount of $80,147 for Dr. Simon.

(5) This column reflects bonus payments earned in 2014.

(6) This column reflects the aggregate grant date fair value of stock options granted during 2014 computed in accordance with the provisions of ASC Topic 718. The assumptions that we used to calculate these amounts are discussed in Note 14 to our financial statements appearing at the end of this prospectus. These amounts do not reflect the actual economic value that will be realized by the named executive officer upon the vesting of the stock options, the exercise of the stock options, or the sale of the common stock underlying such stock options. The actual value that may be realized is also subject to time-based vesting restrictions that require the named executive officer to continue to provide services to us.

(7) In June 2008, we issued a secured promissory note to Dr. Simon. In March 2014, our board of directors approved the forgiveness of the principal amount and all accrued interest under the note, and paid Dr. Simon $133,159 to cover taxes incurred by Dr. Simon as a result of the forgiveness of $115,106 of indebtedness. All Other Compensation above consists of the total of the principal and interest forgiven and the tax gross up.

Outstanding Equity Awards at Fiscal Year-End 2014

The following table provides information regarding equity awards held by our named executive officers as of December 31, 2014.

	Option Awards				
		Number of Securities Underlying Unexercised Options			
Name	Vesting Commencement Date	Exercisable	Unexercisable	Option Exercise Price	Option Expiration Date
Barry J. Simon, M.D.	12/18/14	—	200,000(1)	$ 3.25	12/18/24
Steve Gorlin	3/17/14	175,000	—	$ 0.40	3/17/24
	12/18/14	—	100,000(1)	$ 3.25	12/18/24
Hans G. Klingemann, M.D., Ph.D.	—	400,000(2)	—	$ 0.78	11/24/24
	12/18/14	—	125,000(1)	$ 3.25	12/18/24

(1) 1/24th of the shares subject to the option vest monthly from the vesting commencement date, subject to continued service through each vesting date.
(2) Shares subject to the option were fully-vested upon grant.

Executive Employment Agreements

Patrick Soon-Shiong. In May 2015, we entered into an executive employment agreement with Dr. Soon-Shiong pursuant to which he agreed to continue to serve as our Chief Executive Officer and Chairman of the board of directors in consideration for an annual base salary of $1 and eligibility to participate in any benefit programs and receive any perquisites and other benefits that we make available to our senior executives. Dr. Soon-Shiong's employment agreement is for no particular term and provides for "at will" employment, provided that, if we terminate Dr. Soon-Shiong without "cause" (as such term is defined in Dr. Soon-Shiong's employment agreement), we must provide him with sixty (60) days' notice.

Dr. Soon-Shiong's employment agreement provides that, in consideration of Dr. Soon-Shiong's appointment as Chief Executive Officer, on March 24, 2015 we granted Dr. Soon-Shiong the following equity awards:

- An option to purchase 1,000,000 shares of our common stock pursuant to the terms of the Company's 2014 Equity Incentive Plan and an option agreement between us and Dr. Soon-Shiong. Dr. Soon-Shiong's option will vest in equal monthly installments over a period of four (4) years from the date of grant. If we experience a change in control, as defined in Dr. Soon-Shiong's employment agreement, and Dr. Soon-Shiong remains our employee through such date, the option will fully vest and become exercisable.
- A warrant to purchase up to 9,500,000 shares of the Company's common stock at an exercise price of $3.70 was issued to Dr. Soon-Shiong on March 24, 2015. The warrant will vest as follows: (i) 4,000,000 shares will vest monthly over a period of 40 months beginning April 1, 2015; and (ii) up to 5,500,000 shares will vest based upon achievement of certain strategic, manufacturing, clinical development and regulatory milestones.

Pursuant to Dr. Soon-Shiong's employment agreement, if we terminate the employment of Dr. Soon-Shiong without "cause" or Dr. Soon-Shiong resigns for "good reason" (as such terms are defined in Dr. Soon-Shiong's employment agreement), all of Dr. Soon-Shiong's then-outstanding stock options and other equity awards, including the warrant discussed above, will fully vest and become exercisable, notwithstanding any time-based or milestone-based conditions or restrictions.

In the event any payment to Dr. Soon-Shiong would be subject to the excise tax imposed by Section 4999 of the Code (as a result of a payment being classified as a parachute payment under Section 280G of the Code), Dr. Soon-Shiong will receive a cash "gross up" payment from us.

Barry J. Simon. On January 1, 2015, we entered into an executive employment agreement with Dr. Simon pursuant to which he agreed to continue to serve as our President and Chief Executive Officer and as a member of our board of directors in consideration for an annual base salary of $395,000, subject to increases of at least 6% annually, eligibility to receive an annual performance bonus with the target amount determined as 45% of Dr. Simon's annual base salary, and eligibility to participate in any benefit programs and receive any perquisites and other benefits that we make available to our senior executives. Dr. Simon's employment agreement is for no particular term and provides for "at will" employment, subject to certain severance provisions as described below.

Dr. Simon's employment agreement provides that we shall reimburse him for all reasonable travel, entertainment and other expenses incurred or paid by him in connection to his duties to us in accordance with our standard policies and procedures, provided that he will be entitled to reimbursement for business class airfare on domestic flights exceeding three (3) hours and first class airfare on all foreign flights. Dr. Simon is also entitled to "piggyback" registration rights in connection with any subsequent public offering or secondary offering of our common stock.

Dr. Simon's employment agreement provides that, upon the closing date of the initial public offering of our common stock, Dr. Simon will be eligible to receive the following equity awards, or the "IPO Equity Awards," pursuant to the terms and conditions of our 2015 Equity Incentive Plan:

- An option to purchase 300,000 shares of our common stock.
- A grant of 200,000 restricted stock units representing the right to receive one share of our common stock for each restricted stock unit that becomes vested.

50% of the IPO Equity Awards will vest upon grant and the remaining 50% will vest upon the first anniversary of the closing date of our initial public offering, subject to continued employment through the applicable vesting dates. The IPO Equity Awards will be subject to certain accelerated vesting provisions as discussed below.

Dr. Simon's employment agreement provides that, commencing as of the first calendar year following the grant of the IPO Equity Awards, or in 2015 if the initial public offering does not occur, Dr. Simon will be eligible to receive additional annual equity grants as determined by our board of directors or its compensation committee. The annual equity grants to Dr. Simon will have a target value as of the grant date such that the sum of the aggregate target value of such annual equity grants, plus the value of Dr. Simon's base salary and annual bonus at target, result in a total direct annual compensation opportunity for Dr. Simon of no less than $1,200,000 per year.

Dr. Simon's employment agreement provides that, so long as Dr. Simon remains our employee, he will serve as a member of our board of directors for so long as our common stock is not publicly traded, and, following the date our common stock becomes publicly traded, subject to any requirements of applicable law, Dr. Simon will be nominated to be a member of our board of directors at each annual stockholder meeting by our board of director's corporate governance committee. If Dr. Simon's employment with us is terminated for any reason, his membership on our board of directors will also terminate, unless otherwise agreed in writing by us and Dr. Simon.

Pursuant to Dr. Simon's employment agreement, if we terminate the employment of Dr. Simon other than for death, "disability," or "cause" or Dr. Simon resigns for "good reason" (as such terms are defined in Dr. Simon's employment agreement), and, within 60 days following his termination, Dr. Simon executes a release of claims in our favor and a mutual non-disparagement agreement with a three (3) year term, Dr. Simon is entitled to receive (i) any unpaid annual bonus with respect to the calendar year ending on or preceding the date of termination, which will be payable at the time such bonuses would have been paid if Dr. Simon were still employed with us, (ii) a lump sum payment equal to two (2) times the sum of (A) Dr. Simon's base salary as in effect on the date of termination, plus (B) the highest of (x) Dr. Simon's annual bonus paid for the year preceding the year of termination, (y) Dr. Simon's annual bonus paid at target for the year in which the termination occurs, and (z) Dr. Simon's base salary in effect at the time of termination, (iii) reimbursement of premiums to maintain

group health insurance continuation benefits pursuant to "COBRA" for Dr. Simon and his respective dependents for up to eighteen (18) months, (iv) with respect to Dr. Simon's stock option to purchase 200,000 shares of our common stock granted on December 18, 2014, or the "Existing Equity Award," all shares subject to the Existing Equity Award will fully vest and become exercisable, and the Existing Equity Award will remain outstanding and exercisable (to the extent not already exercised) for a period of three (3) years measured from the date of Dr. Simon's termination of employment, and (v) with respect to all equity awards granted to Dr. Simon following January 1, 2015, including the IPO Equity Awards, Dr. Simon (A) will receive twenty-four (24) months of vesting acceleration on the time-based vesting component of such equity awards, (B) will be eligible to vest with respect to any performance-based component of such awards if the performance criteria are satisfied within twenty-four (24) months following Dr. Simon's termination of employment, and (C) such equity awards will remain outstanding and exercisable (to the extent not already exercised) for a period of three (3) years measured from the date of Dr. Simon's termination of employment.

Pursuant to Dr. Simon's employment agreement, if, within the one (1) month period prior to or at any time following a "change of control" (as such term is defined in Dr. Simon's employment agreement) we terminate the employment of Dr. Simon other than for death, "disability," or "cause" or Dr. Simon resigns for "good reason" (as such terms are defined in Dr. Simon's employment agreement), and, within 60 days following his termination, Dr. Simon executes a release of claims in our favor and a mutual non-disparagement agreement with a three (3) year term, Dr. Simon is entitled to receive (i) any unpaid annual bonus with respect to the calendar year ending on or preceding the date of termination, which shall be payable at the time such bonuses would have been paid if Dr. Simon were still employed with us, (ii) a lump sum payment equal to three (3) times the sum of (A) Dr. Simon's base salary as in effect on the date of termination, plus (B) the highest of (x) Dr. Simon's annual bonus paid for the year preceding the year of termination, (y) Dr. Simon's annual bonus paid at target for the year in which the termination occurs, and (z) Dr. Simon's base salary in effect at the time of termination, (iii) reimbursement of premiums to maintain group health insurance continuation benefits pursuant to "COBRA" for Dr. Simon and his respective dependents for up to eighteen (18) months and (iv) all shares subject to the Existing Equity Award and equivalent to all equity awards granted to Dr. Simon following January 1, 2015, including the IPO Equity Awards, (A) such equity awards will become fully vested and exercisable, and (B) such equity awards will remain outstanding and exercisable (to the extent not already exercised) for a period of three (3) years measured from the date of the later of Dr. Simon's termination of employment or the change of control.

In the event any payment to Dr. Simon would be subject to the excise tax imposed by Section 4999 of the Code (as a result of a payment being classified as a parachute payment under Section 280G of the Code), Dr. Simon will receive such payment as would entitle him to receive the greatest after-tax benefit, even if it means that we pay him a lower aggregate payment so as to minimize or eliminate the potential excise tax imposed by Section 4999 of the Code.

Steve Gorlin. On February 1, 2014, we entered into an employment agreement with Mr. Gorlin pursuant to which he agreed to serve as a part-time employee and, following the date that our redomestication merger from Illinois to Delaware became effective, as the Executive Chairman of our Board of Directors in consideration for an annual base salary of $180,000 and the opportunity to receive an annual bonus determined by the Company. Mr. Gorlin's employment agreement is for an initial term of two (2) years, subject to automatic renewal for an additional one (1) year unless we or Mr. Gorlin give notice to terminate the employment agreement at least ninety (90) days prior to the expiration of the term. Mr. Gorlin's employment agreement provides for "at will" employment, subject to certain severance provisions as described below.

Mr. Gorlin's employment agreement provides that he will be entitled to receive a cash bonus of $250,000 if the Company experiences a private placement of at least $5 million with a valuation of $32 million, payable on the third (3rd) business day after the closing of such private placement.

Mr. Gorlin's employment agreement provides that we will pay or reimburse legal expenses incurred by Mr. Gorlin in the negotiation and preparation of his employment agreement and other agreements between him and us in an amount up to $35,000.

Mr. Gorlin's employment agreement provides that, immediately after the date that our redomestication merger from Illinois to Delaware becomes effective, Mr. Gorlin will be granted a fully vested option to purchase 555,000 shares of our common stock with a term of ten (10) years.

Pursuant to Mr. Gorlin's employment agreement, if we terminate the employment of Mr. Gorlin without "cause" or Mr. Gorlin resigns for "good reason" (as such terms are defined in Mr. Gorlin's employment agreement), we will continue to pay Mr. Gorlin his then-current annual salary until the later of (i) the end of the remaining term of his employment or (ii) six (6) months.

Mr. Gorlin's employment agreement contains a non-compete provision, pursuant to which Mr. Gorlin has agreed not to compete or interfere with us or our affiliates, or solicit our employees or interfere with our business relationships, for one (1) year after the termination of his employment.

Hans Klingemann. On March 19, 2014, we entered into an Amended and Restated Executive Employee Non-Disclosure and Confidentiality Agreement with Dr. Klingemann that became effective at the closing of our April 2014 private placement, pursuant to which he agreed to continue to serve as our Chief Medical and Scientific Officer in consideration for a cash bonus equal to $10,000, an annual base salary of $255,000, an annual performance bonus upon achievement of certain managerial objectives to be mutually agreed upon by Dr. Klingemann and the Company's board of directors, and eligibility to participate in any benefit programs that we make available to our employees. Dr. Klingemann's employment agreement further provides that he will be reimbursed up to $20,000 for the legal expenses he incurred in the negotiation and preparation of the employment agreement. Dr. Klingemann's employment agreement is for an initial term of two (2) years, subject to automatic renewal for an additional one (1) year unless we or Dr. Klingemann give notice to terminate the employment agreement at least sixty (60) days prior to the expiration of the term. Dr. Klingemann's employment agreement provides for "at will" employment, subject to certain severance provisions as described below.

Pursuant to Dr. Klingemann's employment agreement, if we terminate the employment of Dr. Klingemann without "cause" or Dr. Klingemann resigns for "good reason" (as such terms are defined in Dr. Klingemann's employment agreement), we will continue to pay Dr. Klingemann his then-current annual salary for one (1) year if the termination takes place in the first twelve (12) months after the effective date of his employment agreement, or six (6) months if the termination takes place anytime thereafter.

Pursuant to Dr. Klingemann's employment agreement, if we experience a "change of control," as defined in Dr. Klingemann's employment agreement, and Dr. Klingemann remains our employee through such date, any unvested options or warrants held by Dr. Klingemann will immediately vest.

Dr. Klingemann's employment agreement contains a non-compete provision, pursuant to which Dr. Klingemann has agreed not to compete or interfere with us or our affiliates, or solicit our employees or interfere with our business relationships, for one (1) year after the termination of his employment.

Director Compensation

In 2014, we entered into cash compensation arrangements with our non-employee directors. Under these arrangements, we pay non-employee directors $30,000 a year payable quarterly when we are a private company and $60,000 per year payable quarterly if we are a public company.

From time to time, we have granted stock options to our non-employee directors for their service on our board of directors. We also reimburse our directors for expenses associated with attending meetings of our board of directors and committees of our board of directors. Directors who are also our employees receive no additional compensation for their service as a director.

In addition, each non-employee director who first joins us following this offering automatically will be granted an initial award of a nonstatutory stock option to purchase shares of our common stock effective on the date on which such person first becomes elected as a non-employee director. Such initial award will vest as to one-third of the shares subject thereto on each anniversary of the initial award's grant date, provided that the director remains a service provider through the applicable vesting date. On the date of each annual meeting of our stockholders beginning with the first annual meeting following this offering, each non-employee director automatically will be granted a nonstatutory stock option to purchase shares of our common stock. Such annual award will vest fully on the date of the next annual meeting held after the date of grant, provided that the director remains a service provider through the applicable vesting date.

Our 2015 Plan, as described below under the section titled "Employee Benefit and Stock Plans," provides that in the event of a merger or change in control, as defined in our 2015 Plan, each outstanding equity award granted under our 2015 Plan that is held by a non-employee director will fully vest, all restrictions on the shares subject to such award will lapse, and with respect to awards with performance-based vesting, all performance goals or other vesting criteria will be deemed achieved at 100% of target levels, and all of the shares subject to such award will become fully exercisable, if applicable.

The following table sets forth information regarding compensation earned by or paid to our non-employee directors during 2014.

Name	Fees Earned or Paid in Cash ($)	Option Awards ($)(1)(2)	Total ($)
Richard Kusserow	7,500	58,362	65,862
John T. Potts, Jr., M.D.	7,500	58,362	65,862
John C. Thomas Jr. M.D.	7,500	58,362	65,862
Robert H. Rosen	1,667	438,688	440,355

(1) The amounts reported do not reflect the amounts actually received by our non-employee directors. Instead, these amounts reflect the aggregate grant date fair value of each stock option granted to our non-employee directors during the fiscal year ended December 31, 2014, as computed in accordance with FASB ASC 718. Assumptions used in the calculation of these amounts are included in Note 14 to our audited financial statements included in this prospectus. As required by SEC rules, the amounts shown exclude the impact of estimated forfeitures related to service-based vesting conditions. Our non-employee directors who have received options will only realize compensation with regard to these options to the extent the trading price of our common stock is greater than the exercise price of such options.

(2) Mr. Kusserow had options to purchase 125,001 shares of common stock outstanding as of December 31, 2014. Drs. Potts and Thomas, and Mr. Rosen, each had options to purchase 200,000 shares of common stock outstanding as of December 31, 2014.

Equity Compensation Plan Information

2015 Equity Incentive Plan

Our board of directors intends to adopt the 2015 Equity Incentive Plan, or the 2015 Plan, in connection with this offering. Our 2015 Plan will permit the grant of incentive stock options, within the meaning of Section 422 of the Code, to our employees and any parent and subsidiary corporations' employees, and for the grant of nonstatutory stock options, restricted stock, restricted stock units, stock appreciation rights, performance units and performance shares to our employees, directors and consultants and our parent and subsidiary corporations' employees and consultants.

Authorized shares. A total of shares of our common stock will be reserved for issuance pursuant to the 2015 Plan. In addition, the shares reserved for issuance under our 2015 Plan will also include shares reserved but

not issued under the 2014 Equity Incentive Plan, and shares subject to stock options or similar awards granted under the 2014 Equity Incentive Plan that expire or terminate without having been exercised in full and shares issued pursuant to awards granted under the 2014 Equity Incentive Plan that are forfeited to or repurchased by us (provided that the maximum number of shares that may be added to the 2015 Plan pursuant to this sentence is shares). In addition, shares may become available under the 2015 Plan under the following two paragraphs.

The number of shares available for issuance under the 2015 Plan will also include an annual increase on the first day of each fiscal year beginning in 2015, equal to the least of:

- shares;
- % of the outstanding shares of common stock as of the last day of our immediately preceding fiscal year; or
- such other amount as our board of directors may determine.

If an award expires or becomes unexercisable without having been exercised in full, is surrendered pursuant to an exchange program, or, with respect to restricted stock, restricted stock units, performance units or performance shares, is forfeited or repurchased due to failure to vest, the unpurchased shares (or for awards other than stock options or stock appreciation rights, the forfeited or repurchased shares) will become available for future grant or sale under our 2015 Plan. With respect to stock appreciation rights, the net shares issued will cease to be available under the 2015 Plan and all remaining shares will remain available for future grant or sale under the 2015 Plan. Shares used to pay the exercise price of an award or satisfy the tax withholding obligations related to an award will become available for future grant or sale under our 2015 Plan. To the extent an award is paid out in cash rather than shares, such cash payment will not result in reducing the number of shares available for issuance under our 2015 Plan.

Plan administration. Our board of directors or one or more committees appointed by our board of directors will administer our 2015 Plan. In the case of awards intended to qualify as “performance-based compensation” within the meaning of Section 162(m) of the Code, the committee will consist of two or more “outside directors” within the meaning of Section 162(m). In addition, if we determine it is desirable to qualify transactions under the 2015 Plan as exempt under Rule 16b-3 of the Exchange Act or Rule 16b-3, such transactions will be structured to satisfy the requirements for exemption under Rule 16b-3. Subject to the provisions of our 2015 Plan, the administrator has the power to administer the plan, including but not limited to, the power to interpret the terms of our 2015 Plan and awards granted under it, to create, amend and revoke rules relating to our 2015 Plan, including creating sub-plans, and to determine the terms of the awards, including the exercise price, the number of shares subject to each such award, the exercisability of the awards and the form of consideration, if any, payable upon exercise. The administrator also has the authority to amend existing awards to reduce or increase their exercise price, to allow participants the opportunity to transfer outstanding awards to a financial institution or other person or entity selected by the administrator and to institute an exchange program by which outstanding awards may be surrendered in exchange for awards of the same type which may have a higher or lower exercise price or different terms, awards of a different type and/or cash.

Stock options. Stock options may be granted under our 2015 Plan. The exercise price of options granted under our 2015 Plan must at least be equal to the fair market value of our common stock on the date of grant. The term of an incentive stock option may not exceed 10 years, except that with respect to any participant who owns more than 10% of the voting power of all classes of our outstanding stock, the term must not exceed five years and the exercise price must equal at least 110% of the fair market value on the grant date. The administrator will determine the methods of payment of the exercise price of an option, which may include cash, shares or other property acceptable to the administrator, as well as other types of consideration permitted by applicable law. After the termination of service of an employee, director or consultant, he or she may exercise his or her option for the period of time stated in his or her option agreement. Generally, if termination is due to death or disability, the option will remain exercisable for 12 months. In all other cases, the option will generally remain exercisable for three months

following the termination of service. However, in no event may an option be exercised later than the expiration of its term. Subject to the provisions of our 2015 Plan, the administrator determines the other terms of options.

Stock appreciation rights. Stock appreciation rights may be granted under our 2015 Plan. Stock appreciation rights allow the recipient to receive the appreciation in the fair market value of our common stock between the exercise date and the date of grant. Stock appreciation rights may not have a term exceeding 10 years. After the termination of service of an employee, director or consultant, he or she may exercise his or her stock appreciation right for the period of time stated in his or her option agreement. However, in no event may a stock appreciation right be exercised later than the expiration of its term. Subject to the provisions of our 2015 Plan, the administrator determines the other terms of stock appreciation rights, including when such rights become exercisable and whether to pay any increased appreciation in cash or with shares of our common stock, or a combination thereof, except that the per share exercise price for the shares to be issued pursuant to the exercise of a stock appreciation right will be no less than 100% of the fair market value per share on the date of grant.

Restricted stock. Restricted stock may be granted under our 2015 Plan. Restricted stock awards are grants of shares of our common stock that vest in accordance with terms and conditions established by the administrator. The administrator will determine the number of shares of restricted stock granted to any employee, director or consultant and, subject to the provisions of our 2015 Plan, will determine the terms and conditions of such awards. The administrator may impose whatever conditions for lapse of the restriction on the shares it determines to be appropriate (for example, the administrator may set restrictions based on the achievement of specific performance goals or continued service to us); provided, however, that the administrator, in its sole discretion, may accelerate the time at which any restrictions will lapse or be removed. Recipients of restricted stock awards generally will have voting and dividend rights with respect to such shares upon grant without regard to the restriction, unless the administrator provides otherwise. Shares of restricted stock as to which the restrictions have not lapsed are subject to our right of repurchase or forfeiture.

Restricted stock units. Restricted stock units may be granted under our 2015 Plan. Restricted stock units are bookkeeping entries representing an amount equal to the fair market value of one share of our common stock. Subject to the provisions of our 2015 Plan, the administrator will determine the terms and conditions of restricted stock units, including the vesting criteria (which may include accomplishing specified performance criteria or continued service to us) and the form and timing of payment. Notwithstanding the foregoing, the administrator, in its sole discretion, may accelerate the time at which any restricted stock units will vest.

Performance units and performance shares. Performance units and performance shares may be granted under our 2015 Plan. Performance units and performance shares are awards that will result in a payment to a participant only if performance goals established by the administrator are achieved or the awards otherwise vest. The administrator will establish organizational or individual performance goals or other vesting criteria in its discretion, which, depending on the extent to which they are met, will determine the number and/or the value of performance units and performance shares to be paid out to participants. After the grant of a performance unit or performance share, the administrator, in its sole discretion, may reduce or waive any performance criteria or other vesting provisions for such performance units or performance shares. Performance units shall have an initial dollar value established by the administrator prior to the grant date. Performance shares shall have an initial value equal to the fair market value of our common stock on the grant date. The administrator, in its sole discretion, may pay earned performance units or performance shares in the form of cash, in shares or in some combination

Non-employee directors. Our 2015 Plan provides that all non-employee directors are eligible to receive all types of awards (except for incentive stock options) under the 2015 Plan. Our 2015 Plan provides that in any given fiscal year, a non-employee director may not receive under the 2015 Plan awards having a grant date fair value greater than $ increased to $ in connection with his or her initial service, in each case, as grant fair value is determined under generally accepted accounting principles. Our 2015 Plan further provides that, in the event of a merger or change in control, as defined in our 2015 Plan, each outstanding equity award granted under our 2015 Plan that is held by a non-employee director will fully vest, all restrictions on the shares

subject to such award will lapse, and with respect to awards with performance-based vesting, all performance goals or other vesting criteria will be deemed achieved at 100% of target levels, and all of the shares subject to such award will become fully exercisable, if applicable.

Non-transferability of awards. Unless the administrator provides otherwise, our 2015 Plan generally does not allow for the transfer of awards and only the recipient of an award may exercise an award during his or her lifetime.

Certain adjustments. In the event of certain changes in our capitalization, to prevent diminution or enlargement of the benefits or potential benefits available under our 2015 Plan, the administrator will adjust the number and class of shares that may be delivered under our 2015 Plan and/or the number, class and price of shares covered by each outstanding award and the numerical share limits set forth in our 2015 Plan. In the event of our proposed liquidation or dissolution, the administrator will notify participants as soon as practicable and all awards will terminate immediately prior to the consummation of such proposed transaction.

Merger or change in control. Our 2015 Plan provides that in the event of a merger or change in control, as defined under the 2015 Plan, each outstanding award will be treated as the administrator determines, except that if a successor corporation or its parent or subsidiary does not assume or substitute an equivalent award for any outstanding award, then such award will fully vest, all restrictions on the shares subject to such award will lapse, all performance goals or other vesting criteria applicable to the shares subject to such award will be deemed achieved at 100% of target levels and all of the shares subject to such award will become fully exercisable, if applicable, for a specified period prior to the transaction. The award will then terminate upon the expiration of the specified period of time.

Amendment, termination. The administrator will have the authority to amend, suspend or terminate the 2015 Plan provided such action will not impair the existing rights of any participant. Our 2015 Plan will automatically terminate in 2025, unless we terminate it sooner

2014 Equity Incentive Plan

Authorized shares. Our board of directors adopted, and our stockholders approved, our 2014 Equity Incentive Plan, or the 2014 Plan, in March 2014. We intend to terminate our 2014 Plan in connection with our initial public offering, and, accordingly, no shares will be available for future issuance under the 2014 Plan following our initial public offering. Notwithstanding the foregoing, the 2014 Plan will continue to govern outstanding awards granted thereunder. As of March 31, 2015, options to purchase 405,000 shares of common stock remained outstanding under the 2014 Plan.

Plan administration. Our board of directors or a committee of our board (the administrator) administers our 2014 Plan. The administrator has the power to (i) determine eligible persons who will receive awards under the 2014 Plan, (ii) grant awards to eligible persons, and determine the price at which securities will be offered or awarded and the number of securities to be offered or awarded, and determine the other specific terms and conditions of such awards consistent with the limits of the 2014 Plan, (iii) approve the forms of award agreements, (iv) construe and interpret the 2014 Plan and any agreements defining the rights and obligations of us, our subsidiaries, and participants under the 2014 Plan, and to prescribe, amend and rescind rules and regulations relating to the administration of the 2014 Plan or the awards granted under the 2014 Plan, (v) cancel, modify, or waive our rights with respect to, or modify, discontinue, suspend, or terminate any or all outstanding awards, subject to any required consent under the terms of the 2014 Plan, (vi) accelerate or extend the vesting or exercisability or extend the term of any or all outstanding awards (in the case of options or stock appreciation rights, within the maximum ten-year term of such awards) in such circumstances as the administrator may deem appropriate, (vii) adjust the number of shares subject to any award, adjust the price of any or all outstanding awards or otherwise change previously imposed terms and conditions, in such circumstances as the administrator may deem appropriate, in each case subject to compliance with applicable law, and provided that in no case

(except as otherwise specified in the 2014 Plan) shall such an adjustment constitute a repricing of the per share exercise or base price of any award granted under the 2014 Plan, and further provided that any adjustment or change in terms shall be made in a manner that, in the good faith determination of the administrator, will not likely result in the imposition of additional taxes or interest under Section 409A of the Code, (viii) determine the date of grant of an award, subject to the terms of the 2014 Plan, (ix) determine whether, and the extent to which, adjustments are required pursuant to the adjustment provisions of the 2014 Plan and authorize the termination, conversion, substitution, acceleration or succession of awards upon the occurrence of certain events as set forth in the 2014 Plan, (x) acquire or settle (subject to the terms of the 2014 Plan) rights under awards in cash, stock of equivalent value, or other consideration; and (xi) determine the fair market value of our common stock or awards under the 2014 Plan from time to time and/or the manner in which such value will be determined. Any action taken by us or the administrator relating to the 2014 Plan and within its authority under the 2014 Plan or under applicable law will be conclusive or binding on all persons.

Stock options. Under the 2014 Plan, the administrator has the power to grant options. The exercise price of stock options granted under our 2014 Plan has to be at least equal to 100% of the fair market value of our common stock on the date of grant, as determined by the administrator. The term of a stock option may not exceed ten (10) years, except that with respect to any participant who owns 10% of the voting power of all classes of our outstanding stock as of the grant date, the term of an incentive stock option may not exceed 5 years and the exercise price must be at least equal to 110% of the fair market value on the grant date. The 2014 Plan administrator determines the terms and conditions of options.

After termination of an employee, director or consultant, he or she may exercise his or her option for the period of time stated in the option agreement. Generally, unless an award agreement provides otherwise, if termination is due to death or disability, it is expected that the option will remain exercisable for twelve (12) months, and if termination is due to “cause” (as defined in the 2014 Plan or in the applicable award agreement), it is expected that the option will cease to be exercisable immediately up a participant’s termination. In all other cases, it is expected that the option will generally remain exercisable for three (3) months. However, an option generally may not be exercised later than the expiration of its term.

Stock Appreciation Rights. Under the 2014 Plan, the administrator has the power to grant stock appreciation rights. A stock appreciation right is a right to receive a payment, in cash and/or common stock, equal to the number of shares of our common stock being exercised, multiplied by the excess of (i) the fair market value of a share of common stock on the date the stock appreciation right is exercised, over (ii) the fair market value of a share of common stock on the date the stock appreciation right was granted, as specified in the applicable award agreement. The maximum term of a stock appreciation right is ten (10) years. The post-termination exercise periods for options, described above, also generally apply to stock appreciation rights granted under the 2014 Plan.

Restricted shares. Under the 2014 Plan, the administrator has the power to grant restricted stock awards. Restricted stock awards are shares of our common stock that vest in accordance with terms and conditions established by the administrator. The administrator may impose whatever restrictions on transferability, risk of forfeiture, and other restrictions it determines to be appropriate. Shares of restricted stock that do not vest are subject to our right of repurchase or forfeiture. Except as provided in the 2014 Plan or the award agreement applicable to the restricted stock, a participant granted restricted stock will have all of the rights of a shareholder, including the right to vote the restricted stock and the right to receive dividends thereon. The administrator may require that restricted shares be held in escrow until all restrictions lapse.

Restricted stock units. Under the 2014 Plan, the administrator has the power to grant restricted stock units. Each restricted stock unit represents the right to receive from us, on the respective scheduled vesting or payment date, one share of our common stock. Subject to the provisions of our 2014 Plan, the administrator will determine the terms and conditions of restricted stock units, including the vesting criteria (which may include accomplishing specified performance criteria or continued service to us) and the form and timing of payment. Except as provided in the 2014 Plan or the award agreement applicable to the restricted stock units, a participant

granted restricted stock units will have no rights of a shareholder until such time the shares of common stock underlying the restricted stock units are issued to the participant.

Cash Awards. Under the 2014 Plan, the administrator has the power to grant cash bonuses to participants, including discretionary awards, awards based on objective or subjective performance criteria, awards subject to other vesting criteria, or awards that are otherwise consistent with the 2014 Plan. Cash awards will be awarded in such amount and at such times as the administrator will determine.

Other Awards. Under the 2014 Plan, the administrator may grant the following additional types of awards: (i) stock bonuses, performance stock, performance units, dividend equivalents, or similar rights to purchase or acquire shares, whether at a fixed or variable price or ration to our common stock, upon the passage of time, the occurrence of one or more events, or the satisfaction of performance criteria or other conditions, or any combination thereof, or (ii) any similar securities with a value derived from the value of or related to our common stock and/or returns thereon.

Non-transferability of awards. Unless otherwise provided by the administrator in an individual award agreement, our 2014 Plan generally does not allow for the transfer of awards except by will or by the laws of descent and distribution or as otherwise required by applicable law, and awards are exercisable (as applicable) only by the participant. However, it is our practice to generally grant nonstatutory stock options that are transferable to immediate family members in compliance with applicable securities laws.

Change in control. Our 2014 Plan provides that in the event of a change in control, as defined in the 2014 Plan, unless an award agreement provides otherwise, each then-outstanding option and stock appreciation right will automatically become fully vested, all restricted shares then outstanding will automatically fully vest free of restrictions, and each other award granted under the 2014 Plan that is then outstanding will automatically become vested and payable to the holder of such award unless the administrator has made appropriate provision for the substitution, assumption, exchange or other continuation of the award pursuant to the change in control. Notwithstanding the foregoing, the administrator, in its sole and absolute discretion, may choose (in an award agreement or otherwise) to provide for full or partial accelerated vesting of any award upon a change in control (or upon any other event or other circumstance related to the change in control, such as an involuntary termination of employment occurring after such change in control, as the administrator may determine), irrespective of whether such any such award has been substituted, assumed, exchanged or otherwise continued pursuant to the change in control.

Any award that has been accelerated in connection with a change in control pursuant to the preceding paragraph will terminate upon such event, subject to any provision made by the administrator for the survival, substitution, assumption, exchange, or other continuation of such award. Holders of options and stock appreciation rights will be given reasonable advance notice of the impending termination and a reasonable opportunity to exercise their outstanding awards. The administrator may make provision for payment in cash or property or both in respect of awards terminated in connection with a change in control.

Certain adjustments. Upon or in contemplation of any reclassification, recapitalization, stock split (including a stock split in the form of a stock dividend) or reverse stock split; any merger, arrangement, combination, consolidation, or other reorganization; any spin-off, split-up, or similar extraordinary dividend distribution in respect of our common stock (whether in the form of securities or property); any exchange of our common stock or other securities, or any similar, unusual or extraordinary corporate transaction in respect of our common stock; then the administrator shall in such manner, to such extent and at such time as it deems appropriate and equitable in the circumstances (but subject to compliance with applicable laws and any stock exchange requirements) proportionately adjust any or all of the following:

- the number and type of shares of our common stock (or other securities) that thereafter may be made the subject of awards (including the number of shares provided for in the 2014 Plan),

- the number, amount and type of shares of our common stock (or other securities or property) subject to any or all outstanding awards,
- the grant, purchase, or exercise price (which term includes the base price of any stock appreciation right or similar right) of any or all outstanding awards,
- the securities, cash or other property deliverable upon exercise or payment of any outstanding awards, and
- any compensation limitations set forth in the 2014 Plan, if applicable, and the performance standards applicable to any outstanding awards (provided that no adjustment shall be allowed to the extent inconsistent with the requirements of Code Section 162(m), if applicable).

Amendment, termination. The administrator has the authority to amend, suspend or terminate the 2014 Equity Incentive Plan provided that, without the written consent of a participant, such action does not affect in any manner materially adverse to the participant any rights or benefits of the participant or our obligations under any award granted under the 2014 Plan prior to the effective date of the change.

Limitations on Liability and Indemnification Matters

Our amended and restated certificate of incorporation and amended and restated bylaws, each to be effective upon the completion of this offering, will provide that we will indemnify our directors and officers, and may indemnify our employees and other agents, to the fullest extent permitted by Delaware law. Delaware law prohibits our amended and restated certificate of incorporation from limiting the liability of our directors for the following:

- any breach of the director's duty of loyalty to us or to our stockholders;
- acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- unlawful payment of dividends or unlawful stock repurchases or redemptions; and
- any transaction from which the director derived an improper personal benefit

If Delaware law is amended to authorize corporate action further eliminating or limiting the personal liability of a director, then the liability of our directors will be eliminated or limited to the fullest extent permitted by Delaware law, as so amended. Our amended and restated certificate of incorporation does not eliminate a director's duty of care and, in appropriate circumstances, equitable remedies, such as injunctive or other forms of non-monetary relief, remain available under Delaware law. This provision also does not affect a director's responsibilities under any other laws, such as the federal securities laws or other state or federal laws. Under our amended and restated bylaws, we will also be empowered to purchase insurance on behalf of any person whom we are required or permitted to indemnify.

In addition to the indemnification required in our amended and restated certificate of incorporation and amended and restated bylaws, we have entered into an indemnification agreement with each member of our board of directors and each of our officers. These agreements provide for the indemnification of our directors and officers for certain expenses and liabilities incurred in connection with any action, suit, proceeding or alternative dispute resolution mechanism, or hearing, inquiry or investigation that may lead to the foregoing, to which they are a party, or are threatened to be made a party, by reason of the fact that they are or were a director, officer, employee, agent or fiduciary of our company, or any of our subsidiaries, by reason of any action or inaction by them while serving as an officer, director, agent or fiduciary, or by reason of the fact that they were serving at our request as a director, officer, employee, agent or fiduciary of another entity. In the case of an action or proceeding by or in the right of our company or any of our subsidiaries, no indemnification will be provided for any claim where a court determines that the indemnified party is prohibited from receiving indemnification. We believe that these charter and bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit us and our stockholders. Moreover, a stockholder's investment may be harmed to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable. There is no pending litigation or proceeding naming any of our directors or officers as to which indemnification is being sought, nor are we aware of any pending or threatened litigation that may result in claims for indemnification by any director or officer.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Certain Relationships and Related Transactions

The following is a summary of transactions since January 1, 2012 to which we have been a party in which the amount involved exceeded $120,000 and in which any of our executive officers, directors, or beneficial holders of more than 5% of our capital stock had or will have a direct or indirect material interest, other than compensation arrangements and indemnification agreements which are described under the section of this prospectus captioned "Executive and Director Compensation."

Related Party Transaction Policy

Following completion of this offering, our audit committee will have the primary responsibility for reviewing and approving or disapproving "related party transactions," which, as defined in our written related party transactions policy, are transactions in which we participate and the aggregate amount involved exceeds or may be expected to exceed $120,000, and in which a related person has or will have a direct or indirect material interest. For purposes of this policy, a related person will be defined as a director, executive officer, or nominee for director, in each case at any time since the beginning of the most recently completed year, and their immediate family members, or any person or entity who is or will be, at the time a transaction, arrangement or relationship occurs or exists, a greater than 5% beneficial owner of our common stock, and their immediate family members. Our audit committee charter provides that the audit committee shall review and approve or disapprove any related party transactions.

Sales of Securities

The following table sets forth a summary of the sale and issuance of our securities to related persons since January 1, 2012, other than compensation arrangements which are described under the section of this prospectus captioned "Executive and Director Compensation." For a description of beneficial ownership see the section of this prospectus captioned "Security Ownership of Certain Beneficial Owners and Management."

Purchaser	Class A Common Stock(7)	Class B Common Stock(7)	Series B Convertible Preferred Stock(7)	Series C Convertible Preferred Stock(7)
5% Stockholders:				
Bio IP Ventures LLC(1)	130,238		1,000	416,667
Cambridge Equities, L.P.(2)	13,605,981			
Sorrento Therapeutics, Inc.(3)	3,034,473			
Executive Officers and Directors:				
Barry J. Simon, M.D.(4)		1,820,441		
Steve Gorlin (5)		1,092,264		
Hans Klingeman, M.D., Ph.D.(6)		1,155,484		

(1) On June 20, 2013, we entered into a securities purchase agreement with Bio IP Ventures LLC, pursuant to which we sold a secured promissory note in the principal amount of $1,000,000, and 1,000 shares of our Series B preferred stock at a per share price of $0.10, for an aggregate purchase price of $1,000,100. In connection with our April 2014 private placement described in paragraph (4) below, Bio IP Ventures LLC converted the $1,000,000 principal amount of its promissory note into 416,667 "units" and a warrant to purchase 104,167 shares of our common stock. Each "unit" consisted of one share of our Series C preferred stock and a warrant to purchase one quarter of a share of our common stock at an aggregate price of $2.40 per unit. On June 20, 2013, Bio IP Ventures LLC purchased notes from some of our existing creditors totaling $312,570. In April 2014, these notes were exchanged for 130,238 shares of our Class A common stock. In December 2014, the Series C preferred stock was converted into Class A common stock.

(2) On December 23, 2014, we issued and sold to Cambridge Equities, LP, or Cambridge, an aggregate of 13,605,981 shares of our Class A common stock pursuant to a subscription and investment agreement at a price of $3.4908 per share for an aggregate purchase price of $47,495,481. Dr. Patrick Soon-Shiong, our

chief executive officer and one of our directors is the sole member of the general partner of Cambridge and has the sole power to vote or direct to vote, and the sole power to dispose or direct the disposition of all such shares.

(3) On December 18, 2014, we issued and sold to Sorrento Therapeutics, Inc., or Sorrento, an aggregate of 2,461,538 shares of our Class A common stock pursuant to a subscription and investment agreement at a price of $3.25 per share. The subscription agreement for such transaction was amended on December 23, 2014, to sell an additional 572,935 shares of the our Class A common stock to Sorrento.

(4) On December 30, 2013, we entered into a restricted stock purchase agreement for our Class B common stock with Barry J. Simon, M.D., our president, chief operating officer and one of our directors, pursuant to which Dr. Simon purchased 27,306,615 shares at a price per share of $0.025, which was paid in the form of a secured promissory note, with interest accruing at the applicable federal rate and a maturity date of nine years from the date of the note. In February 2014, we reincorporated into the state of Delaware and conjunction with our reincorporation, we conducted a 15 to 1 reverse stock split of our shares such that Dr. Simon's shares were converted into 1,820,441 shares of our Class B common stock. The note was settled in full on December 31, 2014.

(5) On December 30, 2013, we entered into a restricted stock purchase agreement for our Class B common stock with Hans G. Klingemann, M.D., Ph.D., one of our directors and our vice president, research and development, pursuant to which Dr. Klingemann purchased 17,332,260 shares at a price per share of $0.025 which was paid in the form of a secured promissory note, with interest accruing at the applicable federal rate and a maturity date of nine years from the date of the note. In February 2014, we reincorporated into the state of Delaware and conjunction with our reincorporation, we conducted a 15 to 1 reverse stock split of our shares such that Dr. Klingemann's shares were converted into 1,155,484 shares of our Class B common stock. The note was settled on December 31, 2014.

(6) On December 30, 2013, we entered into a restricted stock purchase agreement for our Class B common stock with Steve Gorlin, our vice chairman, pursuant to which Mr. Gorlin purchased 16,383,960 shares at a price per share of $0.025, of which a portion was remitted in cash, and the balance was applied to the forgiveness of certain of our indebtedness to Mr. Gorlin. In February 2014, we reincorporated into the state of Delaware and conjunction with our reincorporation, we conducted a 15 to 1 reverse stock split of our shares such that Mr. Gorlin's shares were converted into 1,092,264 shares of our Class B common stock.

(7) All of our Class B common stock, Series B preferred stock and Series C preferred stock was subsequently converted into Class A common stock in connection with our recapitalization on December 23, 2014 in connection with the Cambridge transaction set forth in paragraph (1) above. Our Class B common stock and Series C preferred stock converted at a one-to-one ratio and our Series B preferred stock converted at a 1-to-5,132.548 ratio.

Sorrento Investments

In December 2014, we entered into a subscription and investment agreement, or the Sorrento Subscription Agreement, and a registration rights agreement, or the Sorrento Registration Rights Agreement, with Sorrento Therapeutics, Inc., or Sorrento, relating to the private placement of our common stock. In the private placement, we issued to Sorrento an aggregate of 2,461,538 shares of our Class A common stock at a price of $3.25 per share in two separate tranches that closed on December 16, 2014 and December 18, 2014. On December 23, 2014, we entered into a First Amendment to the Sorrento Subscription Agreement, or the Amended Sorrento Subscription Agreement, with Sorrento pursuant to which we issued 572,935 shares of our common stock, or the Third Tranche Shares, to Sorrento at a price of $3.4908 as the third tranche in the series of investments contemplated by the Sorrento Subscription Agreement. We received aggregate gross proceeds of $10.0 million from Sorrento's investments.

Pursuant to the Amended Sorrento Subscription Agreement, Sorrento shall have the right to designate one director to our Board of Directors for so long as Sorrento, directly or indirectly, owns more than 250,000 shares of the issued and outstanding shares of our Class A common stock, subject to adjustment for stock splits, stock dividends, recapitalizations and similar transactions. Dr. Henry Ji, who is the Chief Executive Officer, President and a director of Sorrento, was selected by Sorrento to hold this board seat. The Sorrento director nominee shall be nominated and recommended for election to the Board of Directors by our nominating committee, subject to

any applicable limitations imposed by the DGCL, the Board of Directors' fiduciary duties to our stockholders and any other applicable law. Sorrento's right to have a designee nominated or appointed to serve on our Board of Directors shall automatically terminate whenever Sorrento owns less than 250,000 shares of our issued and outstanding shares of common stock.

If at any time that Sorrento owns more than 250,000 of the issued and outstanding shares of our Class A common stock and does not have a designee serving as a member of our Board of Directors, Sorrento shall have the right to designate one individual to attend all board meetings as an observer in a non-voting capacity and its designee shall receive a copy of all materials provided to our board members, subject to customary conflict of interest and confidentiality considerations.

Pursuant to a Schedule 13D filed by Cambridge on December 24, 2014, Cambridge beneficially owns 8,912,199 shares of Sorrento, representing 19.9% of Sorrento and Dr. Soon-Shiong, our chief executive officer and one of our directors, may beneficially own 9,623,373 shares or 21.9%, of Sorrento, which includes the 8,912,199 shares held by Cambridge, of which Dr. Soon-Shiong is the sole member of its general partner, and an additional 720,174 shares of common stock of Sorrento, which Dr. Soon-Shiong purchased on the open market.

Sorrento Registration Rights

Under the terms of the Sorrento Registration Rights Agreement, we have provided Sorrento with a right to demand registration of the Third Tranche Shares. We have also granted to Sorrento and the other purchasers under the Sorrento Subscription Agreement "piggyback" registration rights exercisable at any time that allow them to include the shares of our common stock that they own in any public offering of equity securities initiated by us for our own account or the account of others (other than those public offerings pursuant to registration statements on forms that do not permit registration for resale by them). These "piggyback" registration rights are not available with respect to any shares of our Class A common stock held by Sorrento or the purchasers which are eligible for resale pursuant certain exemptions from registration under the Securities Act or that are the subject of a then-effective registration statement. Sorrento has agreed to waive its registration rights with respect to this offering.

Sorrento Joint Development and License Agreement

On December 18, 2014, contemporaneously with the closing of Sorrento's second tranche of investment in the Company, we entered into a joint development and license agreement with Sorrento Therapeutics to collaborate on the development and commercialization of therapeutic applications of certain effector cell lines. Pursuant to this agreement the parties have agreed to use certain of our NK-92 cells exclusively with Sorrento's CARs and certain other CARs not excluded under the agreement to develop and commercialize joint products as may be agreed between the parties. To fund our joint research and development efforts, Sorrento has agreed to make research credit payments that are not material in each of December 2015 and 2016, which amounts would be reduced by certain expenses for which we are responsible under the agreement. The research credit payments will be paid in the form of full-time employee expense credits by Sorrento, for our portion of any development costs, and a laboratory credit for maintaining a laboratory on Sorrento's premises. Each joint product developed by the parties will be driven by one party, as mutually agreed upon by a designated steering committee comprised of three representatives from each party. That designated party, in each circumstance, will initiate and control development, testing, out-licensing regulatory approval, and commercialization, and will bear all costs associated with the development of the joint cell line or joint product, unless the other party shares in such costs. Revenues generated from each joint cell line or joint product will be apportioned between Sorrento and us, depending upon the stage of development and each party's contribution towards the development costs. The agreement expires upon later of the completion of the series of our collaborative research and development efforts or three years. We and Sorrento each have the right to terminate the agreement and licenses if the other party is dissolved or is declared bankrupt or insolvent or remains in default of any material obligations following a sixty day cure period to remedy the default.

Cambridge Investment

On December 23, 2014, we entered into a subscription and investment agreement, or the Cambridge Subscription Agreement, a registration rights agreement, or the Cambridge Registration Rights Agreement, and a reclassification agreement, or the Reclassification Agreement, with Cambridge, relating to the private placement of our Class A common stock. In the private placement, we issued to Cambridge an aggregate of 13,605,981 shares of Class A common stock at a price of $3.4908. We received aggregate gross proceeds of $47.5 million from Cambridge's investment.

Cambridge agreed in the Cambridge Subscription Agreement that, until the earlier of the consummation of this offering and December 23, 2015, neither it nor any of its affiliates shall acquire, including by way of the acquisition of control of another entity, beneficial ownership of any shares of our common stock which, when aggregated with all of the other shares of our common stock beneficially owned by Cambridge and its affiliates, would cause the total number of shares of our common stock beneficially owned by Cambridge and its affiliates to exceed 49.9% of our outstanding shares of common stock. The Cambridge Subscription Agreement was amended pursuant to a letter agreement dated January 20, 2015, to remove the limitation on Class A common stock beneficially owned by Cambridge in exchange for Cambridge agreeing to vote its shares in favor of certain matters approved by a majority of our board of directors.

Pursuant to the Cambridge Subscription Agreement, Cambridge shall have the right to designate one director to our Board of Directors for so long as Cambridge and/or its affiliates directly own more than 20% of the issued and outstanding shares of our common stock, subject to adjustment for stock splits, stock dividends, recapitalizations and similar transactions. Dr. Soon-Shiong, who controls the entity that is the general partner of Cambridge and has the sole power to vote or direct to vote and the sole power to dispose or direct the disposition, was selected by Cambridge to hold this board seat. The Cambridge director nominee shall be nominated and recommended for election to the Board of Directors by our nominating committee, subject to any applicable limitations imposed by the DGCL, the Board of Directors' fiduciary duties to our stockholders and any other applicable law. Cambridge's right to have a designee nominated or appointed to serve on our Board of Directors shall automatically terminate whenever Cambridge owns less than 20% of our issued and outstanding shares of common stock.

Under the terms of the Cambridge Subscription Agreement, Cambridge has agreed to vote all of the shares of our common stock beneficially owned by it and its affiliates in favor of, or affirmatively consent to, any matter or action necessary to facilitate the consummation of this offering. Cambridge has also agreed pursuant to the terms of the agreement that, during a restricted period, Cambridge and its affiliates will not, directly or indirectly, engage in certain activities including seeking to solicit or influence the voting of any shares of our common stock, influence or change control of the Company, modify the composition of our Board of Directors or act in concert with other persons to affect the foregoing. The restricted period commenced on the closing date of the Cambridge Subscription Agreement and continues through and includes the date of consummation of this offering. The period is suspended at any time when Cambridge and its affiliates own less than 20% of the outstanding shares of our common stock.

We have granted Cambridge a right to participate in future sales we make of our common stock or common stock equivalents prior to the consummation of this offering subject to certain customary exceptions. Under this participation right, Cambridge may elect to purchase a number of securities in the proposed sale that is proportionate to the number of shares of common stock then held by Cambridge to the total of our outstanding shares of common stock on a fully-diluted basis. Cambridge's right of participation does not apply to our sale of shares of common stock in this offering.

Pursuant to the Reclassification Agreement, we agreed together with Cambridge, Bio IP Ventures, LLC, or Bio IP, and Bonderman Family Limited Partership, or Bonderman LP, subject to the effectiveness of certain transactions, to take all necessary actions and to vote such shares necessary to convert all of our issued and outstanding shares of Series B preferred stock be converted into Class A common stock, all of our issued and

outstanding Series C preferred stock be converted into Class B common stock, and to reclassify all of our Series B preferred stock, Series C preferred stock and Class B common stock into our Class A common stock by filing an amendment to our certificate of incorporation.

Cambridge Registration Rights

Under the terms of the Cambridge Registration Rights Agreement, we have provided Cambridge with a right to demand registration of the shares of common stock issued under the Cambridge Subscription Agreement. We have also granted to Cambridge "piggyback" registration rights exercisable at any time that allow them to include the shares of our common stock that they own in any public offering of equity securities initiated by us for our own account or the account of others (other than those public offerings pursuant to registration statements on forms that do not permit registration for resale by them). These "piggyback" registration rights are not available with respect to any shares of our common stock held by Cambridge which are eligible for resale pursuant certain exemptions from registration under the Securities Act or that are the subject of a then-effective registration statement. Cambridge has agreed to waive its registration rights with respect to this offering.

Stockholders' Agreement

On December 23, 2014, we entered into a stockholders' agreement, or the Stockholders' Agreement with Sorrento, Cambridge, Barry J. Simon, Steven Gorlin and Hans Klingeman, pursuant to which the signing stockholders agreed to, among other things, vote in favor of (i) a Cambridge designee for election to our Board of Directors and to serve as Co-Chairman, (ii) a Sorrento designee for election to our Board of Directors and (iii) each other director nominee that is not a Cambridge designee or Sorrento designee recommended by at least a majority of the directors of our entire Board of Directors for election as directors of Conkwest. The obligation of the stockholders to so vote will terminate automatically upon the earlier of (a) the consummation of this offering and (b) (1) with respect to the Cambridge nominee, at such time as Cambridge shall no longer have the right to make such nomination pursuant to the Cambridge Subscription Agreement (or shall earlier agree to relinquish such right) and (2) with respect to the Sorrento nominee, at such time Sorrento shall no longer have the right to make such nomination pursuant to the Amended Sorrento Subscription Agreement (or shall earlier agree to relinquish such right).

Reclassification Agreement

On December 23, 2014, we entered into reclassification agreement, or the Reclassification Agreement, with Bio IP Ventures, LLC, Cambridge and Bonderman Family Limited Partnership pursuant to which the parties thereto agreed to vote all their shares of Class A common stock and Series B preferred stock in favor of an amendment to our certificate of incorporation that effectuated the conversion of all of our outstanding Series B preferred stock, Series C preferred stock and Class B common stock into shares of our Class A common stock at a conversion rate of 1 to 1 for the Series C preferred stock and Class B common stock, and a conversion rate of 5,132.548 to 1 for our Series B preferred stock.

Forgiveness of Executive Loans

In June 2008, we issued a promissory note to loan up to $200,000 to an officer. The note accrued interest at 2.08% per annum and was scheduled to mature on June 19, 2014. Upon the earlier of the date of a change of control or the date of the closing of an equity financing of at least $3.0 million, we would forgive the officer's obligation to pay the outstanding principal and related accrued interest. In addition, we would pay an amount equal to the sum of any federal, state, and local income taxes and any disallowed deductions imposed on the officer by the loan forgiveness. In connection with the sale of our Series C preferred stock, in March 2014 we recorded compensation expense of $115,106 for forgiveness of the principal and accrued interest and $133,159 to cover income taxes incurred by the officer as a result of the forgiveness of the loan.

Acquisition of Inex Bio

On March 1, 2012, Barry Simon, M.D., our president, chief operating officer, and one of our directors, was appointed to the board of directors of Inex Bio, Inc., or Inex Bio, a Republic of Korea corporation focused on cell therapy development.

In April 2012, we entered into a License Agreement, or the Inex License Agreement, with Inex Bio. Under the Inex License Agreement, we provided Inex Bio with an exclusive license to the Company's technology to be used in products only in certain Asian countries. In exchange for the Inex License Agreement, we received a $300,000 up-front license fee. In addition, we were expected to receive milestone payments of up to $775,000 based upon the completion of certain clinical trials and a 5% royalty on the net sales of products using our aNK cells. No milestone payments were due or received for the years ended December 31, 2013 or 2014.

In May 2012, we acquired 57,000 shares of Inex Bio for $248,541, which represented 22.2% of the outstanding shares and 17.4% of the fully-diluted shares of Inex Bio.

On March 30, 2015, we entered into a Stock Purchase Agreement with InexBio Holdings, LLC and certain other parties, or the purchase agreement, pursuant to which we acquired all the remaining outstanding shares of Inex Bio not previously owned by us for cash consideration of $8.0 million and the issuance of 1,729,729 warrants to purchase our Class A common stock with an exercise price of $3.70 per share. Cambridge, an entity in which Dr. Soon-Shiong, our chief executive officer and one of our directors, is the sole member of its general partner, and the spouse of Dr. Ji, one of our directors, together indirectly own a substantial equity interest in InexBio Holdings, LLC. At the time of our acquisition of the remaining shares of Inex Bio, Dr. Simon, our chief operating officer and one of our board members, was on the board of directors of Inex Bio. Subsequent to the closing of the transaction, InexBio Holdings, LLC exercised its portion of the warrant issued pursuant to the transaction and distributed 990,000 shares of our Class A common stock to Cambridge and 419,409 shares of our Class A common stock to the spouse of Dr. Ji.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table provides information as to shares of common stock beneficially owned as of March 31, 2015 by:

- each director;
- each named executive officer;
- each person owning of record or known by us, based on information provided to us by the persons named below, to own beneficially at least 5% of our common stock; and
- all directors and executive officers as a group.

The percentage ownership information is based on 33,089,891 shares of common stock outstanding as of March 31, 2015. Shares issuable pursuant to the exercise of stock options and warrants exercisable within 60 days are deemed outstanding and held by the holder of such options or warrants for computing the percentage of outstanding common stock beneficially owned by any other person.

Information with respect to beneficial ownership has been furnished by each director, officer or beneficial owner of more than 5% of our common stock. We have determined beneficial ownership in accordance with the rules of the SEC. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities. In addition, the rules include shares of our common stock issuable pursuant to the exercise of stock options or warrants that are either immediately exercisable or exercisable within 60 days of March 31, 2015. As noted in the applicable footnotes to the table, some of the options are not vested but are exercisable at any time and, if exercised, subject to a lapsing right of repurchase until the options are fully vested. These shares are deemed to be outstanding and beneficially owned by the person holding those options or warrants for the purpose of computing the percentage ownership of that person, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. Unless otherwise indicated, the persons or entities identified in this table have sole voting and investment power with respect to all shares shown as beneficially owned by them, subject to applicable community property laws.

Except as otherwise noted below, the address for each person or entity listed in the table is c/o Conkwest, Inc., 2533 South Coast Highway 101, Suite 110, Cardiff-by-the-Sea, California 92007-2133. Beneficial ownership representing less than 1% is denoted with an asterisk (*).

	Beneficial Ownership Prior to the Offering		Beneficial Ownership After the Offering	
Name of Beneficial Owner	Shares	Percentage	Shares	Percentage
5% Stockholders:				
Cambridge Equities, LP(1)	20,941,364	61.45%		
Sorrento Therapeutics, Inc.(2)	3,034,473	9.17%		
Bonderman Family Limited Partnership(3)	2,499,551	7.55%		
Barry J. Simon, M.D.(4)	1,766,647	5.33%		
Directors and Named Executive Officers:				
Patrick Soon-Shiong, M.D., FRCS (C), FACS(5)	21,183,030	61.72%		
Barry J. Simon, M.D.(6)	1,766,647	5.33%		
Hans G. Klingemann, M.D., Ph.D(7)	1,437,253	4.29%		
Steve Gorlin(8)	585,298	1.76%		
Henry Ji, Ph.D.(9)	3,067,806	9.26%		
Richard Kusserow(10)	116,666	*		
John T. Potts, Jr., M.D.(11)	116,666	*		
Robert Rosen(12)	41,666	*		
John C. Thomas, Jr.(13)	116,666	*		
All directors and executive officers as a group (10 persons)(14)	28,490,031	80.36%		

(1) Consists of (i) 19,951,364 shares held by Cambridge Equities, LP ("Cambridge Equities") and (ii) 990,000 shares that may be acquired pursuant to the exercise of a warrant held of record within 60 days of March 31, 2015 by Cambridge. MP 13 Ventures, LLC ("MP 13 Ventures") is the general partner of Cambridge Equities and may be deemed to have beneficial ownership of the shares held by Cambridge Equities. Dr. Soon-Shiong, a member of our board of directors and our chief executive officer, is the sole member of MP 13 Ventures, LLC, and has voting and dispositive power over the shares held by Cambridge Equities. The address for Cambridge Equities is 9922 Jefferson Boulevard, Culver City, California 90232.

(2) Consists of 3,034,473 shares held by Sorrento Therapeutics, Inc. ("Sorrento"), a publicly traded company on the NASDAQ stock market. Dr. Ji, a member of our board of directors, is a co-founder, director, president and chief executive officer of Sorrento. Dr. Ji may be deemed to have voting and dispositive power over the shares held by Sorrento. Dr. Ji disclaims beneficial ownership with respect to such shares except to the extent of his pecuniary interest therein, if any. The address for Sorrento is 6042 Cornerstone Court West, Suite B, San Diego, California 92121.

(3) Consists of 2,499,551 shares held by Bonderman Family Limited Partnership. The address for Bonderman Family Limited Partnership is 301 Commerce Street, Suite 3300, Fort Worth, Texas 76102.

(4) Consists of (i) 1,681,648 shares held and (ii) 84,999 shares issuable upon the exercise of options that are exercisable within 60 days of March 31, 2015.

(5) Consists of (i) 19,951,364 shares held by Cambridge Equities disclosed in paragraph (1) above, (ii) 990,000 shares that may be acquired pursuant to the exercise of a warrant held of record within 60 days of March 31, 2015 by Cambridge disclosed in paragraph (1) above, (iii) 41,666 shares issuable upon the exercise of options that are exercisable within 60 days of March 31, 2015 by Dr. Patrick Soon-Shiong, (iv) 200,000 shares that may be acquired pursuant to the exercise of a warrant held of record within 60 days of March 31, 2015 by Dr. Soon-Shiong.

(6) Consists of the shares disclosed in paragraph (4) above.

(7) Consists of (i) 1,011,212 shares held and (ii) 426,041 shares issuable upon the exercise of options that are exercisable within 60 days of March 31, 2015.

(8) Consists of (i) 346,132 shares held and (ii) 239,166 shares issuable upon the exercise of options that are exercisable within 60 days of March 31, 2015.

(9) Consists of (i) 3,034,473 shares held by Sorrento disclosed in paragraph (2) above, and (ii) 33,333 shares issuable upon the exercise of options that are exercisable within 60 days of March 31, 2015 by Dr Ji.

(10) Consists of (i) 99,998 shares held and (ii) 16,668 shares issuable upon the exercise of options that are exercisable within 60 days of March 31, 2015 held jointly by Mr. Kusserow and his spouse.

(11) Consists of 116,666 shares issuable upon the exercise of options that are exercisable within 60 days of March 31, 2015.

(12) Consists of 41,666 shares issuable upon the exercise of options that are exercisable within 60 days of March 31, 2015.

(13) Consists of 116,666 shares issuable upon the exercise of options that are exercisable within 60 days of March 31, 2015.

(14) Consists of (i) 26,124,827 shares beneficially owned by our current executive officers and directors, (ii) 1,190,000 shares that may be acquired pursuant to the exercise of warrants held of record within 60 days of March 31, 2015 and (iii) options to purchase 1,175,204 shares of common stock that are exercisable within 60 days of March 31, 2015.

DESCRIPTION OF CAPITAL STOCK

General

The following description summarizes the most important terms of our capital stock, as they are expected to be in effect upon the completion of this offering. We expect to adopt an amended and restated certificate of incorporation and amended and restated bylaws in connection with the completion of this offering, and this description summarizes the provisions that are expected to be included in such documents. This summary does not purport to be complete and is qualified in its entirety by the provisions of our amended and restated certificate of incorporation and amended and restated bylaws, copies of which have been filed as exhibits to the registration statement of which this prospectus is a part. For a complete description of our capital stock, you should refer to our amended and restated certificate of incorporation and bylaws, that are filed as exhibits to the registration statement of which this prospectus forms a part, and to the applicable provisions of Delaware law. Immediately following the completion of this offering, our authorized capital stock will consist of shares of common stock, $0.001 par value per share, and shares of undesignated preferred stock, $0.001 par value per share.

Common Stock

We are authorized to issue up to a total of 80,000,000 shares of common stock, par value $0.0001 per share. Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of our stockholders. Holders of our common stock have no cumulative voting rights. Further, holders of our common stock have no preemptive, conversion, redemption or subscription rights and there are no sinking fund provisions applicable to our common stock. Upon our liquidation, dissolution or winding-up, holders of our common stock are entitled to share ratably in all assets remaining after payment of all liabilities and the liquidation preferences of any of our outstanding shares of preferred stock. Subject to preferences that may be applicable to any outstanding shares of preferred stock, holders of our common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors, or board, out of our assets which are legally available.

As of March 31, 2015, there were 33,089,891 shares of common stock issued and outstanding and there were approximately 77 holders of record of our common stock.

Preferred Stock

Our board is authorized, subject to certain limitations prescribed by law, to designate and issue up to a total of 20,000,000 shares of preferred stock, par value $0.0001, without stockholder approval. The board may issue preferred stock from time to time in one or more series and fix the designations, preferences and rights of the shares of each such series and any qualifications, limitations or restrictions on the shares of each such series, including dividend rights and rates, conversion rights, voting rights, terms of redemption, liquidation preferences and the number of shares constituting any such series.

Our board may authorize the issuance of preferred stock with voting or conversion rights that could harm the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in control of our company and might harm the market price of our common stock and the voting and other rights of the holders of common stock. We have no current plans to issue any shares of preferred stock.

Warrants

The following table sets forth information about outstanding warrants to purchase 12,211,777 shares of our common stock as of March 31, 2015:

Number of Shares Exercisable Prior to This Offering	Number of Shares of Common Stock Exercisable Following This Offering	Exercise Price Per Share
35,296	—	$ 4.51
62,016	—	$ 3.25
884,736	—	$ 3.00
11,229,729	—	$ 3.70
12,211,777	—	

Options

As of March 31, 2015, options to purchase 5,000,270 shares of our common stock at a weighted-average exercise price of $2.57 per share were outstanding.

Registration Rights

Sorrento Registration Rights

Under the terms of the Sorrento Registration Rights Agreement, we have provided Sorrento with a right to demand registration of the Third Tranche Shares. We have also granted to Sorrento and the other purchasers under the Sorrento Subscription Agreement "piggyback" registration rights exercisable at any time that allow them to include the shares of our common stock that they own in any public offering of equity securities initiated by us for our own account or the account of others (other than those public offerings pursuant to registration statements on forms that do not permit registration for resale by them). These "piggyback" registration rights are not available with respect to any shares of our common stock held by Sorrento or the purchasers which are eligible for resale pursuant certain exemptions from registration under the Securities Act or that are the subject of a then-effective registration statement. Sorrento has agreed to waive its registration rights with respect to this offering.

Cambridge Registration Rights

Under the terms of the Cambridge Registration Rights Agreement, we have provided Cambridge with a right to demand registration of the shares of common stock issued under the Cambridge Subscription Agreement. We have also granted to Cambridge "piggyback" registration rights exercisable at any time that allow them to include the shares of our common stock that they own in any public offering of equity securities initiated by us for our own account or the account of others (other than those public offerings pursuant to registration statements on forms that do not permit registration for resale by them). These "piggyback" registration rights are not available with respect to any shares of our common stock held by Cambridge which are eligible for resale pursuant certain exemptions from registration under the Securities Act or that are the subject of a then-effective registration statement. Cambridge has agreed to waive its registration rights with respect to this offering.

Registration Rights Agreement

On June 20, 2013, we entered into a registration rights agreement with Bio IP Ventures LLC, or Bio IP, in conjunction with the issuance and sale a secured promissory note and shares of our Series B preferred stock. Pursuant to the agreement, we have provided Bio IP with a right to demand registration subject to certain

obligations set forth in the agreement. We also granted Bio IP "piggyback" registration rights exercisable at any time following the consummation of this offering and subject to certain other limitations that allow Bio IP to include the shares of our common stock that it owns in any such public offerings of equity securities initiated by us for our own account or the account of others.

Subscription and Securities Purchase Agreement

In April 2014, we entered into a series of subscription agreements with accredited investors pursuant to which we issued and sold an aggregate of 2,691,615 "units" consisting of 2,691,615 shares of our Series C preferred stock and 672,904 warrants to purchase shares of our common stock. Investors participating in such financing were granted "piggyback" registration rights exercisable at any time that allow them to include the shares of our common stock that they own in any public offering of equity securities initiated by us for our own account or the account of others (other than those public offerings pursuant to registration statements on forms that do not permit registration for resale by them). These "piggyback" registration rights are not available with respect to any shares of our common stock held by such investors or the purchasers which are eligible for resale pursuant certain exemptions from registration under the Securities Act or that are the subject of a then-effective registration statement.

Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws

The provisions of Delaware law, our amended and restated certificate of incorporation and our amended and restated bylaws may have the effect of delaying, deferring or discouraging another person from acquiring control of our company. These provisions, which are summarized below, may have the effect of discouraging takeover bids. They are also designed, in part, to encourage persons seeking to acquire control of us to negotiate first with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with an unfriendly or unsolicited acquirer outweigh the disadvantages of discouraging a proposal to acquire us because negotiation of these proposals could result in an improvement of their terms.

Amended and Restated Certificate of Incorporation and Amended and Restated Bylaw Provisions

Our amended and restated certificate of incorporation and our amended and restated bylaws include a number of provisions that could deter hostile takeovers or delay or prevent changes in control of our management team, including the following:

- *Board of directors vacancies*. Our amended and restated certificate of incorporation and amended and restated bylaws will authorize only our board of directors to fill vacant directorships, including newly created seats. In addition, the number of directors constituting our board of directors will be permitted to be set only by a resolution adopted by our board of directors. These provisions would prevent a stockholder from increasing the size of our board of directors and then gaining control of our board of directors by filling the resulting vacancies with its own nominees. This makes it more difficult to change the composition of our board of directors but promotes continuity of management.
- *Advance notice requirements for stockholder proposals and director nominations*. Our amended and restated bylaws will provide advance notice procedures for stockholders seeking to bring business before our annual meeting of stockholders or to nominate candidates for election as directors at our annual meeting of stockholders. Our amended and restated bylaws will also specify certain requirements regarding the form and content of a stockholder's notice. These provisions might preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our annual meeting of stockholders if the proper procedures are not followed. We expect that these provisions may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of our company.

- *No cumulative voting*. The Delaware General Corporation Law provides that stockholders are not entitled to the right to cumulate votes in the election of directors unless a corporation's certificate of incorporation provides otherwise. Our amended and restated certificate of incorporation will not provide for cumulative voting.
- *Amendment of charter provisions*. Any amendment of the above provisions in our amended and restated certificate of incorporation would require approval by holders of at least two-thirds of our then outstanding voting securities.
- *Issuance of undesignated preferred stock*. Our board of directors will have the authority, without further action by the stockholders, to issue up to 10,000,000 shares of undesignated preferred stock with rights and preferences, including voting rights, designated from time to time by our board of directors. The existence of authorized but unissued shares of preferred stock would enable our board of directors to render more difficult or to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or other means.

Listing

We have applied for listing of our common stock on The NASDAQ Global Select Market under the symbol " ."

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is . The transfer agent and registrar's address is .

SHARES ELIGIBLE FOR FUTURE SALE

Before this offering, no public market existed for our common stock. Market sales of shares of our common stock after this offering and from time to time, and the availability of shares for future sale, may reduce the market price of our common stock. Sales of substantial amounts of our common stock, or the perception that these sales could occur, could adversely affect prevailing market prices for our common stock and could impair our future ability to obtain capital, especially through an offering of equity securities.

Based on the number of shares of common stock outstanding as of the date of this prospectus, and assuming the sale of all shares offered, upon completion of this offering, shares of common stock will be outstanding. All of the securities sold by in this offering, other than the shares purchased by our directors and officers in the directed share program, will be freely tradable without restrictions or further registration under the Securities Act unless held by our "affiliates," as that term is defined under Rule 144 under the Securities Act.

The remaining shares of common stock outstanding upon the closing of this offering are restricted securities, as defined under Rule 144 of the Securities Act. Restricted securities may be sold in the U.S. public market only if registered or if they qualify for an exemption from registration, including by reason of Rule 144 or 701 under the Securities Act, which rules are summarized below. These remaining shares will generally become available for sale in the public market as follows:

- restricted shares will be eligible for sale in the public market upon completion of this offering under Rule 144; and
- restricted shares will be eligible for sale in the public market 90 days after the date of this prospectus, subject (with respect to shares held by affiliates) to the volume, manner of sale and other limitations under Rule 144 and Rule 701.

Rule 144

In general, under Rule 144 under the Securities Act, as in effect on the date of this prospectus, beginning 90 days after the date of this prospectus, a person who is not one of our affiliates at any time during the three months preceding a sale, and who has beneficially owned shares of our common stock to be sold for at least six months, would be entitled to sell an unlimited number of shares of our common stock, provided current public information about us is available. In addition, under Rule 144, a person who is not one of our affiliates at any time during the three months preceding a sale, and who has beneficially owned the shares of our common stock to be sold for at least one year, would be entitled to sell an unlimited number of shares immediately upon the closing of this offering without regard to whether current public information about us is available. Beginning 90 days after the date of this prospectus, our affiliates who have beneficially owned shares of our common stock for at least six months are entitled to sell within any three-month period a number of shares that does not exceed the greater of:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately shares immediately after this offering; and
- the average weekly trading volume of our common stock on The NASDAQ Global Select Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale, or if no such notice is required, the date of receipt of the order to execute the sale.

Sales of restricted shares under Rule 144 by our affiliates are also subject to requirements regarding the manner of sale, notice and the availability of current public information about us. Rule 144 also provides that affiliates relying on Rule 144 to sell shares of our common stock that are not restricted shares must nonetheless comply with the same restrictions applicable to restricted shares, other than the holding period requirement.

Lock-Up Agreements

Notwithstanding the availability of Rule 144, holders of substantially all of our outstanding securities will enter into lock-up agreements as described above under “Underwriting” and their securities will become eligible for sale at the expiration of the restrictions set forth in those agreements, subject to any exceptions set forth therein.

Rule 701

Rule 701 under the Securities Act, as in effect on the date of this prospectus, permits resales of shares in reliance upon Rule 144 but without compliance with some of the restrictions of Rule 144, including the holding period requirement. All holders of Rule 701 shares are required to wait until 90 days after the date of this prospectus before selling their shares under Rule 701.

Equity Incentive Plans

Following the completion of this offering, we intend to file a registration statement on Form S-8 under the Securities Act to register shares of our common stock issued or reserved for issuance under our 2014 Equity Incentive Plan and 2015 Equity Incentive Plan. The registration statement on Form S-8 will become effective immediately upon filing, and shares covered by such registration statement will thereupon be eligible for sale in the public markets, subject to vesting restrictions, the lock-up agreements described above and Rule 144 limitations applicable to affiliates. See the section titled “Executive and Director Compensation—Equity Compensation Plan Information” for additional information.

Registration Rights

Upon completion of this offering, the holders of approximately shares of our common stock will be eligible to exercise certain rights to cause us to register their shares for resale under the Securities Act, subject to various conditions and limitations. These registration rights are described under the caption “Description of Securities–Registration Rights.” Upon the effectiveness of a registration statement covering these shares, the shares would become freely tradable, and a large number of shares may be sold into the public market. If that occurs, the market price of our common stock could be adversely affected.

Warrants

Upon the closing of this offering, warrants entitling holders to purchase an aggregate of 12,211,777 shares of our common stock at a weighted-average exercise price of $3.65 per share will be outstanding.

See the section titled “Description of Capital Stock” for additional information. Such shares issued upon exercise of the warrants may be able to be sold after the expiration of the lock-up period described above subject the requirements of Rule 144 described above.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following is a summary of the material U.S. federal income tax consequences of the ownership and disposition of our common stock to non-U.S. holders (as defined below), but does not purport to be a complete analysis of all the potential tax considerations relating thereto. This summary is based upon the provisions of the United States Internal Revenue Code of 1986, as amended, or the Code, Treasury Regulations promulgated thereunder, administrative rulings and judicial decisions, all as of the date hereof. These authorities may be changed, possibly retroactively, so as to result in U.S. federal income tax consequences different from those set forth below. We have not sought any ruling from the Internal Revenue Service, or the IRS, with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS will agree with such statements and conclusions.

This summary also does not address the tax considerations arising under the laws of any non-U.S., state or local jurisdiction or under U.S. federal gift and estate tax laws, except to the limited extent set forth below. In addition, this discussion does not address the potential application of any tax considerations applicable to an investor's particular circumstances or to investors that may be subject to special tax rules, including, without limitation:

- banks, insurance companies or other financial institutions;
- persons subject to the alternative minimum tax or the tax on net investment income;
- tax-exempt organizations;
- controlled foreign corporations, passive foreign investment companies or corporations that accumulate earnings to avoid U.S. federal income tax;
- dealers in securities or currencies;
- traders in securities that elect to use a mark-to-market method of accounting for their securities holdings;
- persons that own, or are deemed to own, more than five percent of our capital stock (except to the extent specifically set forth below);
- certain former citizens or long-term residents of the United States;
- persons who hold our common stock as a position in a hedging transaction, "straddle," "conversion transaction" or other risk reduction transaction;
- persons who hold or receive our common stock pursuant to the exercise of any warrant or option or otherwise as compensation;
- persons who do not hold our common stock as a capital asset within the meaning of Section 1221 of the Code; or
- persons deemed to sell our common stock under the constructive sale provisions of the Code.

In addition, if a partnership, entity or arrangement classified as a partnership for U.S. federal income tax purposes holds our common stock, the tax treatment of a partner generally will depend on the status of the partner and upon the activities of the partnership. Accordingly, partnerships that hold our common stock, and partners in such partnerships, should consult their tax advisors.

You are urged to consult your tax advisor with respect to the application of the U.S. federal income tax laws to your particular situation, as well as any tax consequences of the purchase, ownership and disposition of our common stock arising under the U.S. federal estate or gift tax laws or under the laws of any state, local, non-U.S. or other taxing jurisdiction or under any applicable tax treaty.

Non-U.S. Holder Defined

For purposes of this discussion, you are a non-U.S. holder if you are any holder other than a partnership (or other entity classified as a partnership for U.S. federal income tax purposes) or:

- an individual citizen or resident of the United States (for U.S. federal income tax purposes);
- a corporation or other entity taxable as a corporation created or organized in the United States or under the laws of the United States or any political subdivision thereof;
- an estate whose income is subject to U.S. federal income tax regardless of its source; or
- a trust (x) whose administration is subject to the primary supervision of a U.S. court and that has one or more U.S. persons who have the authority to control all substantial decisions of the trust or (y) that has made a valid election under applicable Treasury Regulations to be treated as a U.S. person.

Distributions

We do not anticipate making any distributions on our common stock following the completion of this offering. However, if we do make distributions on our common stock, those payments will constitute dividends for U.S. tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. To the extent those distributions exceed both our current and our accumulated earnings and profits, they will constitute a return of capital and will first reduce your basis in our common stock, but not below zero, and then will be treated as gain from the sale of stock.

Subject to the discussion below on effectively connected income, any dividend paid to you generally will be subject to U.S. withholding tax either at a rate of 30% of the gross amount of the dividend or such lower rate as may be specified by an applicable income tax treaty, subject to the discussion below on common stock held by or through foreign entities. In order to receive a reduced treaty rate, you must provide us with an IRS Form W-8BEN or W-8BEN-E or other appropriate version of IRS Form W-8 certifying qualification for the reduced rate. A non-U.S. holder of shares of our common stock eligible for a reduced rate of U.S. withholding tax pursuant to an income tax treaty may obtain a refund of any excess amounts withheld by filing an appropriate claim for refund with the IRS. If the non-U.S. holder holds the stock through a financial institution or other agent acting on the non-U.S. holder's behalf, the non-U.S. holder will be required to provide appropriate documentation to the agent, which then will be required to provide certification to us or our paying agent, either directly or through other intermediaries.

Dividends received by you that are effectively connected with your conduct of a U.S. trade or business (and, if required by an applicable income tax treaty, such dividends are attributable to a permanent establishment maintained by you in the United States), are includible in your gross income in the taxable year received, and are generally exempt from such withholding tax, subject to the discussion below on backup withholding and on common stock held by or through foreign entities. In order to obtain this exemption, you must provide us with an IRS Form W-8ECI or other applicable IRS Form W-8 properly certifying such exemption. Such effectively connected dividends, although not subject to withholding tax, are taxed at the same graduated rates applicable to U.S. persons, net of certain deductions and credits, subject to an applicable income tax treaty providing otherwise. In addition, if you are a corporate non-U.S. holder, dividends you receive that are effectively connected with your conduct of a U.S. trade or business may also be subject to a branch profits tax at a rate of 30% or such lower rate as may be specified by an applicable income tax treaty. You should consult your tax advisor regarding any applicable tax treaties that may provide for different rules.

Gain on Disposition of Common Stock

Subject to the discussion below on backup withholding and on common stock held by or through foreign entities, you generally will not be required to pay U.S. federal income tax on any gain realized upon the sale or other disposition of our common stock unless:

- the gain is effectively connected with your conduct of a U.S. trade or business (and, if required by an applicable income tax treaty, the gain is attributable to a permanent establishment maintained by you in the United States);
- you are an individual who is present in the United States for a period or periods aggregating 183 days or more during the calendar year in which the sale or disposition occurs and certain other conditions are met; or
- our common stock constitutes a U.S. real property interest by reason of our status as a "United States real property holding corporation," or USRPHC, for U.S. federal income tax purposes at any time within the shorter of the five-year period preceding your disposition of, or your holding period for, our common stock.

We believe that we are not currently and will not become a USRPHC. However, because the determination of whether we are a USRPHC depends on the fair market value of our U.S. real property relative to the fair market value of our other business assets, there can be no assurance that we will not become a USRPHC in the future. Even if we become a USRPHC, however, as long as our common stock is regularly traded on an established securities market, your common stock will be treated as U.S. real property interests only if you actually or constructively hold more than five percent of such regularly traded common stock at any time during the shorter of the five-year period preceding your disposition of, or your holding period for, our common stock.

If you are a non-U.S. holder described in the first bullet above, you will be required to pay tax on the net gain derived from the sale under regular graduated U.S. federal income tax rates, and a corporate non-U.S. holder described in the first bullet above also may be subject to the branch profits tax at a 30% rate, or such lower rate as may be specified by an applicable income tax treaty. If you are an individual non-U.S. holder described in the second bullet above, you will be subject to tax at 30% (or such lower rate specified by an applicable income tax treaty) on the gain derived from the sale, which tax may be offset by U.S. source capital losses for the year. You should consult any applicable income tax or other treaties that may provide for different rules.

Federal Estate Tax

Our common stock beneficially owned by an individual who is not a citizen or resident of the United States (as defined for U.S. federal estate tax purposes) at the time of their death will generally be includable in the decedent's gross estate for U.S. federal estate tax purposes, unless an applicable estate tax treaty provides otherwise.

Backup Withholding and Information Reporting

Generally, we must report annually to the IRS the amount of dividends paid to you, your name and address, and the amount of tax withheld, if any. A similar report will be sent to you. Pursuant to applicable income tax treaties or other agreements, the IRS may make these reports available to tax authorities in your country of residence.

Payments of dividends or of proceeds on the disposition of stock made to you may be subject to information reporting and backup withholding at a current rate of 28% unless you establish an exemption, for example, by properly certifying your non-U.S. status on an IRS Form W-8BEN or W-8BEN-E or another appropriate version of IRS Form W-8. Notwithstanding the foregoing, backup withholding and information reporting may apply if either we or our paying agent has actual knowledge, or reason to know, that you are a U.S. person.

Backup withholding is not an additional tax; rather, the U.S. federal income tax liability of persons subject to backup withholding will be reduced by the amount of tax withheld. If withholding results in an overpayment of taxes, a refund or credit may generally be obtained from the IRS, provided that the required information is furnished to the IRS in a timely manner.

Foreign Accounts

Code Sections 1471-1474 and the regulations issued thereunder generally will impose a U.S. federal withholding tax of 30% on dividends on, and the gross proceeds from a sale or other disposition of our common stock, paid to a "foreign financial institution" (as specially defined under these rules), unless such institution enters into an agreement with the U.S. government to, among other things, withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding the U.S. account holders of such institution (which includes certain equity and debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners) or otherwise establishes an exemption. The legislation also generally will impose a U.S. federal withholding tax of 30% on dividends on and the gross proceeds from a sale or other disposition of our common stock paid to a "non-financial foreign entity" (as defined under these rules) unless such entity provides the withholding agent with a certification identifying the direct and indirect U.S. owners of the entity or otherwise establishes an exemption. The withholding obligations under this legislation will apply currently to dividends on our common stock and will apply under transition rules to the gross proceeds of a sale or other disposition of our common stock on or after January 1, 2017. Under certain circumstances, a non-U.S. holder might be eligible for refunds or credits of such taxes. An intergovernmental agreement between the United States and an applicable foreign country may modify the requirements described in this paragraph. Prospective investors are encouraged to consult with their own tax advisors regarding the possible implications of this legislation on their investment in our common stock.

The preceding discussion of U.S. federal income tax considerations is for general information only. It is not tax advice. Each prospective investor should consult its own tax advisor regarding the particular U.S. federal, state and local and non-U.S. tax consequences of purchasing, holding and disposing of our common stock, including the consequences of any proposed change in applicable laws

UNDERWRITING

We are offering the shares of common stock described in this prospectus through a number of underwriters. Merrill Lynch, Pierce, Fenner & Smith Incorporated, Citigroup Global Markets Inc., Jefferies LLC and Piper Jaffray & Co. are acting as joint book-running managers of the offering. We have entered into an underwriting agreement with the underwriters. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriters, and each underwriter has severally agreed to purchase, at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus, the number of shares of common stock listed next to its name in the following table:

Name	Number of Shares
Merrill Lynch, Pierce, Fenner & Smith Incorporated	
Citigroup Global Markets Inc.	
Jefferies LLC	
Piper Jaffray & Co.	
Total	

The underwriters are committed to purchase all the common shares offered by us if they purchase any shares. The underwriting agreement also provides that if an underwriter defaults, the purchase commitments of non-defaulting underwriters may also be increased or the offering may be terminated.

The underwriters propose to offer the common shares directly to the public at the initial public offering price set forth on the cover page of this prospectus and to certain dealers at that price less a concession not in excess of $ per share. Any such dealers may resell shares of certain brokers or dealers at a discount of up to $ per share from the initial offering price. After the initial public offering of the shares, the offering price and other selling terms may be changed by the underwriters. Sales of shares made outside of the United States may be made by affiliates of the underwriters.

The underwriters have an option to buy up to additional shares of common stock from us. The underwriters have 30 days from the date of this prospectus to exercise this option to purchase additional shares. If any shares are purchased with this option to purchase additional shares, the underwriters will purchase shares in approximately the same proportion as shown in the table above. If any additional shares of common stock are purchased, the underwriters will offer the additional shares on the same terms as those on which the shares are being offered.

The underwriting fee is equal to the public offering price per share of common stock less the amount paid by the underwriters to us per share of common stock. The underwriting fee is $ per share. The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	Without option to purchase additional shares exercise	With full option to purchase additional shares exercise
Per Share	$	$
Total	$	$

We estimate that the total expenses of this offering, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding the underwriting discounts and commissions, will be approximately $. We have agreed to reimburse the underwriters for all expenses relating to the clearance of this offering with the Financial Industry Regulatory Authority, Inc.

A prospectus in electronic format may be made available on the web sites maintained by one or more underwriters, or selling group members, if any, participating in the offering. The underwriters may agree to allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters and selling group members that may make Internet distributions on the same basis as other allocations.

We have agreed that we will not (1) offer, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, or file with the SEC, a registration statement under the Securities Act relating to, any shares of our common stock or any securities convertible into or exercisable or exchangeable for any shares of our common stock, or publicly disclose the intention to make any offer, sale, pledge, disposition or filing, or (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the common stock or such other securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of common stock or such other securities, in cash or otherwise, without the prior written consent of Merrill Lynch, Pierce, Fenner & Smith Incorporated, Citigroup Global Markets, Inc., Jefferies LLC and Piper Jaffray & Co. for a period of 180 days after the date of this prospectus, other than the shares of our common stock to be sold hereunder and any shares of our common stock issued upon the exercise of options granted under our existing equity incentive plans. Our directors and executive officers, and substantially all of our securityholders have entered into lock-up agreements with the underwriters prior to the commencement of this offering pursuant to which each of these persons or entities, with limited exceptions, for a period of 180 days after the date of this prospectus, may not, without the prior written consent of Merrill Lynch, Pierce, Fenner & Smith Incorporated, Citigroup Global Markets, Inc., Jefferies LLC and Piper Jaffray & Co., (1) lend, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock (including, without limitation, common stock or such other securities which may be deemed to be beneficially owned by such directors, executive officers, or other securityholders in accordance with the rules and regulations of the SEC and securities which may be issued upon exercise of a stock option or warrant), or publicly disclose the intention to make any offer, sale pledge or disposition, or (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the common stock or such other securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of common stock or such other securities, in cash or otherwise, or (3) make any demand for or exercise any right with respect to the registration of any shares of our common stock or any security convertible into or exercisable or exchangeable for our common stock.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act.

We have applied to have our common stock approved for listing on the NASDAQ Global Select Market under the symbol “ ”.

In connection with this offering, the underwriters may engage in stabilizing transactions, which involves making bids for, purchasing and selling shares of common stock in the open market for the purpose of preventing or retarding a decline in the market price of the common stock while this offering is in progress. These stabilizing transactions may include making short sales of the common stock, which involves the sale by the underwriters of a greater number of shares of common stock than they are required to purchase in this offering, and purchasing shares of common stock on the open market to cover positions created by short sales. Short sales may be “covered” shorts, which are short positions in an amount not greater than the underwriters’ option to purchase additional shares referred to above, or may be “naked” shorts, which are short positions in excess of that amount. The underwriters may close out any covered short position either by exercising their option to purchase additional shares, in whole or in part, or by purchasing shares in the open market. In making this determination, the underwriters will consider, among other things, the price of shares available for purchase in the open market compared to the price at which the underwriters may purchase shares through the option to purchase additional

shares. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market that could adversely affect investors who purchase in this offering. To the extent that the underwriters create a naked short position, they will purchase shares in the open market to cover the position.

The underwriters have advised us that, pursuant to Regulation M of the Securities Act, they may also engage in other activities that stabilize, maintain or otherwise affect the price of the common stock, including the imposition of penalty bids. This means that if the representatives of the underwriters purchase common stock in the open market in stabilizing transactions or to cover short sales, the representatives can require the underwriters that sold those shares as part of this offering to repay the underwriting discounts and commissions received by them.

These activities may have the effect of raising or maintaining the market price of the common stock or preventing or retarding a decline in the market price of the common stock, and, as a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. If the underwriters commence these activities, they may discontinue them at any time. The underwriters may carry out these transactions on the , in the over-the-counter market or otherwise.

Prior to this offering, there has been no public market for our common stock. The initial public offering price will be determined by negotiations between us and the representatives of the underwriters. In determining the initial public offering price, we and the representatives of the underwriters expect to consider a number of factors, including:

- the information set forth in this prospectus and otherwise available to the representatives;
- our prospects and the history and prospects for the industry in which we compete;
- an assessment of our management;
- our prospects for future earnings;
- the general condition of the securities markets at the time of this offering;
- the recent market prices of, and demand for, publicly traded common stock of generally comparable companies; and
- other factors deemed relevant by the underwriters and us.

Neither we nor the underwriters can assure investors that an active trading market will develop for our common shares, or that the shares will trade in the public market at or above the initial public offering price.

Certain of the underwriters and their affiliates have provided in the past to us and our affiliates and may provide from time to time in the future certain commercial banking, financial advisory, investment banking and other services for us and such affiliates in the ordinary course of their business, for which they have received and may continue to receive customary fees and commissions. In addition, from time to time, certain of the underwriters and their affiliates may effect transactions for their own account or the account of customers, and hold on behalf of themselves or their customers, long or short positions in our debt or equity securities or loans, and may do so in the future.

At our request, the underwriters have also reserved for sale, at the initial public offering price, up to additional shares of our common stock for sale to some of our employees, business associates and related persons. The underwriters will receive the same underwriting discount on any shares purchased by our directors, officers, employees, existing investors, business associates and related persons as they will on any other shares sold to the public in this offering. If shares are sold to these persons or entities, it will reduce the number of shares available for sale to the general public. Any shares that are not sold to these persons or entities will be offered by the underwriters to the general public on the same terms as the other shares offered by this prospectus.

Selling Restrictions

General

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the securities offered by this prospectus in any jurisdiction where action for that purpose is required. The securities offered by this prospectus may not be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

Notice to Prospective Investors in the European Economic Area

In relation to each Member State of the European Economic Area, each, a Relevant Member State, no offer of shares may be made to the public in that Relevant Member State other than:

- to any legal entity which is a qualified investor as defined in the Prospectus Directive;
- to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representatives; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of shares shall require the Company or the representatives to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

Each person in a Relevant Member State who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed that it is a “qualified investor” within the meaning of the law in that Relevant Member State implementing Article 2(1)(e) of the Prospectus Directive. In the case of any shares being offered to a financial intermediary as that term is used in Article 3(2) of the Prospectus Directive, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public other than their offer or resale in a Relevant Member State to qualified investors as so defined or in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

The Company, the representatives and their affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgements and agreements.

This prospectus has been prepared on the basis that any offer of shares in any Relevant Member State will be made pursuant to an exemption under the Prospectus Directive from the requirement to publish a prospectus for offers of shares. Accordingly any person making or intending to make an offer in that Relevant Member State of shares which are the subject of the offering contemplated in this prospectus may only do so in circumstances in which no obligation arises for the Company or any of the underwriters to publish a prospectus pursuant to Article 3 of the Prospectus Directive in relation to such offer. Neither the Company nor the underwriters have authorized, nor do they authorize, the making of any offer of shares in circumstances in which an obligation arises for the Company or the underwriters to publish a prospectus for such offer.

For the purpose of the above provisions, the expression “an offer to the public” in relation to any securities in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the securities to be offered so as to enable an investor to decide to purchase or subscribe the shares, as the same may be varied in the Relevant Member State by any measure implementing the Prospectus Directive in the Relevant Member State and the expression “Prospectus Directive” means Directive 2003/71/EC (including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member States) and includes any relevant implementing measure in the Relevant Member State and the expression “2010 PD Amending Directive” means Directive 2010/73/EU.

Notice to Prospective Investors in the United Kingdom

In the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are “qualified investors” (as defined in the Prospectus Directive) (1) who have professional experience in matters relating to investments falling within Article 19 (5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the “Order”); and/or (2) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as “relevant persons”).

Any person in the United Kingdom that is not a relevant person should not act or rely on the information included in this document or use it as basis for taking any action. In the United Kingdom, any investment or investment activity that this document relates to may be made or taken exclusively by relevant persons. Any person in the United Kingdom that is not a relevant person should not act or rely on this document or any of its contents.

Notice to Prospective Investors in Switzerland

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or the SIX, or on any other stock exchange or regulated trading facility in Switzerland. This document does not constitute a prospectus within the meaning of, and has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, the Company, the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or the CISA. The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

Notice to Prospective Investors in Hong Kong

The shares have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (b) in other circumstances which do not result in the document being a “prospectus” as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to the shares has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are

likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made thereunder.

Notice to Prospective Investors in Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (1) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA; (2) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275, of the SFA; or (3) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor, securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares pursuant to an offer made under Section 275 of the SFA except: (1) to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA; (2) where no consideration is or will be given for the transfer; (3) where the transfer is by operation of law; (4) as specified in Section 276(7) of the SFA; or (5) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

Notice to Prospective Investors in Japan

The shares have not been and will not be registered under the Financial Instruments and Exchange Act. Accordingly, the shares may not be offered or sold, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to or for the benefit of a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Act and any other applicable laws, regulations and ministerial guidelines of Japan.

Notice to Prospective Investors in Australia

This prospectus:

- does not constitute a disclosure document under Chapter 6D.2 of the Corporations Act 2001 (Cth), or the Corporations Act;
- has not been, and will not be, lodged with the Australian Securities and Investments Commission, or ASIC, as a disclosure document for the purposes of the Corporations Act and does not purport to include the information required of a disclosure document under Chapter 6D.2 of the Corporations Act; and

- may only be provided in Australia to select investors who are able to demonstrate that they fall within one or more of the categories of investors, or Exempt Investors, available under section 708 of the Corporations Act.

The securities offered by this prospectus may not be directly or indirectly offered for subscription or purchased or sold, and no invitations to subscribe for or buy the securities may be issued, and no draft or definitive offering memorandum, advertisement or other offering material relating to any securities may be distributed in Australia, except where disclosure to investors is not required under Chapter 6D of the Corporations Act or is otherwise in compliance with all applicable Australian laws and regulations. By submitting an application for the securities, you represent and warrant to us that you are an Exempt Investor.

As any offer of securities under this document will be made without disclosure in Australia under Chapter 6D.2 of the Corporations Act, the offer of those securities for resale in Australia within 12 months may, under section 707 of the Corporations Act, require disclosure to investors under Chapter 6D.2 if none of the exemptions in section 708 applies to that resale. By applying for the securities you undertake to us that you will not, for a period of 12 months from the date of issue of the securities, offer, transfer, assign or otherwise alienate those securities to investors in Australia except in circumstances where disclosure to investors is not required under Chapter 6D.2 of the Corporations Act or where a compliant disclosure document is prepared and lodged with ASIC.

Notice to Prospective Investors in the Dubai International Financial Centre, or DIFC

This document relates to an Exempt Offer in accordance with the Markets Rules 2012 of the Dubai Financial Services Authority, or DFSA. This document is intended for distribution only to persons of a type specified in the Markets Rules 2012 of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus supplement nor taken steps to verify the information set forth herein and has no responsibility for this document. The securities to which this document relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the securities offered should conduct their own due diligence on the securities. If you do not understand the contents of this document you should consult an authorized financial advisor.

In relation to its use in the DIFC, this document is strictly private and confidential and is being distributed to a limited number of investors and must not be provided to any person other than the original recipient, and may not be reproduced or used for any other purpose. The interests in the securities may not be offered or sold directly or indirectly to the public in the DIFC.

LEGAL MATTERS

The validity of the shares of common stock offered hereby will be passed upon for us by Wilson Sonsini Goodrich & Rosati, Professional Corporation, San Diego, California. The underwriters are being represented by Cooley LLP, Santa Monica, California, in connection with this offering.

EXPERTS

Our financial statements as and for the years ending December 31, 2013 and 2014, appearing in this prospectus and registration statement have been audited by Mayer Hoffman McCann P.C., independent registered public accounting firm, as set forth in their report thereon appearing elsewhere in this prospectus, and are included in reliance upon such report given upon the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of common stock offered by this prospectus. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement, some of which is contained in exhibits to the registration statement as permitted by the rules and regulations of the SEC. For further information with respect to us and our common stock, we refer you to the registration statement, including the exhibits filed as a part of the registration statement. Statements contained in this prospectus concerning the contents of any contract or any other document is not necessarily complete. If a contract or document has been filed as an exhibit to the registration statement, please see the copy of the contract or document that has been filed. Each statement in this prospectus relating to a contract or document filed as an exhibit is qualified in all respects by the filed exhibit. You may obtain copies of this information by mail from the Public Reference Section of the SEC, 100 F Street, N.E., Room 1580, Washington, D.C. 20549, at prescribed rates. You may obtain information on the operation of the public reference rooms by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet website that contains reports, proxy statements and other information about issuers, like us, that file electronically with the SEC. The address of that website is www.sec.gov.

As a result of this offering, we will become subject to the information and reporting requirements of the Exchange Act and, in accordance with this law, will file periodic reports, proxy statements and other information with the SEC. These periodic reports, proxy statements and other information will be available for inspection and copying at the SEC's public reference facilities and the website of the SEC referred to above. We also maintain a website at www.otonomy.com. Upon completion of this offering, you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on our website is not a part of this prospectus and the inclusion of our website address in this prospectus is an inactive textual reference only.

Index to Financial Statements

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
Conkwest, Inc.

We have audited the accompanying balance sheets of Conkwest, Inc. as of December 31, 2013 and 2014, and the related statements of operations, stockholders' equity (deficit) and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Conkwest, Inc. as of December 31, 2013 and 2014, and the results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

/s/ Mayer Hoffman McCann P.C.

San Diego, California
April 17, 2015 (except for subsequent events noted in Note 17, as to which the date is May 14, 2015)

Conkwest, Inc.
Balance Sheets
(in thousands, except share and per share amounts)

	As of December 31, 2013	2014
ASSETS		
Current assets:		
Cash and cash equivalents	$ 350	$ 59,104
Accounts receivable, net	265	145
Prepaid expenses and other current assets	109	124
Note receivable from related party	115	—
Finance issuance costs, net	139	—
Total current assets	978	59,373
Investment in Inex Bio, Inc.	249	249
Property and equipment, net	13	211
Intangible assets, net	863	835
Other assets	—	160
Total assets	$ 2,103	$ 60,828
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current liabilities:		
Accounts payable	$ 1,501	$ 1,131
Accrued expenses	607	311
Interest payable	538	—
Notes payable	1,737	265
Note payable to related party	23	—
Warrant derivative liability	19	177
Deferred revenue	573	521
Total liabilities	4,998	2,405
Commitments and contingencies (See Note 10)		
Stockholders' equity (deficit)		
Series B convertible preferred stock, $0.0001 par value; 1,000 shares authorized; 1,000 and 0 shares issued and outstanding: liquidation preference of $0 as of December 31, 2013 and 2014	—	—
Series C convertible preferred stock, $0.0001 par value; 4,000,000 shares authorized; 0 shares issued and outstanding as of December 31, 2013 and 2014	—	—
Class A common stock, $0.0001 par value; 138,977,165 and 75,470,414 shares authorized; 625,652 and 32,997,244 issued and outstanding as of December 31, 2013 and 2014	1	3
Class B common stock, $0.0001 par value; 61,022,835 and 4,529,586 shares authorized; 907,966 and 0 issued and outstanding as of December 31, 2013 and 2014	1	—
Additional paid-in capital	3,631	71,161
Accumulated deficit	(6,528)	(12,741)
Total stockholders' equity (deficit)	(2,895)	58,423
Total liabilities and stockholders' equity (deficit)	$ 2,103	$ 60,828

The accompanying notes are an integral part of these financial statements.

Conkwest, Inc.
Statements of Operations
(in thousands, except share and per share amounts)

	Year Ended December 31,	
	2013	2014
Revenue	$ 600	$ 641
Operating expenses:		
Royalties and cost of licensing	253	323
Research and development	446	1,595
Selling, general and administrative	1,982	4,326
Total operating expenses	2,681	6,244
Loss from operations	(2,081)	(5,603)
Other income (expense):		
Interest expense, net	(461)	(451)
Fair value adjustment	684	(158)
Total other income (expense)	223	(609)
Loss before income taxes	(1,858)	(6,212)
Income tax expense	1	1
Net loss	$ (1,859)	$ (6,213)
Net loss per share:		
Basic and diluted	$ (4.32)	$ (1.40)
Weighted-average number of shares during the year:		
Basic and diluted	430,519	4,453,702

The accompanying notes are an integral part of these financial statements.

Conkwest, Inc.
Statements of Stockholders' Equity (Deficit)
(in thousands, except share and per share amounts)

	Series A convertible preferred stock		Series B convertible preferred stock		Series C convertible preferred stock		Common stock Class A		Common stock Class B		Additional Paid-in Capital	Accumulated Deficit	Total
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount			
Balance at December 31, 2012	219,308	$ —	—	$ —	—	$ —	196,008	$ 1	—	$ —	$ 946	$ (4,669)	$ (3,722)
Issuance of Series B convertible preferred stock less issuance costs of $125	—	—	1,000	—	—	—	—	—	—	—	511	—	511
Conversion to Class A common stock	(219,308)	—	—	—	—	—	219,308	—	—	—	—	—	—
Conversion of debt and payables to Class A common stock	—	—	—	—	—	—	210,336	—	—	—	950	—	950
Exercise of Class B common stock	—	—	—	—	—	—	—	—	907,966	1	340	—	341
Stock-based compensation expense	—	—	—	—	—	—	—	—	—	—	884	—	884
Net loss	—	—	—	—	—	—	—	—	—	—	—	(1,859)	(1,859)
Balance at December 31, 2013	—	—	1,000	—	—	—	625,652	1	907,966	1	3,631	(6,528)	(2,895)
Exercise of Class B common stock	—	—	—	—	—	—	—	—	3,160,223	—	1,185	—	1,185
Stock-based compensation expense	—	—	—	—	—	—	—	—	—	—	562	—	562
Change in par value from $0.001 to $0.0001	—	—	—	—	—	—	—	(1)	—	(1)	2	—	—
Issuance of Series C convertible preferred stock less issuance costs of $758	—	—	—	—	3,108,282	—	—	—	—	—	6,701	—	6,701
Conversion of debt and payables to Class A common stock	—	—	—	—	—	—	822,468	—	—	—	1,339	—	1,339
Issuance of restricted stock	—	—	—	—	—	—	70,000	—	—	—	227	—	227
Issuance of stock to placement agent	—	—	—	—	—	—	1,667,472	—	412,180	—	—	—	—
Issuance of Class A common stock less issuance costs of $159	—	—	—	—	—	—	16,640,454	2	—	—	57,335	—	57,337
Conversion of Preferred B and C convertible preferred stock and Class B common stock to Class A common stock	—	—	(1,000)	—	(3,108,282)	—	12,721,199	1	(4,480,369)	—	(1)	—	—
Exercise of stock options	—	—	—	—	—	—	449,999	—	—	—	180	—	180
Net loss	—	—	—	—	—	—	—	—	—	—	—	(6,213)	(6,213)
Balance at December 31, 2014	—	$ —	—	$ —	—	$ —	32,997,244	$ 3	—	$ —	$ 71,161	$ (12,741)	$58,423

The accompanying notes are an integral part of these financial statements.

Conkwest, Inc.
Statements of Cash Flows
(in thousands, except share and per share amounts)

	Year Ended December 31, 2013	2014
Cash flows used in operating activities:		
Net loss	$ (1,859)	$ (6,213)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	76	128
Amortization of finance issuance costs	60	60
Stock-based compensation expense	884	789
Change in fair value of warrant derivative liability	(684)	158
Amortization of debt discount	259	377
Forgiveness of note receivable from related party	—	115
Bad debt expense	—	25
Changes in operating assets and liabilities:		
Accounts receivable	(173)	95
Notes receivable from related party	(2)	(1)
Other current assets	97	(14)
Other assets	—	(160)
Accounts payable	700	(347)
Interest payable	153	(18)
Accrued expenses	156	(296)
Deferred revenue	(75)	(52)
Net cash used in operating activities	(408)	(5,354)
Cash flows used in investing activities:		
Purchases of property and equipment	(3)	(235)
Investment in intangible assets	(260)	(64)
Net cash used in investing activities	(263)	(299)
Cash flows provided by financing activities:		
Proceeds from debt and equity offerings, net of issuance costs	676	63,118
Payments on notes payable	(1)	(53)
Proceeds from exercise of Class B common stock	230	1,162
Proceeds from exercise of stock options	—	180
Net cash provided by financing activities	905	64,407
Net increase in cash and cash equivalents	234	58,754
Cash and cash equivalents, beginning of year	116	350
Cash and cash equivalents, end of year	$ 350	$ 59,104
Cash paid during the year for:		
Interest	$ —	$ 52
Income taxes	$ 1	$ 1
Supplemental disclosure of non-cash investing and financing activities:		
Conversion of debt and payables into Class A common stock	$ 950	$ 1,339
Conversion of debt into Series C convertible preferred stock	$ —	$ 1,000
Notes received for purchase Class B common stock	$ 1,526	$ —
Conversion of accounts payable against note receivable from related party	$ 110	$ 23
Issuance of stock to placement agent	$ —	$ —
Change in par value from $0.001 to $0.0001	$ —	$ 1

The accompanying notes are an integral part of these financial statements.

Conkwest, Inc.
Notes to the Financial Statements
As of and for the years ended December 31, 2013 and 2014
(in thousands, except share and per share amounts)

1. Description of Business and Basis of Presentation

Organization

Conkwest, Inc., (the Company) was incorporated in Illinois on October 7, 2002 under the name ZelleRx Corporation. On January 22, 2010, the Company changed its name to Conkwest, Inc. The Company is a biotechnology company headquartered in Cardiff-by-the-Sea, California with certain operations in Culver City, California. The Company is commercially developing targeted direct-acting immunotherapeutic agents for a variety of clinical conditions.

The Company holds the exclusive right to commercialize activated natural killer (aNK) cells, a commercially viable natural killer cell-line, and a variety of genetically modified derivatives capable of killing cancer and virally infected cells. The Company owns corresponding U.S. and foreign composition and methods-of-use patents and applications covering the clinical use of aNK cells as a therapeutic to treat a spectrum of clinical conditions.

The Company also licensed exclusive commercial rights to a portfolio of CD16 bearing aNK cells along with the corresponding U.S. and foreign composition and methods-of-use patents and applications covering the non-clinical use in laboratory testing of monoclonal antibodies as well as clinical use as a therapeutic to treat cancers in combination with antibody products. The Company has licensed or sub-licensed its cell lines and intellectual property to numerous pharmaceutical and biotechnology companies for such non-clinical uses.

The Company retains exclusive worldwide rights to clinical and research data, intellectual property and know-how developed with the Company’s aNK cells, as well as the only clinical grade master cell bank.

Domicile Change

In March 2014, the Company entered into a definitive merger and share exchange agreement pursuant to which the Company redomesticated from the State of Illinois to the State of Delaware and the Illinois Company ceased to exist (the Redomestication). In connection with the Redomestication, the holders of Class A and Class B common stock received one share of Class A and Class B common stock of the Delaware Company, respectively, in exchange for fifteen shares of the Illinois Company. The holders of Series B preferred stock received one share of Series B preferred stock of the Delaware Company in exchange for one share of the Illinois Company. The holders of any options, warrants or other securities are subject to adjustment based on the ratio of one for fifteen. All share numbers and per share prices in the accompanying financial statements have been adjusted to reflect the 1 for 15 exchange.

Liquidity

As of December 31, 2014, the Company had an accumulated deficit of approximately $12,741. The Company also had negative cash flow from operations of approximately $5,354 during the year ended December 31, 2014. The Company expects that it will likely need additional capital to further fund development of, and seek regulatory approvals for, its product candidates, and begin to commercialize any approved products.

The Company is currently focused primarily on the development of immunotherapeutic treatments for cancers and debilitating viral infections using targeted cancer killing cell lines, and believes such activities will result in the Company’s continued incurrence of significant research and development and other expenses related to those programs. If the clinical trials for any of the Company’s product candidates fail or produce unsuccessful results

and those product candidates do not gain regulatory approval, or if any of the Company's product candidates, if approved, fails to achieve market acceptance, the Company may never become profitable. Even if the Company achieves profitability in the future, it may not be able to sustain profitability in subsequent periods. The Company intends to cover its future operating expenses through cash and cash equivalents on hand and through a combination of equity offerings, debt financings, government or other third-party funding, marketing and distribution arrangements and other collaborations, strategic alliances and licensing arrangements. The Company cannot be sure that additional financing will be available when needed or that, if available, financing will be obtained on terms favorable to the Company or its stockholders.

While the Company expects its existing cash and cash equivalents will enable it to fund operations and capital expenditure requirements for at least the next twelve months, having insufficient funds may require it to delay, reduce, limit or terminate some or all of its development programs or future commercialization efforts or grant rights to develop and market product candidates that the Company might otherwise prefer to develop and market itself. Failure to obtain adequate financing eventually could adversely affect the Company's ability to operate as a going concern. If the Company raises additional funds from the issuance of equity securities, substantial dilution to existing stockholders may result. If the Company raises additional funds by incurring debt financing, the terms of the debt may involve significant cash payment obligations as well as covenants and specific financial ratios that may restrict the Company's ability to operate its business.

2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. On an ongoing basis, the Company evaluates its estimates, including those related to the valuation of warrants, stock-based compensation, the valuation allowance for deferred tax assets, and allowance for doubtful accounts. The Company bases its estimates on historical experience and on various other market-specific and relevant assumptions that it believes to be reasonable under the circumstances. Actual results could differ from those estimates.

Concentration of Credit Risk

Financial instruments, which potentially expose the Company to concentrations of credit risk, consist principally of cash balances on deposit with a bank, which exceed insured limits, and accounts receivable. The Company performs ongoing credit evaluations of customers' financial condition, and the Company does not require collateral.

There were 11 and seven customers that comprised the entire accounts receivable balance at December 31, 2013 and 2014, respectively. At December 31, 2013, two customers each had accounts receivable balances in excess of 10% of total accounts receivable. At December 31, 2014, six customers each had accounts receivable balances in excess of 10% of total accounts receivable.

For the year ended December 31, 2014, the Company derived revenue of $167 from one customer, representing 26% of the Company's total revenue, compared to revenue of $75 from one customer, representing 12% of the Company's total revenue for the year ended December 31, 2013.

Conkwest, Inc.
Notes to the Financial Statements
As of and for the years ended December 31, 2013 and 2014
(in thousands, except share and per share amounts)

Cash and Cash Equivalents

The Company considers all highly liquid investments with original maturities from the date of purchase of three months or less to be cash equivalents.

Accounts Receivable, Net

The Company's accounts receivable consist primarily of amounts billed under the Company's license agreements with its customers. The Company extends credit to customers without requiring collateral. Accounts receivable are stated at net realizable value. On a periodic basis, the Company evaluates its accounts receivable and establishes an allowance based on its history of collections and write-offs and the current status of all receivables. The Company does not accrue interest on trade receivables. Accounts receivable is recorded net of a $14 and $25 allowance for doubtful accounts at December 31, 2013 and 2014, respectively.

Property and Equipment

Property and equipment are stated at cost, less accumulated depreciation and amortization. Depreciation is determined on a straight-line basis over the estimated useful lives of the assets, which generally range from three to five years. Leasehold improvements are amortized over the shorter of the useful life of the asset or the term of the related lease. Repairs and maintenance are charged to expense as incurred.

Intangible Assets

Intangible assets consist of costs incurred in connection with patent applications (principally legal fees), patent purchases, trademarks related to the Company's aNK cells. The Company calculates amortization expense for its patents using the straight-line method over the estimated useful lives of the patents, generally 5-15 years. Other intangibles, consisting of trademarks and copyrights, are considered to have indefinite lives and are not amortized but reviewed for impairment annually, or sooner under certain circumstances.

The Company has no historical data to support a probable future economic benefit for patent applications, filing and prosecution costs other than for the Company's aNK cells. Therefore, these patent-related costs are expensed as incurred and are included in selling, general and administrative in the statements of operations. The Company capitalizes patent application costs for those patents that are generating revenue currently. Should the Company experience a legal cost to defend a patent in the future, that cost would be capitalized only when it is part of the cost of retaining and obtaining the future economic benefit of the patent. Costs related to an unsuccessful outcome would be expensed.

Impairment of Long-Lived Assets

The Company reviews for impairment long-lived assets to be held and used whenever events or changes in circumstances indicate that the carrying amounts of the assets may not be recoverable. When such events occur, the Company compares the carrying amounts of the assets to their undiscounted expected future cash flows. If the undiscounted cash flows are insufficient to recover the carrying values, an impairment loss is recorded for the difference between the carrying values and fair values of the assets. No such impairment has occurred as of December 31, 2013 and 2014.

Fair Value of Financial Instruments

The accounting standard for fair value measurements provides a framework for measuring fair value and requires disclosures regarding fair value measurements. Fair value is defined as the price that would be received to sell an

asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, based on the Company's principal or, in absence of a principal, most advantageous market for the specific asset or liability.

The Company uses a three-tier fair value hierarchy to classify and disclose all assets and liabilities measured at fair value on a recurring basis, as well as assets and liabilities measured at fair value on a non-recurring basis, in periods subsequent to their initial measurement. The hierarchy requires the Company to use observable inputs when available, and to minimize the use of unobservable inputs, when determining fair value.

The three tiers are defined as follows:

- Level 1 – Observable inputs that reflect quoted market prices (unadjusted) for identical assets or liabilities in active markets;
- Level 2 – Observable inputs other than quoted prices in active markets that are observable either directly or indirectly in the marketplace for identical or similar assets and liabilities; and
- Level 3 – Unobservable inputs that are supported by little or no market data, which require the Company to develop its own assumptions.

Revenue Recognition and Deferred Revenue

The Company derives substantially all of its revenue from non-exclusive license agreements with numerous pharmaceutical and biotechnology companies granting them the right to use the Company's cell lines and intellectual property for non-clinical use. These license agreements generally include upfront fees and annual research license fees for such use, as well as commercial fees for sales of the licensees' products developed or manufactured using the Company's intellectual property and cell lines. The Company's license agreements also may include milestone payments, although to date, the Company has not generated any revenue from milestone payments. The Company recognizes revenue when (i) persuasive evidence of an arrangement exists; (ii) delivery of the products and/or services has occurred; (iii) the fees are fixed or determinable; and (iv) collectibility is reasonably assured.

When entering into an arrangement, the Company first determines whether the arrangement includes multiple deliverables and is subject to accounting guidance in Accounting Standards Codification (ASC) Subtopic 605-25, *Multiple-Element Arrangements*. If the Company determines that an arrangement includes multiple elements, it determines whether the arrangement should be divided into separate units of accounting and how the arrangement consideration should be measured and allocated among the separate units of accounting.

An element qualifies as a separate unit of accounting when the delivered element has standalone value to the customer. The Company's agreements do not include a general right of return relative to delivered elements. Any delivered elements that do not qualify as separate units of accounting are combined with other undelivered elements within the arrangement as a single unit of accounting. If the arrangement constitutes a single combined unit of accounting, the Company determines the revenue recognition method for the combined unit of accounting and recognizes the revenue over the period from inception through the date the last deliverable within the single unit of accounting is delivered.

License rights and non-contingent deliverables, such as knowledge transfer, do not have standalone value as they are not sold separately and they cannot be resold and, consequently are considered a single unit of accounting.

Conkwest, Inc.
Notes to the Financial Statements
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Therefore, license revenue in the form of upfront payments is deferred and recognized over the applicable relationship period, which historically has been the estimated period of the Company's substantive performance obligations or the period the rights granted are in effect.

The Company recognizes a milestone payment when earned if it is substantive and the Company has no ongoing performance obligations related to the milestone. A milestone payment is considered substantive if it 1) is commensurate with either the Company's performance to achieve the milestone or the enhanced value of the delivered item as a result of a specific outcome resulting from the Company's performance to achieve the milestone; 2) relates solely to past performance; and 3) is reasonable relative to all of the deliverables and payment terms, including other potential milestone consideration, within the arrangement.

The Company records any amounts received prior to satisfying the revenue recognition criteria as deferred revenue in the accompanying balance sheets.

Royalties and Cost of Licensing

Royalties and cost of licensing consist of expenses related to the generation of revenue from the Company's license agreements. These expenses primarily include royalty payments made pursuant to the Company's in-licensing agreements and patent amortization expense.

Research and Development Costs

Major components of research and development costs include cash compensation, stock-based compensation, depreciation and amortization expense on research and development property and equipment, costs of preclinical studies, clinical trials and related clinical manufacturing, costs of drug development, costs of materials and supplies, facilities cost, overhead costs, regulatory and compliance costs, and fees paid to consultants and other entities that conduct certain research and development activities on the Company's behalf. Costs incurred in research and development are expensed as incurred.

Stock-Based Compensation

The Company measures and recognizes compensation expense for all stock-based payment awards made to employees, officers and directors based on the estimated fair values of the awards as of the grant date. The Company records the value of the portion of the award that is ultimately expected to vest as expense over the requisite service period.

The Company also accounts for equity instruments issued to non-employees using a fair value approach under ASC Subtopic 505-50, *Equity-Based Payments to Non-Employees*. The Company values equity instruments and stock options granted using the Black-Scholes option-pricing model. The value of non-employee stock-based compensation is subject to periodic adjustments as the underlying equity instruments vest and is recognized as an expense over the term of the related financing or the period over which services are received.

Income Taxes

The Company recognizes deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the financial reporting and tax basis of assets and liabilities, as well as for

Conkwest, Inc.
Notes to the Financial Statements
As of and for the years ended December 31, 2013 and 2014
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operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using the tax rates that are expected to apply to taxable income for the years in which those tax assets and liabilities are expected to be realized or settled. The Company records valuation allowances to reduce deferred tax assets to the amount the Company believes is more likely than not to be realized.

The Company recognizes uncertain tax positions when the positions will be more likely than not upheld on examination by the taxing authorities based solely upon the technical merits of the positions. The Company recognizes interest and penalties, if any, related to unrecognized income tax uncertainties in income tax expense. The Company did not have any accrued interest or penalties associated with uncertain tax positions as of December 31, 2013 and 2014.

The Company files income tax returns in the United States for federal and various state jurisdictions. With few exceptions, the Company is no longer subject to U.S. federal and state and local income tax examinations for years prior to 2010, although carryforward attributes that were generated prior to 2010 may still be adjusted upon examination by the Internal Revenue Service if used in a future period. No income tax returns are currently under examination by taxing authorities.

Comprehensive Loss

The Company has no items of comprehensive income or loss other than net loss.

Basic and Diluted Net Loss per Share of Common Stock

Basic net loss per share is calculated by dividing the net loss by the weighted-average number of common shares outstanding for the period. Diluted loss per share is computed similarly to basic loss per share except that the denominator is increased to include the number of additional shares that would have been outstanding if the potential common shares had been issued and if the additional common shares were dilutive.

For all periods presented, potentially dilutive securities are excluded from the computation of fully diluted loss per share as their effect is anti-dilutive. The following table details those securities which have been excluded from the computation of potentially dilutive securities:

	Year Ended December 31,	
	2013	2014
Series B convertible preferred stock	1,741,367	—
Class B common shares not exercised (Note 4)	3,160,223	—
Outstanding options	933	2,775,269
Outstanding warrants	365,888	999,696
Total	5,268,411	3,774,965

Amounts in the table above reflect the common stock equivalents of the noted instruments.

Segment and Geographic Information

Operating segments are defined as components of an enterprise (business activity from which it earns revenue and incurs expenses) for which discrete financial information is available and regularly reviewed by the chief

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operating decision maker in deciding how to allocate resources and in assessing performance. The Company's chief operating decision maker (CODM) is its Chief Executive Officer. The Company views its operations and manages its business as a single operating and reporting segment. All assets of the Company were held in the United States for the years ended December 31, 2013 and 2014.

Although all operations are based in the United States, the Company generated a portion of its revenue from customers outside of the United States. Information about the Company's revenue from different geographic regions for the years ended December 31, 2013 and 2014 is as follows:

	Year Ended December 31,	
	2013	2014
United States	$380	$371
Europe	95	220
Other Non-U.S.	125	50
Total	$600	$641

Application of New or Revised Accounting Standards – Adopted

From time to time, the Financial Accounting Standards Board (the FASB) or other standard-setting bodies issue accounting standards that are adopted by the Company as of the specified effective date.

On April 5, 2012, President Obama signed the Jump-Start Our Business Startups Act (the JOBS Act) into law. The JOBS Act contains provisions that, among other things, reduce certain reporting requirements for an emerging growth company. As an emerging growth company, the Company may elect to adopt new or revised accounting standards when they become effective for non-public companies, which typically is later than public companies must adopt the standards. The Company has elected not to take advantage of the extended transition period afforded by the JOBS Act and, as a result, will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies.

In July 2013, the FASB issued Accounting Standard Update (ASU) No. 2013-11, *Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Credit Carryforward Exist* (ASU 2013-11). ASU 2013-11 amends the presentation requirements of ASC Topic 740, *Income Taxes*, and requires an unrecognized tax benefit to be presented in the financial statements as a reduction to a deferred tax asset for a net operating loss carryforward, similar tax loss, or a tax credit carryforward. To the extent the tax benefit is not available at the reporting date under the governing tax law or if the entity does not intend to use the deferred tax asset for such purpose, the unrecognized tax benefit should be presented as a liability and not combined with deferred tax assets. ASU 2013-11 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2013. The amendments are to be applied to all unrecognized tax benefits that exist as of the effective date and may be applied retrospectively to each prior reporting period presented. The adoption of ASU 2013-11 did not have a material impact on its financial statements as no uncertain tax positions existed as of December 31, 2013 and 2014.

Application of New or Revised Accounting Standards – Not Yet Adopted

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)*, which amends the guidance in former ASC Topic 605, *Revenue Recognition*, and becomes effective beginning

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January 1, 2017. This guidance requires that entities recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The Company is currently evaluating the impact of the provisions of ASC Topic 606 on its financial statements and disclosures. On April 29, 2015, the FASB proposed deferring the effective date of Topic 606 by one year.

In June 2014, the FASB issued ASU 2014-12, *Compensation-Stock Compensation (Topic 718): Accounting for Share-Based Payments when the Terms of an Award Provide that a Performance Target Could Be Achieved After the Requisite Service Period* (ASU 2014-12). The amendments require that a performance target that affects vesting and that could be achieved after the requisite service period be treated as a performance condition. ASU 2014-12 is effective for annual periods and interim periods within those annual periods beginning after December 15, 2015. Earlier adoption is permitted. The Company is currently evaluating the impact of the adoption of ASU 2014-12 on its financial statements and disclosures.

In August 2014, the FASB issued ASU No. 2014-15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern* (ASU 2014-15), which amends ASC Subtopic 205-40 to provide guidance about management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern and to provide related disclosures. Specifically, the amendments (1) provide a definition of the term "substantial doubt," (2) require an evaluation every reporting period, (3) provide principles for considering the mitigating effect of management's plans, (4) require certain disclosures when substantial doubt is alleviated as a result of consideration of management's plans, (5) require an express statement and other disclosures when substantial doubt is not alleviated and (6) require an assessment for a period of one year after the date that financial statements are issued. ASU 2014-15 is effective for fiscal years ending after December 15, 2016, and for annual periods and interim periods thereafter. The Company does not expect this standard to have a material impact on its financial statements and disclosures.

In January 2015, the FASB issued ASU No. 2015-01, *Income Statement – Extraordinary and Unusual Items (Subtopic 225-20); Simplifying Income Statement Presentation by Eliminating the Concept of Extraordinary Items*, which eliminates the concept of extraordinary items, stating that the concept causes uncertainty because (1) it is unclear when an item should be considered both unusual and infrequent and (2) users do not find the classification and presentation necessary to identify those events and transactions. This ASU is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2015, with early adoption permitted provided the guidance is applied from the beginning of the fiscal year of adoption. The Company does not expect this standard to have an impact on its financial statements and disclosures upon adoption.

In February 2015, the FASB issued ASU 2015-02, *Consolidation (Topic 810) – Amendments to the Consolidation Analysis* (ASU 2015-02). ASU 2015-02 affects reporting entities that are required to evaluate whether they should consolidate certain legal entities. Specifically, the amendments (i) modify the evaluation of whether limited partnerships and similar legal entities are variable interest entities (VIEs) or voting interest entities, (ii) eliminate the presumption that a general partner should consolidate a limited partnership, (iii) affect the consolidated analysis of reporting entities that are involved with VIEs, and (iv) provide a scope exception for certain entities. ASU 2015-02 is effective for interim and annual reporting periods beginning after December 15, 2015. The Company is currently evaluating the impact of the adoption of ASU 2015-02 on its financial statements and disclosures.

In April 2015, the FASB issued ASU 2015-03, *Interest – Imputation of Interest (Subtopic 835-30)* (ASU 2015-03), which requires the debt issuance costs related to a recognized debt liability be presented in the balance sheet

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as a direct deduction from the carrying amount of that debt liability, consistent with the presentation of debt discounts. This guidance is effective for financial statements issued for fiscal years beginning after December 15, 2015, and interim periods within those fiscal years. The Company does not expect this standard to have a material impact on its financial statements and disclosures.

3. Allowance for Doubtful Accounts

A summary of activity in the allowance for doubtful accounts for the years ended December 31, 2013 and 2014 is as follows:

	Balance at Beginning of Year	Additions Charged to Expense	Deductions	Balance at End of Year
Year ended December 31, 2013	$ 14	$ —	$ —	$ 14
Year ended December 31, 2014	$ 14	$ 25	$ (14)	$ 25

4. Note Receivable from Related Party

In June 2008, the Company entered into a Loan Agreement to loan up to $200 to an officer of the Company. At December 31, 2013, the outstanding principal balance was $105 with accrued interest of $10. The loan accrued interest at 2.08% per annum and was scheduled to mature on June 19, 2014.

Under the Loan Agreement, if the officer is terminated without cause, the Company would forgive the outstanding principal balance and the related accrued interest. Upon the earlier of the date of a change of control or the date of the closing of an equity financing of at least $3,000, the Company also would forgive the officer's obligation to pay the outstanding principal and accrued interest. In addition, the Company would pay an amount equal to the sum of any federal, state, and local income taxes and any disallowed deductions imposed on the officer by the loan forgiveness.

At the end of March 2014, as a result of the Series C preferred stock financing (Note 12), the Company recognized expense of $115 for forgiving the outstanding principal and accrued interest under the Loan Agreement. In addition, the Company recorded $133 in selling, general and administrative expenses for the estimated income taxes associated with the loan forgiveness.

In December 2013, the Company entered into restricted stock purchase agreements with certain officers to sell 4,068,189 shares of the Company's Class B common stock (Note 13). As consideration for the shares, the officers executed secured promissory notes totaling $1,526 (the Secured Notes). The Secured Notes accrued interest at 1.64% per annum, and all principal and interest was due and payable on the earlier of (i) the sale of all or substantially all of the Company's stock by the officer and (ii) December 2022. The Secured Notes were collateralized by the underlying Class B common stock. Since the Secured Notes were non-recourse, they were treated similar to stock options for accounting purposes with the fair value recognized through a charge to compensation expense. The shares of Class B common stock were not considered issued and outstanding in the financial statements until the Company received payment against the Secured Notes.

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In December 2013, the Company recorded $884 of compensation expense using the Black-Scholes option-pricing model to determine the fair value of the Class B common stock granted to the officers. The assumptions used in the model are presented in the table below.

Expected term	3 years
Risk-free interest rate	0.78%
Expected volatility	92.00%
Dividend yield	0.00%

In 2013 and 2014, the Company received principal payments under the Secured Notes of $230 and $1,162, respectively. Additionally in 2013 and 2014, an officer agreed to offset against his outstanding principal and interest $110 and $23, respectively, of amounts the Company owed to him. Upon receipt of these payments, the Company issued to the officers 907,966 and 3,160,223 shares of Class B common stock in 2013 and 2014, respectively. As of December 31, 2014, the Secured Notes were settled in full.

5. Investment in Inex Bio, Inc.

In April 2012, the Company entered into a License Agreement with Inex Bio, Inc. (Inex Bio), a Republic of Korea corporation focused on cell therapy development (the Inex License Agreement). Under the Inex License Agreement, the Company provided Inex Bio with an exclusive license to the Company's technology to be used in products only in certain Asian countries. In exchange for the Inex License Agreement, the Company received a $300 up-front license fee. In addition, the Company was to receive milestone payments of up to $775 based upon completion of clinical trials and a 5% royalty on net sales of products using the aNK cells. No milestone payments were due or received for the years ended December 31, 2013 or 2014.

In May 2012, the Company acquired 57,000 shares of Inex Bio for $249, which represented 22.2% of the outstanding shares and 17.4% of the fully-diluted shares of Inex Bio. The Company accounts for its investment under the cost method since management cannot exert significant influence over Inex Bio because (i) Inex Bio is located in South Korea and the Company has limited interaction with investee management; (ii) there is no interchange of managerial personnel; and (iii) the other investor is a public company in South Korea that is more closely involved in the management of Inex Bio. The Company reviews its investment for impairment in accordance with ASC Topic 320, *Investments – Debt and Equity Securities*. There was no impairment of the investment at December 31, 2013 and 2014.

Subsequent to December 31, 2014, the Company acquired all the outstanding shares of Inex Bio not currently owned by the Company (Note 17).

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6. Property and Equipment

Property and equipment consists of the following as of December 31:

	2013	2014	Estimated Useful Life
Laboratory and office equipment	$ 9	$ 29	5 years
Furniture and fixtures	13	44	5 years
Software	—	2	3 years
Leasehold improvements	—	182	Shorter of useful life or lease term
Total property and equipment	22	257	
Less accumulated depreciation and amortization	(9)	(46)	
Property and equipment, net	$ 13	$211	

Depreciation and amortization expense was $4 and $36 for the years ended December 31, 2013 and 2014, respectively.

7. Intangible Assets

Intangible assets consist of the following as of December 31:

	2013	2014
Patents and patent applications	$1,230	$1,294
Trademarks	3	3
Total intangible assets	1,233	1,297
Less accumulated amortization	(370)	(462)
Intangible assets, net	$ 863	$ 835

Amortization expense was $72 and $92 for the years ended December 31, 2013 and 2014, respectively, which relates exclusively to patent and patent applications. Amortization expense related to the Company’s intangible assets is included in royalties and cost of licensing.

Future estimated amortization expense related to the Company’s patent and patent applications for the next five years and thereafter is as follows:

Years ending December 31:	
2015	$ 90
2016	90
2017	90
2018	90
2019	80
Thereafter	392
	$832

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8. Accrued Expenses

Accrued expenses consist of the following as of December 31:

	2013	2014
Accrued compensation costs	$580	$191
Accrued royalties	—	29
Accrued other expense	27	91
Total accrued expenses	$607	$311

9. Notes Payable

2013 Promissory Note – In June 2013, the Company entered into a Securities Purchase Agreement (the 2013 Securities Purchase Agreement) whereby the Company issued to an institutional investor a $1,000 note payable (the 2013 Promissory Note) plus 1,000 shares of Series B preferred stock (Note 12) for aggregate proceeds of $1,000. The 2013 Promissory Note accrued interest at 5% per annum and was scheduled to mature on June 20, 2014. The 2013 Promissory Note was secured by all of the assets of the Company.

The Company allocated the proceeds under the 2013 Securities Purchase Agreement to the 2013 Promissory Note and Series B preferred stock based on their relative fair values, which resulted in $364 and $636 being allocated to the 2013 Promissory Note and Series B preferred stock, respectively. The Company recorded a debt discount of $636, which was being amortized to interest expense over the term of the 2013 Promissory Note using the effective interest method. The Company accrued interest on the 2013 Promissory Note of $27 that was included in interest payable at December 31, 2013.

In April 2014, the Company entered into the 2014 Securities Purchase Agreement (Note 12) at which time the holder of the 2013 Promissory Note agreed to convert the $1,000 principal into 416,667 shares of Series C preferred stock plus a warrant to purchase 104,167 shares of Class A common stock having the same terms as the warrants issued in the 2014 Securities Purchase Agreement. The Company paid accrued interest of $39 in cash.

Other Notes and Payables – The 2013 Securities Purchase Agreement was a qualified financing. As a result, certain holders of notes payable and accounts payable totaling $950 (Converting Creditors) converted their outstanding payable balances into Class A common stock at a conversion price of $4.51 per share. The Series A preferred stock holders and Converting Creditors also entered into a shareholder lock up agreement.

2009 Convertible Notes – In 2009, the Company executed a Bridge Loan Agreement to sell and issue $426 of convertible promissory notes (the 2009 Convertible Notes). The 2009 Convertible Notes accrued interest at 15% per annum until maturity on September 30, 2010 (the Maturity Date). After the Maturity Date, the 2009 Convertible Notes accrued interest at 24% per annum. The 2009 Convertible Notes were convertible at the option of the holders into securities issued in the Company's next financing. The 2009 Convertible Notes were secured by all of the Company's assets. At December 31, 2013, there was $426 of principal and $396 of accrued interest outstanding on the 2009 Convertible Notes. As discussed below, the 2009 Convertible Notes were exchanged for shares of Class A common stock, and there was no balance outstanding on the 2009 Convertible Notes at December 31, 2014.

Each holder of the 2009 Convertible Notes also received a warrant to purchase shares of Class A common stock (2009 Warrants). The 2009 Warrants are exercisable only if and to the extent that the holder subscribed to the next financing for a number of shares equal to 300% of the number of shares issued to the holder in the next financing.

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The exercise price of the 2009 Warrants initially is the purchase price for the shares in the next financing. However, for up to two years after the date that the Company becomes a public company, the exercise price is adjusted to a price equal to the price of the new equity securities should the Company enter into any new equity transaction whereby the price of the equity in the new transaction is lower than the exercise price of the 2009 Warrants.

In conjunction with the 2013 Securities Purchase Agreement, each holder of the 2009 Convertible Notes entered into a consent, amendment and exchange agreement (the Exchange Agreement). The Exchange Agreement (i) modified the Maturity Date to June 20, 2014; (ii) caused each holder to execute a subordination and shareholder lock-up agreement, and; (iii) upon a Mandatory Exchange Financing, as defined in Note 10, automatically exchanged the outstanding principal and accrued interest under the 2009 Convertible Notes and the 2009 Warrants for shares of Class A common stock at an exchange rate of three times the principal amount of the 2009 Convertible Notes divided by the per share price of the Mandatory Exchange Financing. In April 2014, the 2014 Securities Purchase Agreement qualified as a Mandatory Exchange Financing and the $426 principal balance plus $422 accrued interest on the 2009 Convertible Notes and the 2009 Warrants were exchanged for 532,125 shares of the Company's Class A common stock.

In connection with the sale of the 2009 Convertible Notes, the Company used a placement agent. The placement agent received a corporate advisory warrant (the CA Warrant) for common stock equal to 20% of the issued and outstanding common stock of the Company on a fully diluted basis immediately following the final closing of the bridge financing. The CA Warrant had an exercise price of $4.51 per share and was to expire on September 30, 2019. The placement agent also received a warrant for common stock for the number of shares equal to 9% of the number of warrant shares issued to the holders who subscribe to the next financing (the PA Warrant). The initial exercise price of the PA Warrant is equal to the price of the next financing.

In conjunction with the 2013 Securities Purchase Agreement, the placement agent agreed to exchange the CA Warrant and PA Warrant into shares of Class A common stock equal to 10% of the shares of fully-diluted stock outstanding immediately following the closing of a Mandatory Exchange Financing less certain exempted issuances. At the 2014 Securities Purchase Agreement closing, the CA Warrant and PA Warrant were exchanged for 1,648,722 shares of the Company's Class A common stock.

The Company also issued to the placement agent 18,750 shares of Class A common stock in exchange for a cash commission (Note 13).

Settlement Agreement – In 2007, the Company entered into a settlement agreement with a former officer of the Company (the Settlement Agreement). The Settlement Agreement included a cash payment to the former officer of $265 payable upon the Company's receipt of any debt or equity financing. As part of the 2009 Convertible Notes financing, the Settlement Agreement was amended so that the $265 will convert into Class A common stock at a conversion price of $4.51 per share on the second anniversary of Company being a publicly traded company. Subsequent to December 31, 2014, the Company and former officer entered into a Supplemental Agreement and General Release (Note 17) and the debt was retired.

Founder Note – As of December 31, 2013, the Company owed a founder of the Company $23 associated with a license agreement (Note 10) and miscellaneous other obligations, which is included in note payable to related party on the balance sheet at December 31, 2013. In April 2014, the outstanding balance was paid in full.

Other Notes and Creditors – As part of the 2009 Convertible Notes financing, certain other note holders and creditors with obligations totaling $194 (Other Creditors) executed agreements either to defer payment for three

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years or convert the obligations into Class A common stock upon the Company closing a financing of at least $1,200 at a conversion price of $4.51 per share. In conjunction with the 2013 Securities Purchase Agreement, Other Creditors holding $20 of principal plus $29 of accrued interest elected to convert their obligations into 10,913 shares of Class A common stock. The Company had accrued interest on the obligations to Other Creditors of $115 that was included in interest payable at December 31, 2013.

Other Creditors holding $50 of principal entered into exchange agreements whereby, upon the Company completing a Mandatory Exchange Financing, the balance plus any accrued interest is automatically exchanged for shares of Class A common stock at an exchange rate of three times the amount owed divided by the per share price of the Mandatory Exchange Financing. At the close of the 2014 Securities Purchase Agreement, the $50 principal plus accrued interest of $50 were exchanged for 124,688 shares of Class A common stock. In April 2014, an Other Creditor with $95 of outstanding principal and interest agreed to sell its note to a third party who agreed to exchange the note for 61,771 shares of Class A common stock. Other Creditors with $29 of outstanding principal plus $13 of accrued interest were repaid in cash in April 2014.

Side Agreement Notes – Payables and debt totaling $249 were sold by certain creditors to existing investors (the Side Agreements). In conjunction with the Side Agreements, the Company issued to the investors convertible notes pursuant to an exchange agreement whereby upon the Company completing a Mandatory Exchange Financing, the outstanding balance under the convertible notes are automatically exchanged for shares of Class A common stock at an exchange rate of the amount divided by the per share price of the Mandatory Exchange Financing (the Side Agreement Notes). At the close of the 2014 Securities Purchase Agreement, the $249 balance of the convertible notes was exchanged for 103,884 shares of Class A common stock.

The Company had the following balances outstanding under notes payable as of December 31:

	2013	2014
2013 Promissory Note	$ 623	$ —
2009 Convertible Notes	426	—
Settlement Agreement Note	265	265
Other Creditor Notes	174	—
Side Agreement Notes	249	—
	$1,737	$ 265

10. Commitments and Contingencies

Operating Lease

The Company leases office space in Cardiff-by-the-Sea, California under a non-cancelable operating lease that expires in August 2016. Future minimum lease payments under the lease agreement as of December 31, 2014 are as follows:

Years ending December 31:	
2015	$145
2016	99
	$244

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The Company leases a research facility on a month-to-month basis.

Rent expense for the years ended December 31, 2013 and 2014 was $62 and $218, respectively.

Collaborative Arrangement

A collaborative arrangement is a contractual arrangement that involves a joint operating activity. These arrangements involve two or more parties who are (i) active participants in the activity, and (ii) exposed to significant risks and rewards dependent on the commercial success of the activity.

Joint Development and License Agreement – In December 2014, the Company entered into a Joint Development and License Agreement (the Joint Development and License Agreement) with Sorrento Therapeutics, Inc. (Sorrento). Under the Joint Development and License Agreement, the Company and Sorrento agreed to exclusively collaborate on research, development and commercialization with respect to certain technologies and intellectual property rights as may be agreed between the parties for the purpose of jointly developing therapeutic applications of certain effector cell lines.

To fund the Company's joint research and development efforts, Sorrento agreed to make research payments to the Company in the aggregate amount of $2,000 payable in December 2015 and 2016, reduced for certain expenses incurred by Sorrento, to fund the joint development efforts of the parties. The research payment will be offset by the costs of a full-time employee paid by Sorrento to work on behalf of the Company and for the Company's portion of any development costs and laboratory costs in maintaining a laboratory on Sorrento's premises.

For each cell line or product to be developed by the parties pursuant to the Joint Development and License Agreement, one party (the Primary Party), determined when a statement of work is agreed to by the parties, will have the right and authority to initiate and control the development, testing, regulatory approval or commercialization of such cell line or product, including the right to license and sublicense all applicable intellectual property rights with respect thereto. The Primary Party will also bear all costs associated with the development of the applicable cell line or product. The Company and Sorrento will split any revenue generated by such cell line or product and any costs associated with obtaining a license to any necessary third-party intellectual property rights in accordance with the terms of the Joint Development and License Agreement. The ratio of such split between the parties is conditioned on the stage of development of the cell line or product and is subject to adjustment in certain circumstances.

Sorrento and the Company each will own an undivided interest in and to all rights, title and interest in and to the joint product rights. The Joint Development and License Agreement expires upon the later of three years or completion of the series of collaborative research and development efforts.

In connection with the Joint Development and License Agreement, Sorrento entered into a subscription and investment agreement with the Company under which the Company sold to Sorrento 2,461,538 shares of the Company's Class A common stock for gross proceeds of $8,000 (Note 13). Subsequently, Sorrento agreed to purchase 572,935 shares of the Company's Class A common stock for an additional $2,000 in gross proceeds.

Royalties and In-licensing Agreements

Founder License Agreement – In 2003, the Company entered into a licensing agreement with a founding shareholder of the Company for the exclusive license to the NK-92 cell line and related know-how for payment

of certain royalties related to the sales of licensed products (the Founder License Agreement). In 2009 and 2010, the Founder License Agreement was amended for the sale and assignment of the licensed patents to the Company. As consideration for the sale and assignment of the licensed patents and technical information to the Company, the founding shareholder was to receive a one-time cash payment of $75, which was converted to a non-interest bearing note (the Founder Note) (Note 9). In addition, the Company is obligated to (i) pay low single digit percentage royalties of net sales of licensed products for therapeutic and diagnostic use; (ii) issue additional shares of common stock of the Company in conjunction with the closing of a financing of at least $1,000 after the 2013 Securities Purchase Agreement to ensure the founder retains no less than a 7% ownership interest of the total outstanding common shares of the Company on a fully diluted basis; (iii) pay the British Columbia Cancer Agency a low single digit percentage royalty on net sales on aNK cell-based products, a responsibility assumed by the Company for the founding shareholder; and (iv) issue a warrant (Founder Warrant) to purchase up to 66,667 additional shares of Class A common stock at a purchase price of $4.51 per share with a 10 year exercise term subject to the completion of five milestones pertaining to granting of a patent, completion of clinical trials and issuance of a commercial biologic license. In 2013, the first milestone, a claim granted for a certain patent application in the United States, was achieved and as a result 20,000 shares underlying the Founder Warrant became exercisable.

In March 2014, the Founder License Agreement was amended to (i) provide for payment to the founder of low single digit percentage royalties on net sales of licensed products for therapeutic and diagnostic use and mid-single digit percentage royalties from sublicenses for net sales of licensed products; (ii) exchange warrants held by the founder to purchase up to 84,315 shares of Class A common stock for a fully-vested incentive stock option to purchase up to 400,000 shares of Class A common stock at fair market value on the date of issuance upon the Company closing a private placement of stock or other securities of at least $3,000 (the Mandatory Exchange Financing); and (iii) remove the requirement for the founder to retain not less than a 7% ownership interest of the total outstanding common shares of the Company on a fully diluted basis. As of December 31, 2014, no royalties have been earned or paid.

Fox Chase Cancer Center License Agreement – In 2004 and amended in 2008, the Company entered into an exclusive license agreement with Fox Chase Cancer Center (Fox Chase) for the exclusive, worldwide rights to certain patents and know-how pertaining to CD16 receptors bearing NK-92 cell lines. In consideration for this exclusive license granted, the Company agreed to pay Fox Chase (i) low single-digit percentage royalties on net sales of licensed products for therapeutic and diagnostic use; (ii) mid-twenties percentage royalties on any compensation the Company receives from sublicensees; and (iii) $20 upon the Company closing the next round of financing, which was paid after completion of the 2014 Securities Purchase Agreement (Note 12).

The Company recorded royalty expense of $127 and $169 for the years ended December 31, 2013 and 2014, respectively, related to the Fox Chase Cancer Center License Agreement. Royalty expense is included in royalties and cost of licensing in the statements of operations.

Rush University Medical Center License Agreement – In 2004, the Company entered into a 12-year licensing agreement with Rush University Medical Center for the exclusive rights to license and grant sublicenses of certain intellectual property related to clinical use of NK-92. The Company is required to pay low to mid-single digit percentage royalties on net sales depending upon the various fields of studies and other factors. The Company is required to pay a minimum annual royalty of $25. The Rush University Medical Center License Agreement also provides for payments in the aggregate amount of $2,500 upon the Company achieving various milestones, including upon (i) the completion of Phase II clinical trial associated with the licensed intellectual property; (ii) the approval by the Food and Drug Administration (the FDA) of a new drug application for a

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licensed product; and (iii) the first year that sales of the licensed product equals or exceeds $250,000. Upon expiration of the Rush University Medical Center License Agreement, the license becomes perpetual, irrevocable, fully-paid and royalty-free.

During 2013 and 2014, the Company recorded royalty expense of $25 and $50 related to the Rush University Medical Center License Agreement. Royalty expense is included in royalties and cost of licensing in the statements of operations. No milestones were met during 2013 and 2014.

11. Out-Licensing Agreement

Intrexon License Agreement – In February 2010, the Company entered into a 17-year license agreement with Intrexon Corporation (Intrexon) pursuant to which the Company granted to Intrexon a non-exclusive, worldwide, sublicensable license to research and sell products under certain patents relating to modified NK-92 cells that express Intrexon's proprietary gene sequences for use as a therapeutic and prophylactic agent in humans in specified therapeutic areas. In consideration for the license agreement, Intrexon paid the Company a one-time fee of $350 and will pay the Company the following milestone payments: $50 upon the first IND filing; $100 upon the commencement of the first Phase II clinical trial; $350 upon the commencement of the first Phase III clinical trial; and $500 upon the first commercial sale relating to the licensed products. Intrexon is obligated to pay the Company a low single digit percentage royalty based on net sales of the licensed products by Intrexon and a mid-teen percentage royalty based on revenues received by Intrexon in connection with sublicenses of the licensed products. No milestone payments were due or received in 2013 or 2014.

12. Convertible Preferred Stock

The Company is authorized to issue 20,000,000 shares of $0.0001 par value preferred stock (Preferred Stock) of which 1,000 shares are designated Series B preferred stock and 4,000,000 shares are designated Series C preferred stock. No shares were designated as Series A preferred stock as of December 31, 2014 and 2013. The Company's board of directors is authorized to determine the series into which shares of Preferred Stock may be divided.

Conversion – In December 2014, the board of directors and the requisite shareholders of each class of stock approved the conversion of Class B common stock, Series B preferred stock and Series C preferred stock into Class A common stock (the Conversion). Each share of Series B preferred stock and Series C preferred stock converted into 1.00 share of Class A common stock.

Redomestication – In March 2014, the Company entered into a definitive merger and share exchange agreement pursuant to which the Company changed its domicile from the State of Illinois to the State of Delaware and the Illinois Company ceased to exist (Note 1). The holders of Series B preferred stock received one share of Series B preferred stock of the Delaware Company in exchange for one share of the Illinois Company. The holders of any options, warrants or other securities are subject to adjustment based on the ratio of one for fifteen.

The holders of Preferred Stock are entitled to one vote for each share of common stock into which the Preferred Stock could then be converted. For so long as the Preferred Stock remains outstanding, the Company may not take certain actions without the vote or consent of the majority of the holders of each class of outstanding Preferred Stock.

Series A Preferred Stock – The Series A preferred stock ranked senior to the Company's common stock and had a liquidation preference of $4.51 per share plus any declared but unpaid dividends. The holders of Series A

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preferred stock were entitled to receive dividends when, if and as declared by the board of directors. As of December 31, 2013 and prior to conversion in 2014, no dividends were declared. The holders of Series A preferred stock were entitled to one vote for each share of common stock into which the Series A preferred stock could then be converted.

The shares of Series A preferred stock were convertible into an equal number of shares of common stock, at the option of the holder, subject to certain adjustments for changes in capitalization and anti-dilution. Each share of Series A preferred stock would automatically convert into common stock immediately upon (i) the Company's sale of its common stock in a firm commitment underwritten public offering pursuant to a registration statement under the Securities Act in which the offering price is at least three times the liquidation preference of the Preferred Stock and the value of outstanding common stock on a fully diluted basis was at least $45,000 or (ii) the affirmative vote of more than 50% of the holders of the then-outstanding Series A preferred stock.

In conjunction with the closing of the 2013 Securities Purchase Agreement, all 219,308 shares of Series A preferred stock converted into 219,308 shares of Class A common stock.

Series B Preferred Stock – The holders of Series B preferred stock are entitled to receive dividends on an as-if-converted to common stock basis only when dividends are paid on shares of common stock. In the event of any liquidation, dissolution or winding up of the Company, the holders of Series B preferred stock are entitled to receive any assets to be distributed on a pro rata basis among the holders of common stock on an as-if-converted to common stock basis. The initial conversion amount was equal to 509.963 shares of Class A common stock per share of Series B preferred stock. On the date the Company received gross proceeds from the issuance of its securities of at least $3,000 (the Private Placement), the conversion amount would be adjusted so that the Series B preferred stock would be convertible into at least 42.5% of the fully-diluted number of shares of common stock outstanding immediately prior to the time of the closing of the Private Placement. Any time after such Private Placement and prior to such time the common stock is listed or quoted on a trading market, if the Company sells or grants any common stock or common stock equivalents (the Dilutive Issuance), then the conversion amount is adjusted so that the Series B preferred stock would be convertible into at least 26.0% of the fully-diluted number of shares of common stock outstanding following such Dilutive Issuance.

In June 2013, the Company entered into the 2013 Securities Purchase Agreement whereby the Company issued the 2013 Promissory Note plus 1,000 shares of Series B preferred stock for aggregate proceeds of $1,000 (Note 9).

In December 2014, all outstanding shares of Series B Preferred Stock converted into 5,132,548 shares of Class A common stock.

Series C Preferred Stock – The holders of Series C preferred stock are not entitled to receive dividends. In the event of any liquidation, dissolution or winding up of the Company, the holders of Series C preferred stock are entitled to receive a preferential amount equal to the greater of $0.0001 per share or an amount per share as would be payable had all shares of Series C preferred stock been converted into common stock immediately prior to a liquidation event. The initial conversion amount was equal to one share of Class A common stock per share of Series C preferred stock. Each share of Series C preferred stock would convert automatically into a share of Class A common stock following: (i) any public offering; (ii) a consolidation or merger with a corporation that is publicly traded; (iii) a consolidation or merger if the proceeds are at least equal to the purchase price of the Series C preferred stock; or (iv) upon the vote or written consent of the holders of a majority of the Series C preferred stock.

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In April 2014, the Company sold 2,691,615 Units in a private placement offering for gross proceeds of $6,460 under a securities purchase agreement (the 2014 Securities Purchase Agreement). In addition, 416,667 Units were issued in conjunction with conversion of the 2013 Promissory Note (Note 9). Each Unit consists of one share of the Company's Series C preferred stock and a warrant to purchase ¼ share of Class A common stock at an initial exercise price of $3.00 per share (the Unit). The warrant expires three years following the date the Company becomes required to file reports under the Exchange Act.

In December 2014, all outstanding shares of Series C Preferred Stock converted into 3,108,282 shares of Class A common stock.

The 2014 Securities Purchase Agreement qualified as a Mandatory Exchange Financing (Note 9).

The following summarizes changes in securities in conjunction with the 2014 Securities Purchase Agreement:

	Class A common stock	Class B common stock	Series C preferred stock	Warrants to purchase Class A common stock	Options to purchase Class A common stock
Share balance in April 2014 prior to 2014 Securities Purchase Agreement	**625,652**	**952,530**	**—**	**412,553**	**1,650,933**
Exchange of Founder Warrant (Note 10)	—	—	—	(84,315)	400,000
Conversion of 2013 Promissory Note (Note 9)	—	—	416,667	104,167	—
Conversion of 2009 Convertible Notes (Note 9)	532,125	—	—	—	—
Exchange of placement agent warrants associated with 2009 Convertible Notes (Note 9)	1,648,722	—	—	—	—
Exchange of Other Creditor debt (Note 9)	186,459	—	—	—	—
Exchange of Side Agreement Notes (Note 9)	103,884	—	—	—	—
Sale of Units in 2014 Securities Purchase Agreement (Note 12)	—	—	2,691,615	672,904	—
Cash commission to placement agent paid in Class A common stock (Note 9)	18,750	—	—	—	—
Exchange of placement agent warrant for stock (Note 9)	—	412,180	—	(104,463)	—
Issuance of placement agent warrant associated with 2014 Securities Purchase Agreement (Note 13)	—	—	—	107,665	—
Share balance after closing of 2014 Securities Purchase Agreement	**3,115,592**	**1,364,710**	**3,108,282**	**1,108,511**	**2,050,933**

13. Common Stock and Common Stock Warrants

Conversion – In December 2014, the Board of Directors and the requisite shareholders of each class of stock approved the conversion of Company stock to Class A common stock (the Conversion). Each share of Class B common stock and Series C preferred stock converted into 1.00 share of Class A common stock.

Redomestication – In connection with the Redomestication, the holders of Class A and Class B common stock received one share of Class A and Class B common stock of the Delaware Company, respectively, in exchange for fifteen shares of the Illinois Company (Note 1).

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Class A Common Stock – In December 2014, the Company issued 2,461,538 shares of Class A common stock at $3.25 per share for gross proceeds of $8,000 in a private placement transaction with Sorrento (Note 10). Subsequently in December 2014, the Company entered into a private placement offering and sold 14,178,916 shares of Class A common stock at $3.4908 per share for gross proceeds of $49,495 of which Sorrento purchased 572,935 shares for $2,000. Related stock issuance costs totaled $159. In conjunction with the offering, the Company amended its Bylaws to increase the size of the board of directors to nine.

In conjunction with the 2013 Securities Purchase Agreement, 210,336 shares of Class A common stock were issued for conversion of certain debt and payables totaling $950, and 219,308 shares were issued in exchange for all outstanding shares of Series A preferred stock. In conjunction with the 2014 Securities Purchase Agreement, the placement agent agreed to exchange $45 of its cash commission for 18,750 shares of Class A common stock.

Class B Common Stock – In December 2013, the Company sold 4,068,189 shares of Class B common stock to officers (Note 4). In March 2014, the Company issued 412,180 shares of Class B common stock to a placement agent in exchange for an outstanding warrant.

The Class B common stock has all the same powers, rights and limitations of the Class A common stock except the Class B common stock has no voting rights. In December 2014, all outstanding shares of Class B common stock converted into 4,480,369 shares of Class A common stock.

Common Stock Warrants – In 2005, the Company issued warrants to various individuals to purchase 107,353 shares of Class A common stock in connection with the Series A preferred stock financing. The warrants were exercisable at $4.51 per share and expired in December 2014. During 2005, 1,667 shares underlying these warrants were exercised for shares of Class A common stock.

In 2008, the Company issued warrants to purchase 70,592 shares of Class A common stock as compensation for services provided to the Company. The warrants are exercisable at $4.51 per share and expire at the earlier of (i) March 2018; (ii) an initial public offering of the Company; or (iii) a sale or merger of the Company. In March 2014, in conjunction with the amendment to the Founder License Agreement, the warrant held by the founder to purchase 84,315 shares of Class A common stock was exchanged for a fully-vested stock option to purchase up to 400,000 shares of Class A common stock (Note 10).

In 2009, the Company issued to a creditor a warrant to purchase 3,132 shares of Class A common stock. The warrant was exercisable at $4.51 per share and expired in 2014.

In 2010, the Company issued, in conjunction with a termination and release agreement, a warrant to purchase 62,016 shares of Class A common stock. The warrant was initially exercisable at $4.51 per share and is currently exercisable at $3.25 per share. The warrant expires in February 2020. The warrant includes a provision that for a period through two years after a reverse merger, the exercise price of the warrant is protected against down-round financing unless 66.67% of shareholders consent to the new transaction. Pursuant to ASC Subtopic 815-15 and ASC Subtopic 815-40, the fair value of the warrant of $439 was recorded as a derivative liability on the issuance date. The fair value of the warrant was estimated at the issuance date and is revalued at each reporting period, using a Monte Carlo simulation. At December 31, 2013 and 2014, the Company recorded a derivative liability of approximately $19 and $177, respectively. The change in fair value of the derivative liability is included in other income (expense) in the statements of operations.

In June 2013, the Company engaged a placement agent in connection with the 2013 Securities Purchase Agreement (Note 9). The placement agent received a warrant to purchase 104,463 shares of Class A common

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stock (the Initial Warrant). On the date of a Mandatory Exchange Financing, the Initial Warrant would automatically be exchanged into shares of common stock equal to 2.5% of the fully-diluted number of shares of Class B common stock outstanding upon the closing of the Private Placement (Note 12). In March 2014, the placement agent agreement was amended to exchange the Initial Warrant for 412,180 shares of Class B common stock and a new warrant for 107,665 shares of Class A common stock based on 4% of the number of shares of stock issued to investors introduced to the Company by the placement agent in the 2014 Securities Purchase Agreement (the New Warrant). The New Warrant has the same terms as warrants issued as part of the 2014 Securities Purchase Agreement.

The following table summarizes warrants outstanding at December 31, 2014:

2008 warrants	52,944
2010 warrants	62,016
2013 warrants	107,665
2014 warrants	777,071
Total	999,696

Common Stock Reserved for Future Issuance – At December 31, 2014, the Company has reserved authorized shares of Class A common stock for future issuance as follows:

Conversion of Class A common stock warrants	999,696
Class A common stock options outstanding under 2004 Plan	268
Class A common stock options outstanding under 2014 Plan	2,775,001
Authorized for future option grants remaining under 2014 Plan	2,705,000
	6,479,965

14. Stock-Based Compensation

2004 Stock Option Plan – In April 2004, the Company adopted the 2004 Stock Option Plan (the 2004 Plan) under which 44,124 shares of common stock were reserved for issuance under the 2004 Plan. The 2004 Plan provides for the granting of stock options to employees, directors and consultants of the Company. Options granted under the 2004 Plan may be either incentive stock options (ISOs) or nonqualified stock options (NSOs). NSOs may be granted to the Company employees and consultants. No further shares are available for grant under the 2004 Plan.

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The following table summarizes stock option transactions under the 2004 Plan:

	Number of Shares	Weighted-Average Exercise Price
Outstanding at December 31, 2012	933	$ 0.75
Options granted	—	
Options forfeited	—	
Options exercised	—	
Outstanding at December 31, 2013	933	$ 0.75
Options granted	—	
Options forfeited	(665)	$ 0.75
Options exercised	—	
Outstanding at December 31, 2014	268	$ 0.75
Exercisable at December 31, 2014	268	

2014 Equity Incentive Plan

In March 2014, the Company's board of directors and stockholders approved the 2014 Equity Incentive Plan (2014 Plan) under which 6,000,000 shares of Class A common stock are reserved for the granting of incentive stock options, nonstatutory stock options, stock appreciation rights, restricted stock, restricted stock units and performance awards to employees, directors and consultants. Recipients of stock awards are eligible to purchase shares of the Company's common stock at an exercise price equal to no less than the estimated fair market value of such stock on the date of grant. The maximum term of awards granted under the 2014 Plan is ten years. Stock awards are generally not exercisable prior to the applicable vesting date, unless otherwise accelerated under the terms of the applicable stock plan agreement. Unvested shares of the Company's common stock issued in connection with an early exercise allowed by the Company may be repurchased by the Company upon termination of the optionee's service with the Company.

The following table summarizes stock option transactions under the 2014 Plan:

	Number of Shares	Weighted-Average Exercise Price	Aggregate Intrinsic Value	Weighted-Average Remaining Contractual Life (in years)
Outstanding at December 31, 2013	—			
Options granted	3,225,000	$ 1.42		
Options forfeited	—			
Options exercised	(449,999)	$ 0.40		
Outstanding at December 31, 2014	2,775,001	$ 1.58	$ 5,297	9.67
Vested and Exercisable at December 31, 2014	920,626	$ 0.60	$ 2,662	9.57

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The following table provides a summary of options outstanding and vested as of December 31, 2014:

Exercise Prices	Number Outstanding	Weighted-Average Life (in Years)	Number Exercisable	Weighted-Average Life (in Years)
$0.40	1,000,001	9.21	437,501	9.21
$0.78	720,000	9.90	483,125	9.90
$3.25	1,055,000	9.95	—	—
	2,775,001	9.67	920,626	9.57

The aggregate intrinsic value of stock options exercised during the years ended December 31, 2014 was $192.

The following table presents stock-based compensation as included in the Company's statement of operations:

	Year Ended December 31,	
	2013	2014
Stock-based compensation expense:		
Exercise of Class B common stock (Note 4)	$884	$ —
Employee stock options	—	485
Non-employee stock options	—	76
Restricted stock award	—	228
	$884	$789
Stock-based compensation expense in operating expenses:		
Research and development	$251	$222
Selling, general and administrative	633	567
	$884	$789

The Company uses a Black-Scholes option-pricing model to determine the fair value of stock-based compensation under ASC Topic 718, *Stock Compensation*. The assumptions used for employee stock options are presented in the table below:

	Year Ended December 31, 2014	
	Employee Grants	Non-Employee Grants
Expected term (years)	5.00-5.64	9.22-9.71
Risk-free interest rate	1.58%-1.89%	2.17%
Expected volatility	81%-91%	81%
Dividend yield	0.00%	0.00%
Weighted-average grant date fair value	$0.98	$0.34

The assumed dividend yield was based on the Company's expectation of not paying dividends in the foreseeable future. The estimated volatility is based on a weighted-average calculation of a peer group of comparable

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companies whose share prices are publicly available. The risk-free interest rate assumption was based on the U.S. Treasury's rates for U.S. Treasury zero-coupon bonds with maturities similar to those of the expected term of the award being valued. The weighted-average expected life of options was estimated using the average of the contractual term and the weighted-average vesting term of the options.

The Company recorded total employee stock-based compensation expense related to the 2014 Plan of $485 for the year ended December 31, 2014. The total unrecognized compensation cost related to non-vested stock options as of December 31, 2014 was $164, which is expected to be recognized over a weighted-average period of 1.1 years.

The Company records equity instruments issued to non-employees as expense at the fair value over the related service period as determined in accordance with the authoritative guidance and periodically revalues the equity instruments as they vest. The Company did not grant any stock options to non-employees during the year ended December 31, 2013. During the year ended December 31, 2014, the Company granted options to purchase a total of 125,000 shares of common stock to non-employees under the 2014 Equity Incentive Plan. As of December 31, 2014, 43,750 non-employee options were vested and outstanding. In the year ended December 31, 2014, the Company recorded stock-based compensation expense related to non-employee consultants of $76 as an operating expense in selling, general and administrative.

Restricted Stock Award – In 2014, the Company issued a restricted stock award for 70,000 shares of Class A common stock that vests based on the holder achieving certain performance milestones. The holder met those performance milestones during the year, and the Company recognized stock compensation expense of $228 related to the restricted stock award.

15. Fair Value Measurement

The carrying amounts of certain financial instruments, including cash and cash equivalents, accounts receivable, prepaid expenses, accounts payable, accrued expenses and notes payable approximate their respective fair values due to the short-term nature of such instruments.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

The Company evaluates its financial assets and liabilities subject to fair value measurements on a recurring basis to determine the appropriate level in which to classify them for each reporting period. This determination requires significant judgments to be made.

The following table summarizes the conclusions reached:

	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Warrant derivative liability at December 31, 2013	$ —	$ —	$ 19
Warrant derivative liability at December 31, 2014	$ —	$ —	$ 177

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The Company used Level 3 inputs for its valuation methodology for the warrant derivative liability. The estimated fair value was determined using a Monte Carlo option pricing model based on various assumptions. The Company's warrant derivative liability is adjusted to reflect estimated fair value at each reporting period, with any decrease or increase in the estimated fair value recorded in other income or expense as an adjustment to fair value of derivative liability. The assumptions used in valuing these warrants are presented in the table below.

	December 31,	
	2013	2014
Expected dividend yield	0%	0%
Expected volatility	92.0%	79.5%
Risk-free interest rate	2.15%	1.67%

In addition, as of the valuation dates, management assessed the probabilities of future financings assumptions in the Monte Carlo valuation models. The Company also applied a discount for lack of marketability to the valuation of the derivative liability based on such trading restrictions due to the shares not being registered.

Activity for the warrant derivative liability measured at fair value using significant unobservable inputs (Level 3) is presented in the table below:

	Warrant Derivative Liability
Balance January 1, 2013	$ 703
Adjustment to estimated fair value	(684)
Balance at December 31, 2013	19
Adjustment to estimated fair value	158
Balance at December 31, 2014	$ 177

16. Income Taxes

Income tax expense for the year ended December 31, 2013 and 2014 consists of the following:

	2013	2014
Current:		
State	$ 1	$ 1
Federal	—	—
Total	1	1
Deferred:		
State	—	—
Federal	—	—
Total	—	—
Income tax provision	$ 1	$ 1

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The components that comprise the Company's net deferred tax assets at December 31 consist of the following:

	2013	2014
Deferred tax assets:		
Accrued compensation	$ 235	$ 196
Accrued legal expenses	18	2
Accrued interest	330	—
Other accrued liabilities	85	10
Depreciation and amortization	11	—
Total deferred tax assets	679	208
Deferred tax liabilities:		
Depreciation and amortization	—	(46)
Total deferred tax liabilities	—	(46)
Net deferred tax assets	679	162
Valuation allowance	(679)	(162)
	$ —	$ —

A reconciliation of the federal statutory income tax rate to the Company's effective income tax rate is as follows:

	Year Ended December 31,	
	2013	2014
Tax computed at federal statutory rate	35.0%	34.0%
State income taxes, net of federal tax benefit	12.0%	4.8%
Other	0.2%	(6.8)%
Section 382/383 NOL	(32.3)%	(40.0)%
Research and development credits	0.0%	0.7%
Stock-based compensation	0.0%	(1.1)%
Warrant derivative liability adjustment	(20.1)%	0.0%
Valuation allowance	5.2%	8.4%
Provision for income taxes	0.0%	0.0%

Pursuant to Internal Revenue Code (IRC) Sections 382 and 383, annual use of the Company's net operating loss and research and development credit carryforwards may be limited in the event that a cumulative change in ownership of more than 50% occurs within a three-year period. The Company has not completed an IRC Section 382/383 analysis regarding the limitation of net operating loss and research and development credit carryforwards. Until such an analysis is completed, the Company has removed the deferred tax assets for net operating losses and federal and state research and development credits of $1,503 and $3,973 from its deferred tax asset schedule at December 31, 2013 and 2014, respectively. The Company also recorded a corresponding decrease to its valuation allowance. When this analysis is finalized, the Company plans to update its unrecognized tax benefits accordingly. The Company does not expect this analysis to be completed within the next 12 months and, as a result, the Company does not expect that the unrecognized tax benefits will change within 12 months of this reporting date. Due to the existence of the valuation allowance, future changes in the Company's unrecognized tax benefits will not impact the Company's effective tax rate.

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In assessing the realization of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax liabilities, projected future taxable income, and tax planning strategies in making this assessment. Based on the level of historical operating results and the uncertainty of the economic conditions, the Company has recorded a full valuation allowance of $162 at December 31, 2014. The change in the valuation allowance for the year ended December 31, 2014 was a decrease of $517.

The Company has not incurred any material interest or penalties as of the current reporting date with respect to income tax matters. The Company does not expect that there will be unrecognized tax benefits of a significant nature that will increase or decrease within 12 months of the reporting date. The Company is subject to U.S. federal income tax as well as income tax in California and Illinois. The federal returns for tax years 2011 through 2014 remain open to examination; the California returns remain subject to examination for tax years 2010 through 2014.

At December 31, 2014, the Company had federal net operating losses of approximately $10,000 and state tax net operating losses of approximately $6,300 in California, $2,400 in Illinois and $1,000 in Massachusetts. The federal loss carryforwards will begin to expire in 2024. California, Illinois and Massachusetts loss carryforwards begin to expire in 2030, 2015 and 2033, respectively.

17. Subsequent Events

The Company evaluated subsequent events through May 14, 2015, the date on which the December 31, 2014 financial statements were available to be issued. There are no significant events that require disclosure in these financial statements, except as follows:

Supplemental Agreement and General Release – In March 2015, the Company entered into a Supplemental Agreement and General Release (the Supplemental Agreement) with a former officer related to the Settlement Agreement (Note 9). As a result, (i) the Company agreed to pay $133 in exchange for retiring the note and (ii) the former officer agreed to exercise a warrant to purchase 17,648 shares of Class A common stock at an exercise price of $4.51.

Acquisition of Inex Bio, Inc. – In March 2015, the Company entered into a Stock Purchase Agreement to acquire all of the shares of Inex Bio it did not previously own for $8,000 in cash. In addition, the sellers received warrants to purchase up to 1,729,729 shares of the Company's Class A common stock at a price of $3.70 per share. The warrants expire fifteen days after the closing date of the Stock Purchase Agreement. In April 2015, the Company received $6,400 for the exercise of the warrant. As a result of this transaction, Inex Bio is now a wholly-owned subsidiary of the Company.

Warrant to an Officer – In March 2015, the board of directors approved the issuance of a warrant to purchase Class A common stock to an officer of the Company. The warrant has a four year term and an exercise price of $3.70 per share. The maximum number of shares underlying the warrant is 9,500,000 of which 4,000,000 vest over a 40-month service period and the remaining 5,500,000 vest based on achievement of various milestones.

Shares

Common Stock

Joint Book-Running Managers

BofA Merrill Lynch **Citigroup** **Jefferies** **Piper Jaffray**

, 2015

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth an itemization of all estimated expenses, all of which the Registrant will pay, in connection with the issuance and distribution of the securities being registered:

	Amount to be Paid
SEC registration fee	$ *
FINRA filing fee	*
The NASDAQ Global Select Market listing fee	*
Printing and engraving expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Transfer agent and registrar fees and expenses	*
Miscellaneous expenses	*
Total	$ *

* To be provided by amendment

Item 14. Indemnification of Directors and Officers

On completion of this offering, the Registrant's amended and restated certificate of incorporation will contain provisions that eliminate, to the maximum extent permitted by the General Corporation Law of the State of Delaware, the personal liability of the Registrant's directors and executive officers for monetary damages for breach of their fiduciary duties as directors or officers. The Registrant's amended and restated certificate of incorporation and bylaws will provide that the Registrant must indemnify its directors and executive officers and may indemnify its employees and other agents to the fullest extent permitted by the General Corporation Law of the State of Delaware.

Sections 145 and 102(b)(7) of the General Corporation Law of the State of Delaware provide that a corporation may indemnify any person made a party to an action by reason of the fact that he or she was a director, executive officer, employee or agent of the corporation or is or was serving at the request of a corporation against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him or her in connection with such action if he or she acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful, except that, in the case of an action by or in right of the corporation, no indemnification may generally be made in respect of any claim as to which such person is adjudged to be liable to the corporation.

The Registrant has entered into indemnification agreements with its directors and executive officers, in addition to the indemnification provided for in its amended and restated certificate of incorporation and bylaws, and intends to enter into indemnification agreements with any new directors and executive officers in the future.

The Registrant has purchased and currently intends to maintain insurance on behalf of each and any person who is or was a director or officer of the Registrant against any loss arising from any claim asserted against him or her and incurred by him or her in any such capacity, subject to certain exclusions.

The Underwriting Agreement (Exhibit 1.1 hereto) provides for indemnification by the underwriters of the Registrant and its executive officers and directors, and by the Registrant of the underwriters, for certain liabilities, including liabilities arising under the Securities Act of 1933, as amended, or the Securities Act.

See also the undertakings set out in response to Item 17 herein.

Item 15. Recent Sales of Unregistered Securities

Since May 1, 2012, the Registrant has issued and sold the following securities:

(1) In May 2012, the Registrant acquired 57,000 shares of Inex Bio Holdings, LLC, or Inex Bio, for $248,541, which represented 22.2% of the outstanding shares and 17.4% of the fully-diluted shares of Inex Bio. On March 30, 2015, we acquired all the remaining outstanding shares of Inex Bio not currently owned by us for cash consideration of $8,000,000 and the issuance of 1,729,729 warrants to purchase our Class A common stock with an exercise price of $3.70 per share. The warrants were subsequently exercised on April 6, 2015.

(2) On June 20, 2013, the Registrant entered into a securities purchase agreement with Bio IP Ventures LLC, pursuant to which the Registrant sold a secured promissory note in the principal amount of $1,000,000, and 1,000 shares of its Series B preferred stock at a per share price of $0.10, for an aggregate purchase price of $1,000,100. In connection with the April 2014 private placement described in paragraph (4) below, Bio IP Ventures LLC converted the $1,000,000 principal amount of its promissory note into 416,667 “units”. Each “unit” consisted of one share of Registrant’s Series C preferred stock and a warrant to purchase one quarter of a share of Registrant’s common stock at aggregate price of $2.40 per unit. In December 2014, the Series C preferred stock was converted into Class A common stock.

(3) On June 20, 2013, Bio IP Ventures LLC purchased notes from the Registrant’s existing creditors totaling $312,570. In April 2014, these notes were exchanged for 130,238 shares of the Registrant’s Class A common stock.

(4) On June 20, 2013, notes and other payables owed to various of the Registrant’s creditors totaling $949,665 were settled in exchange for 210,336 shares of the Registrant’s Class A common stock.

(5) On December 30, 2013, the Registrant entered into a series of restricted stock purchase agreements for its Class B common stock with certain of its officers and directors as follows: (a) Barry J. Simon, the Registrant’s president, chief executive officer and one of its directors, purchased 1,820,441 shares at a price per share of $0.375, resulting in aggregate proceeds to the Registrant of $682,665 paid in the form of a secured promissory note in the same amount, with interest accruing at the applicable federal rate and a maturity date of nine years from the date of the note, (b) Hans G. Klingemann, a director of the Registrant and its chief medical and scientific officer, purchased 1,155,484 shares at a price per share of $0.375 , resulting in aggregate proceeds to the Registrant of $433,307 paid in the form of a secured promissory note in the same amount, with interest accruing at the applicable federal rate and a maturity date of nine years from the date of the note, and (c) Steve Gorlin, the executive chairman of the Registrant’s board of directors, purchased 1,092,264 shares at a price per share of $0.375 for aggregate proceeds to the Registrant of $409,599, of which $230,000 was remitted in cash, and $179,599 was applied to the forgiveness of the Registrant’s indebtedness to Mr. Gorlin. The Class B common stock purchased by the officers and directors were subsequently converted into Class A common stock by the Registrant in December 2014.

(6) From March 17, 2014 through March 24, 2015, the Registrant granted to certain of its employees, consultants, directors and other service providers under the Registrant’s 2014 Equity Incentive Plan options to purchase an aggregate of 5,000,002 shares of its Class A common stock at exercise prices ranging from $0.40 to $3.70 per share.

(7) From April 1, 2014 through April 11, 2014, the Registrant entered into a series of subscription agreements with accredited investors pursuant to which the Registrant sold an aggregate of 2,691,615 “units” consisting of 2,691,615 shares of Registrant’s Series C preferred stock and 672,904 warrants to purchase shares of Registrant’s common stock at aggregate price of $2.40 per unit. Palladium Capital Corp. acted as placement agent on the offering and received aggregate commissions of $493,739 and

18,750 shares of the Registrant's Series C preferred stock, which shares were later converted into Registrant's Class A common stock. In December 2014, all outstanding shares of Series C preferred stock were converted into Class A common stock.

(8) On April 1, 2014, notes and other payables owed to various of the Registrant's creditors totaling $1,339,203 were settled in exchange for 822,468 shares of the Registrant's Class A common stock.

(9) In April 2014 in conjunction with the closing of the 2014 securities purchase agreement, Palladium Capital Corp. received 412,180 shares of the Registrant's Class B common stock, which were later converted into the Registrant's Class A common stock, and a warrant to purchase 107,665 shares of Class A common stock at an exercise price of $3.00 per share in payment for acting as a placement agent on the 2013 securities purchase agreement.

(10) On December 18, 2014, the Registrant issued and sold to Sorrento Therapeutics, Inc., or Sorrento, an aggregate of 2,461,538 shares of its Class A common stock pursuant to a subscription and investment agreement at a price of $3.25 per share for an aggregate purchase price of $8,000,000. The subscription agreement for such transaction was amended on December 23, 2014 as described in paragraph (6) below, to sell an additional 572,935 shares of the Registrant's Class A common stock to Sorrento for an aggregate purchase price of $2,000,000.

(11) On December 23, 2014, the Registrant issued and sold to Cambridge Equities, LP, or Cambridge, an aggregate of 13,605,981 shares of our Class A common stock pursuant to a subscription and investment agreement at a price of $3.4908 per share for an aggregate purchase price of $47,495,481. In conjunction with the transaction, Sorrento amended its subscription and investment agreement entered into on December 18, 2014, as described in paragraph (5) above, to purchase an additional 572,935 shares of our Class A common stock for an aggregate purchase price of $2,000,000.

(12) On March 24, 2015, the Registrant issued to an officer a warrant to purchase a maximum of 9,500,000 shares of Class A common stock for an exercise price of $3.70 per share.

(13) From May 1, 2012 through May 14, 2015, the Registrant issued an aggregate of 610,065 shares of Class A common stock upon the exercise of options for aggregate consideration of $352,348.

None of the foregoing transactions involved any underwriters, underwriting discounts or commissions, or any public offering. The Registrant believes these transactions were exempt from registration under the Securities Act in reliance upon Section 4(a)(2) of the Securities Act or Regulation D, Regulation S or Rule 701 promulgated under the Securities Act as transactions by an issuer not involving any public offering, outside the United States, or pursuant to benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed upon the stock certificates issued in these transactions. All recipients had adequate access, through their relationships with the Registrant or otherwise, to information about the Registrant.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits.

See the Exhibit Index immediately following the Signature Pages.

(b) Financial Statement Schedules.

All other schedules have been omitted because the information required to be presented in them is not applicable or is shown in the financial statements or related notes

Item 17. Undertakings

The Registrant hereby undertakes to provide to the underwriters at the closing as specified in the underwriting agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933, as amended, and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933, as amended, and will be governed by the final adjudication of such issue.

The Registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act of 1933, as amended, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, as amended, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cardiff-by-the-Sea, State of California, on , 2015.

Conkwest, Inc.

By: _____
Patrick Soon-Shiong
Chairman of the Board of Directors and Chief Executive Officer

Each person whose signature appears below constitutes and appoints Patrick Soon-Shiong and Barry J. Simon his true and lawful attorney in fact and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any or all amendments (including post effective amendments) to the Registration Statement, and to sign any registration statement for the same offering covered by this Registration Statement that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and all post effective amendments thereto, and to file the same, with all exhibits thereto, and all documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, each acting alone, or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
Patrick Soon-Shiong	Chairman of the Board of Directors and Chief Executive Officer (Principal Executive Officer)	, 2015
Barry J. Simon	President, Chief Operating Officer and Director	, 2015
Richard Gomberg	Chief Financial Officer (Principal Financial and Accounting Officer)	, 2015
Steve Gorlin	Vice Chairman of the Board of Directors	, 2015
Henry Ji	Director	, 2015
Hans G. Klingemann	Director	, 2015
Richard Kusserow	Director	, 2015

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Signature	Title	Date
John T. Potts, Jr.	Director	, 2015
Robert Rosen	Director	, 2015
John C. Thomas, Jr.	Director	, 2015

EXHIBIT INDEX

Exhibit Number	Description
1.1*	Form of Underwriting Agreement, including Form of Lock-up Agreement.
3.1*	Amended and Restated Certificate of Incorporation of the Registrant, as currently in effect.
3.2*	Form of Amended and Restated Certificate of Incorporation of the Registrant, effective upon the completion of this offering.
3.3*	Bylaws of the Registrant, as currently in effect.
3.4*	Form of Amended and Restated Bylaws of the Registrant, effective upon the completion of this offering.
4.1*	Registration Rights Agreement by and between the Registrant and Cambridge Equities LP, dated December 23, 2014.
4.2*	Registration Rights Agreement by and between the Registrant and Sorrento Therapeutics, Inc., dated December 18, 2014.
4.3*	Form of Subscription and Securities Purchase Agreement among the Registrant and the Subscribers of Series C Preferred Stock, dated as of April 1, 2014.
4.4*	Registration Rights Agreement, among the Registrant and the purchasers of Series B Preferred Stock, dated as of June 20, 2013.
4.5*	Form of Warrant to Purchase Common Stock issued pursuant to the Securities Purchase Agreement dated April 1, 2014.
4.6*	Common Stock Purchase Warrant issued March 24, 2015 to Patrick Soon-Shiong, M.D.
4.7*	Form of Warrant to Purchase Common Stock issued March 14, 2008.
4.8*	Specimen common stock certificate of the Registrant.
5.1*	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation.
10.1+*	Form of Indemnification Agreement between the Registrant and each of its directors and executive officers.
10.2+*	2014 Equity Incentive Plan and forms of agreement thereunder.
10.3+*	2015 Equity Incentive Plan and forms of agreements thereunder, effective upon the completion of this offering.
10.4+*	Executive Incentive Compensation Plan, effective upon the completion of this offering.
10.5+*	Executive Employment Agreement between the Registrant and Patrick Soon-Shiong, effective March 24, 2015.
10.6+*	Executive Employment Agreement between the Registrant and Barry J. Simon, M.D., dated January 1, 2015.
10.7†*	Joint Development and License Agreement between the Registrant and Sorrento Therapeutics, Inc., dated December 18, 2014.
10.8†*	Technology Development & Commercialization Agreement between University Health Network and the Registrant, dated as of July 10, 2014.
10.9†*	Clinical Trial Agreement, as amended, between the University of Pittsburgh and the Registrant, dated August 14, 2009.

Exhibit Number	Description
10.10†*	UHN-ZelleRx License Agreement between University Health Network and the Registrant, dated May 9, 2005.
10.11†*	License Agreement, as amended, between Fox Chase Cancer Center and the Registrant, dated as of July 10, 2004.
10.12†*	Rush-ZelleRx License Agreement, between Rush University Medical Center and the Registrant, dated as of March 24, 2004.
10.13†*	License Agreement, as amended, between Hans G. Klingemann and the Registrant, dated February 10, 2003.
21.1*	Subsidiaries.
23.1*	Consent of Mayer Hoffman McCann P.C., Independent Registered Public Accounting Firm.
23.2*	Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (included in Exhibit 5.1).
24.1	Power of Attorney (see page II-4 to this Form S-1).

* To be filed by amendment.
\+ Indicates management contract or compensatory plan.
† Confidential treatment will be requested with respect to certain portions of this exhibit. Omitted portions will be filed separately with the Securities and Exchange Commission.