As filed with the Securities and Exchange Commission on August 1, 2016

Registration No. 333-212373

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

AMENDMENT No. 1
to
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Lion Biotechnologies, Inc.

(Exact name of registrant as specified in its charter)

Nevada	**2834**	**75-3254381**
(State or other jurisdiction of incorporation or organization)	***(Primary Standard Industrial Classification Code Number)***	***(I.R.S. Employer Identification No.)***

112 W. 34th Street, 17th Floor
New York, NY 10120
(212) 946-4856
(Address, including zip code and telephone number, including area code, of registrant's principal executive offices)

Maria Fardis, Ph.D.
President and Chief Executive Officer
Lion Biotechnologies, Inc.
112 W. 34th Street, 18th Floor
New York, NY 10120
(212) 946-4856
(Name, address, including zip code and telephone number, including area code, of agent for service)

Copy to:
Istvan Benko
TroyGould PC
Suite 1600
1801 Century Park East
Los Angeles, California 90067

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this registration statement, as shall be determined by the selling stockholders identified herein.

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: þ

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 þ	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	**Amount to be Registered(1)**	**Proposed Maximum Offering Price Per Share**	**Proposed Maximum Aggregate Offering Price**	**Amount of Registration Fee**
Common Stock, par value $0.000041666 per share	9,684,000	$ 7.66(2)	$ 74,179,440	$ 7,470.00(3)

(1) In the event of a stock split, reverse stock split, stock dividend or similar transaction involving our common stock, the number of shares registered shall automatically be adjusted to cover the additional shares of stock issuable pursuant to Rule 416 under the Securities Act of 1933, as amended.

(2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) under the Securities Act of 1933, as amended. The calculation of the proposed maximum aggregate offering price of the common stock is based on the average of the high and low sales price for the common stock as reported on The NASDAQ Global Market on June 28, 2016.

(3) Previously paid.

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

The information contained in this prospectus is not complete and may be changed. The selling stockholders named in this prospectus may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell securities, and the selling stockholders are not soliciting offers to buy these securities, in any state where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS

Subject to Completion. Dated August 1, 2016

Lion Biotechnologies, Inc.

9,684,000 Shares of Common Stock

This prospectus relates to the sale of up to 9,684,000 outstanding shares of our common stock that are owned by some of our stockholders. For a list of the selling stockholders, please see "Selling Stockholders." The selling stockholders may sell these shares from time to time in the principal market on which our common stock is traded at the prevailing market price, in negotiated transactions, or through any other means described in the section titled "Plan of Distribution." The selling stockholders may be deemed underwriters within the meaning of the Securities Act of 1933, as amended, of the shares of common stock that they are offering. We will pay the expenses of registering these shares. We will not receive proceeds from the sale of our shares by the selling stockholders that are covered by this prospectus.

The shares are being registered to permit the selling stockholders to sell the shares from time to time in the public market. We do not know when or in what amount the selling stockholders may offer the securities for sale. The selling stockholders may sell some, all or none of the securities offered by this prospectus.

Our common stock is traded on The NASDAQ Global Market under the symbol "LBIO." On July 29, 2016, the last reported sale price of our common stock as reported on The NASDAQ Global Market was $8.84.

You should understand the risks associated with investing in our common stock. Before making an investment, read the "Risk Factors," which begin on page 7 of this prospectus.

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

The date of this prospectus is _____, 2016

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This prospectus is part of a registration statement we filed with the Securities and Exchange Commission (the "SEC"). You should rely only on the information provided in this prospectus. We have not authorized anyone to provide you with information different from that contained in this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities other than the common stock offered by this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any common stock in any circumstances in which such offer or solicitation is unlawful. The selling stockholders are offering to sell, and seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted.

Neither the delivery of this prospectus nor any sale made in connection with this prospectus shall, under any circumstances, create any implication that there has been no change in our affairs since the date of this prospectus or that the information contained in this prospectus is correct as of any time after its date. The information in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of common stock. The rules of the SEC may require us to update this prospectus in the future.

PROSPECTUS SUMMARY

This summary highlights selected information about us contained elsewhere in this prospectus; it does not contain all of the information you should consider before investing in our common stock. You should read the entire prospectus before making an investment decision. This prospectus includes forward-looking statements that involve risks and uncertainties. See "Cautionary Note Regarding Forward-Looking Statement" for more information.

A 1-for-100 reverse stock split of our common stock was effected on September 26, 2013. All share and per share amounts in this prospectus have been retroactively adjusted to give effect to the reverse stock split.

Throughout this prospectus, the terms "Lion," "we," "us," "our," and "our company" refer to Lion Biotechnologies, Inc., a Nevada corporation.

Our Company

We are a clinical-stage biotechnology company focused on the development and commercialization of novel cancer immunotherapy products designed to harness the power of a patient's own immune system to eradicate cancer cells. Our lead program is an adoptive cell therapy utilizing tumor-infiltrating lymphocytes (TIL), which are T cells derived from patients' tumors, for the treatment of metastatic melanoma. We are also pursuing the development of TIL for other solid tumor cancer indications. In February 2016, we announced that the US Food and Drug Administration (FDA) allowed our Investigational New Drug (IND) application to conduct clinical studies using our TIL therapy in cervical and head and neck cancers.

A patient's immune system, particularly his/her TIL, plays an important role in identifying and killing cancer cells. TIL consist of a heterogeneous population of T cells that can recognize a wide variety of cancer-specific mutations and can overcome tumor escape mechanisms. TIL therapy involves growing a patient's TIL in special culture conditions outside the patient's body, or ex vivo, and then infusing the T cells back into the patient in combination with interleukin-2 (IL-2). By taking TIL away from the immune-suppressive tumor microenvironment in the patient, the T cells can rapidly proliferate. Billions of TIL, when infused back into the patient, are better able to search out and potentially eradicate the tumor.

During the second half of 2015, we opened enrollment in a Phase 2 clinical trial of our lead product candidate, LN-144, for the treatment of refractory metastatic melanoma. This single-arm study is for patients with metastatic melanoma whose disease has progressed following treatment with at least one systemic therapy. The purpose of the study is to evaluate the safety, efficacy and feasibility of our autologous TIL infusion (LN-144).

In an online article published in May 2016 from the Journal of Clinical Oncology, data was presented from 101 metastatic melanoma patients treated with TIL therapy in a Phase 2 clinical trial conducted at the National Cancer Institute (NCI) by Dr. Steven Rosenberg, M.D., Ph.D., and colleagues. In the trial, patients with metastatic melanoma were equally divided into two groups. Both groups were treated according to a standard TIL protocol using a lympho-depleting preparative regimen prior to an intravenous infusion of TIL, with high-dose IL-2 given intravenously to physiologic tolerance after the TIL was infused. The second group also received total body irradiation. 54% of all patients treated with TIL therapy achieved an objective response. An objective response occurs when there is a complete remission or a partial remission of the tumor. A complete remission requires a complete disappearance of all detectable evidence of disease, and a partial remission typically requires at least approximately 50% regression of measurable disease without new sites of disease. The publication reported that, of the 101 patients, 24 (24%) had experienced a complete remission (CR). With a median potential follow up time of 40.9 months, only one of the patients who had achieved a CR had recurred. Overall survival (OS) was 51% at 3 years. Toxicities from treatment were primarily associated with the known adverse effects of nonmyeloablative chemotherapy and administration of high-dose IL-2.

In further support of our internal research and clinical development activities, we have a Cooperative Research and Development Agreement (CRADA) with the U.S. Department of Health and Human Services, as represented by the NCI, through which we are funding the research and development of TIL-based product candidates for the treatment of advanced solid tumors. Pursuant to the CRADA, we fund TIL research and clinical trials that are being conducted by Dr. Steven Rosenberg. This five-year CRADA expires in August 2016 unless the parties agree to extend it. We are currently in discussions with the NCI to renew this agreement.

We have a worldwide, exclusive patent license from the National Institutes of Health (NIH) for intellectual property to develop, manufacture and commercialize TIL therapy for the treatment of melanoma, which was amended in 2015 to include the exclusive license of this intellectual property for the treatment of lung cancer, HPV-associated cancers, breast cancer, and bladder cancer. We also have an exclusive license from the NIH for intellectual property relating to a TIL-based therapy for use in melanoma in which TIL that express various inhibitory receptors such as 4-1BB (also known as CD137), PD-1, TIM-3 and LAG-3 are selected and expanded for infusion into the patient. TIL that express these proteins are associated with higher tumor reactivity than other TIL populations, so fewer cells may be needed to be therapeutically effective.

During 2015, we received orphan drug designation for LN-144 in the United States to treat metastatic melanoma. This designation provides seven years of market exclusivity in the United States, subject to certain limited exceptions. However, the orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review or approval process.

We are pursuing refractory metastatic melanoma as our first target indication because of the promising initial NCI results and the commercial opportunity inherent in the significant unmet need of this patient population. Melanoma is a common type of skin cancer, accounting for approximately 74,000 patients diagnosed and 9,900 deaths each year in the United States according to the American Cancer Society's Cancer Estimated 2015 Facts and Figures. According to the NCI's Surveillance, Epidemiology and End Results (SEER) program, about 4-7% of patients with melanoma have metastatic disease. Patients with relapsed/refractory metastatic melanoma following treatment under the current standards of care have a particularly dire prognosis with very few curative treatment options.

In addition to the research and development being conducted under the CRADA, in 2014 we established our own internal research and development capabilities in Tampa, Florida, near the H. Lee Moffitt Cancer & Research Institute (Moffitt) on the campus of the University of South Florida, to explore the next-generation of TIL technology and new product candidates, as well as generate new intellectual property.

Company History

We filed our original Articles of Incorporation with the Secretary of State of Nevada on September 17, 2007. Until March 2010, we were an inactive company known as Freight Management Corp. On March 15, 2010, we changed our name to Genesis Biopharma, Inc. and in 2011 we commenced our current business. On September 26, 2013, we amended and restated our Articles of Incorporation to, among other things, change our name to Lion Biotechnologies, Inc., effect a 1-for-100 reverse stock split (pro-rata reduction of outstanding shares) of our common stock, increase (after the reverse stock split) the number of our authorized number of shares of common stock to 150,000,000 shares, and authorize the issuance of 50,000,000 shares of "blank check" preferred stock, $0.001 par value per share.

Our principal executive offices are located at 112 West 34th Street, 18th Floor, New York, NY 10120, and our telephone number at that address is (212) 946-4856. Our website is located at www.lionbio.com. Information on our website is not, and should not be considered, part of this prospectus.

Recent Developments

On June 1, 2016, we hired Maria Fardis, Ph.D. as our new President and Chief Executive Officer to succeed Elma Hawkins, Ph.D., who previously served as President and Chief Executive Officer of our company.

Effective June 1, 2016, Dr. Fardis also was appointed to our board of directors in accordance with her employment agreement to fill the vacancy created by Dr. Hawkins' departure.

On June 2, 2016, we entered into a securities purchase agreement (the "Securities Purchase Agreement") with various institutional and individual accredited investors to raise gross proceeds of $100 million in a private placement (the "Private Placement").

On June 7, 2016, we completed the Private Placement. In the Private Placement, we issued (i) 9,684,000 shares of our common stock and (ii) 11,368,633 shares of our new Series B Preferred Stock (the "Series B Preferred"). The shares of common stock and Series B Preferred were sold for $4.75 per share. The shares of Series B Preferred are not currently convertible into common stock and, except as required by law, are non-voting. We agreed with the investors in the Private Placement to file a proxy statement with the SEC with respect to a stockholders meeting that would include a proposal to permit the Series B Preferred to become convertible into shares of our common stock and to permit the issuance of shares of common stock upon such conversion. The definitive proxy statement was filed with the SEC on July 7, 2016 for a stockholders meeting scheduled to be held on August 16, 2016. If the requisite stockholder approval is obtained at that annual meeting, the Series B Preferred will be convertible into shares of common stock at an initial conversion price of $4.75 per share. We received net proceeds of approximately $95.7 million from the Private Placement, after paying placement agent fees and estimated offering expenses, which we will use to fund our research and development and for working capital purposes. Jefferies LLC and Piper Jaffray & Co. acted as joint lead placement agents for the Private Placement, and we paid the placement agents a customary placement fee and reimbursed them for certain expenses. We filed the registration statement of which this prospectus is a part to fulfill certain of our contractual obligations to the investors in the Private Placement under a registration rights agreement we entered into pursuant to the Securities Purchase Agreement.

On June 7, 2016, we appointed Wayne Rothbaum to serve as the Interim Chairman of the board of directors. We also agreed to appoint Iain Dukes to serve as a director beginning as of a specified future date.

Molly Henderson, our Chief Financial Officer, has notified us that her last day of employment with us will be August 16, 2016.

Risks Associated with our Business

An investment in our common stock involves a high degree of risk. Below is a summary of certain key risk factors that you should consider in evaluating an investment in our shares of common stock:

- our inability to obtain regulatory approval for, or successfully commercialize, our leading product candidate, LN-144 or our other product candidates;
- the inability of our contract manufacturers to effectively produce our products;
- capacity constraints at our contract manufacturers;
- our inability to secure and maintain relationships with collaborators and contract manufacturers;
- difficultly in enrolling patients in our clinical trials, and uncertainty of clinical trial results;
- our history of operating losses and inability to ever become profitable;
- our limited history of complying with public company reporting requirements;
- uncertainty and volatility in the price of our common stock;
- the costs and effects of existing and potential governmental investigation and litigation;
- our inability to meet the continued listing requirements of The NASDAQ Global Market;
- our inability to develop, implement and maintain appropriate internal controls in the future;

- uncertainty as to our employees', independent contractors' compliance with regulatory standards and requirements and insider trading rules;
- dependence on the efforts of third-parties to conduct and oversee our clinical trials for our product candidates, to manufacture clinical supplies of our product candidates, and to commercialize our product candidates;
- the extent of government regulations;
- a loss of any of our key management personnel;
- our inability to develop or commercialize our product candidates due to intellectual property rights held by third parties and our inability to protect the confidentiality of our trade secrets; and
- our inability to access capital in the future to fund proposed operations.

This list is not exhaustive. Please read the discussion of these risks and other risks described under the caption "Risk Factors" beginning on page 7 of this prospectus.

THE OFFERING

Common Stock offered by the selling stockholders	9,684,000 shares
Common Stock offered by us	None
Common Stock currently outstanding	58,218,339 shares(1)
Common Stock to be outstanding after the offering	58,218,339 shares(1)
NASDAQ Global Market Symbol	LBIO
Use of proceeds	We will not receive any proceeds from the sale of the common stock offered hereby.
Risk Factors	An investment in our common stock involves significant risks. See "Risk Factors" beginning on page 7.

(1) Does not include (i) a total of 12,042,096 restricted shares of common stock and shares of common stock issuable upon the exercise of outstanding options (with exercise prices ranging from $3.13 to $117.00 per share) and warrants (with exercise prices ranging from $2.50 to $2.51), (ii) the 847,000 shares of common stock issuable upon the conversion of our Series A Convertible Preferred, or (iii) the 11,368,633 shares of common stock issuable upon the conversion of our Series B Preferred (if our stockholders approve the Series B Preferred conversion feature).

Selected Financial Data

The following table presents selected financial data. The selected statements of income data for each of the years in the three-year period ended December 31, 2015, and the selected balance sheet data as of December 31, 2014 and 2015, are derived from our audited financial statements included in this prospectus. The selected statements of income data for the three months ended March 31, 2016 and 2015 and the selected consolidated balance sheet data as of March 31, 2016 are derived from our unaudited financial statements contained herein. The selected statements of income data for each of the years in the two-year period ended December 31, 2012, and the selected balance sheet data as of December 31, 2013, 2012 and 2011, are derived from our audited financial statements not included in this prospectus. We have prepared the unaudited financial information set forth below on the same basis as our audited financial statements and have included all adjustments, consisting of only normal recurring adjustments, that we consider necessary for a fair presentation of our financial position and operating results for such periods.

The results for any interim period are not necessarily indicative of the results that may be expected for a full year. Additionally, our historical results are not necessarily indicative of future results. The information set forth below should be read together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and the accompanying notes appearing elsewhere in this prospectus.

	Three Months Ended March 31,		Years Ended December 31,				
	2016	2015	2015	2014	2013	2012	2011
	(Unaudited)		(Dollars in thousands, except per share amounts)				
Net revenue	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operating expenses:							
Research and development	4,192	2,398	15,470	3,849	2,154	1,656	1,756
Impairment of intangible assets	-	-	-	-	-	-	160
General and administrative	2,818	2,900	12,390	8,192	3,831	6,476	19,303
Cost of Lion transaction - related party	-	-	-	-	16,656	-	-
Other income (loss)	126	-	200	6	(2,741)	4,825	(4,476)
Net loss	$ (6,884)	$ (5,298)	$ (27,660)	$ (12,035)	$ (25,382)	$ (3,308)	$ (25,694)
Net loss per share	$ (0.14)	$ (0.14)	$ (0.62)	$ (0.48)	$ (3.47)	$ (4.14)	$ (33.84)

	As of March 31,	As of December 31,				
	2016	2015	2014	2013	2012	2011
	(Unaudited)	(Dollars in thousands)				
Total assets	$ 100,768	$ 105,653	$ 46,507	$ 19,874	$ 29	$ 568
Total liabilities	1,830	1,630	$ 1,662	$ 2,270	$ 11,349	$ 13,349
Derivative liabilities	-	-	-	-	-	$ 7,938
Total stockholders' equity	$ 98,938	$ 104,023	$ 44,845	$ 17,604	$ (11,319)	$ (12,781)

RISK FACTORS

An investment in our common stock involves a high degree of risk. In addition to the other information in this prospectus, prospective investors should carefully consider the following risks before making an investment in our common stock. The risks described in this prospectus are not the only ones we may face. Any of these risks and uncertainties could cause our actual results to differ materially from the results contemplated by the forward-looking statements set forth herein, and could otherwise have a significant adverse impact on our business, prospects, financial condition or result of operation. The trading price of our common stock could decline due to any of these risks and uncertainties, and you could lose all or a part of your investment.

Please see "Note Regarding Cautionary Statements Concerning Forward-Looking Statements" in this prospectus, where we describe additional uncertainties associated with our business and the forward-looking statements included in this prospectus.

Risks Related To Our Business

We have a history of operating losses; we expect to continue to incur losses; and we may never be profitable.

We are a clinical-stage biotechnology company focused on the development and commercialization of novel cancer immunotherapy products designed to harness the power of a patient's own immune system to eradicate cancer cells. We do not have products approved for commercial sale and have not generated revenue. As of March 31, 2016, we had an accumulated deficit of $111.1 million. In addition, during the fiscal year ended December 31, 2015 and the three months ended March 31, 2016, we incurred a net loss of $27.7 million and $6.9 million, respectively. Since our inception we have not generated any revenues. We do not expect to generate any meaningful product sales or royalty revenues for the foreseeable future. We expect to incur significant additional operating losses in the future as we expand our development and clinical trial activities in support of demonstrating the effectiveness of our products.

Our ability to achieve long-term profitability is dependent upon obtaining regulatory approvals for our products and successfully commercializing our products alone or with third parties. However, our operations may not be profitable even if any of our products under development are successfully developed and produced and thereafter commercialized.

We have limited experience in operating our current business, which makes it difficult to evaluate our business plan and our prospects.

Although we entered into the License Agreement, the CRADA and the manufacturing services agreement with Lonza Walkersville, Inc. in 2011, our progress on developing our business and our product candidates was slow until 2014 because of a lack of financial resources and changes in our management. As a result, we have only a limited operating history in our current line of business on which a decision to invest in our company can be based. The future of our company currently is dependent upon our ability to implement our new business plan, as that business plan may be modified from time to time by our new management. While we believe that we have a sound business plan and research and development strategy, we have only a limited operating history against which we can test our plans and assumptions, and investors therefore cannot evaluate the likelihood of our success.

We face the problems, expenses, difficulties, complications and delays normally associated with a small, new biotechnology company, many of which are beyond our control. Accordingly, our prospects should be considered in light of the risks, expenses and difficulties frequently encountered in the establishment of a new business developing technologies in an industry that is characterized by a number of market entrants and intense competition. Because of our size and limited resources, we may not possess the ability to successfully overcome many of the risks and uncertainties frequently encountered by early stage companies involved in the rapidly evolving field of immunotherapy. If our research and development efforts are successful, we may also face the risks associated with the shift from development to commercialization of new products based on innovative technologies. There can be no assurance that we will be successful in developing our new business.

We have limited experience as a company conducting clinical trials.

Prior to 2015, all of the preclinical and clinical trials relating to our product candidates had been conducted by the NCI. Although we have recruited a team that has experience with clinical trials prior to our commencing our current clinical level for LN-144, we had no experience as a company in conducting clinical trials. In part because of this lack of experience, we cannot be certain that planned clinical trials will begin or be completed on time, if at all. Large-scale trials would require significant additional financial and management resources, and reliance on third-party clinical investigators, contract research organizations, or CROs, or consultants. Relying on third-party clinical investigators or CROs may force us to encounter delays that are outside of our control.

We may encounter substantial delays in our clinical trials, or may not be able to conduct our trials on the timelines we expect.

Clinical testing is expensive, time consuming, and subject to uncertainty. We cannot guarantee that any clinical studies will be conducted as planned or completed on schedule, if at all. We initiated our first company sponsored clinical trial in 2015 and have secured with the FDA an IND for the use of LN-145 in cervical and head and neck cancers. Even after these trials begin, issues may arise that could suspend or terminate such clinical trials. A failure of one or more clinical studies can occur at any stage of testing, and our future clinical studies may not be successful. Events that may prevent successful or timely completion of clinical development include:

- the inability to generate sufficient preclinical data to support the initiation of clinical studies;
- capacity constraints and delays in manufacturing, testing, releasing, validating, or importing/exporting sufficient stable quantities of our product candidates for use in clinical studies or the inability to do any of the foregoing, including any quality issues associated with the contract manufacturer;
- delays in reaching a consensus with regulatory agencies on study design;
- the FDA may not allow us to use the clinical trial data from a research institution to support an IND if we cannot demonstrate the comparability of our product candidates with the product candidate used by the relevant research institution in its clinical studies;
- delays in reaching agreement on acceptable terms with prospective contract research organizations, or CROs, and clinical study sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and clinical study sites;
- delays in obtaining required Institutional Review Board, or IRB, approval at each clinical study site;
- imposition of a temporary or permanent clinical hold by regulatory agencies;
- delays in recruiting suitable patients to participate in our clinical studies;
- failure by our CROs, other third parties, or us to adhere to clinical study requirements;
- failure to perform in accordance with the FDA’s current good clinical practices, or cGCPs, requirements, or applicable regulatory guidelines in other countries;

- patients dropping out of a study;
- occurrence of adverse events associated with the product candidate that are viewed to outweigh its potential benefits;
- changes in regulatory requirements and guidance that require amending or submitting new clinical protocols;
- changes in the standard of care on which a clinical development plan was based, which may require new or additional trials;
- the cost of clinical studies of our product candidates being greater than we anticipate;
- clinical studies of our product candidates producing negative or inconclusive results, which may result in our deciding, or regulators requiring us, to conduct additional clinical studies or abandon product development programs; and
- transfer of manufacturing processes from the NCI to our contract manufacturers or other larger-scale facilities operated by a contract manufacturing organization, or CMO, and delays or failure by our CMOs or us to make any necessary changes to such manufacturing process.

We also may conduct clinical and preclinical research in collaboration with other biotechnology and biologics entities in which we combine our technologies with those of our collaborators. Such collaborations may be subject to additional delays as a result of the management of the trials and the necessity of obtaining additional approvals for therapeutics used in the combination trials. These combination therapies will require additional testing and clinical trials will require additional FDA regulatory approval and will increase our future cost of expenses.

Any inability to successfully complete preclinical and clinical development could result in additional costs to us or impair our ability to generate revenue. In addition, if we make manufacturing or formulation changes to our product candidates, we may be required to or we may elect to conduct additional studies to bridge our modified product candidates to earlier versions. Clinical study delays could also shorten any periods during which our products have patent protection and may allow our competitors to bring products to market before we do, which could impair our ability to successfully commercialize our product candidates and may harm our business and results of operations.

It may take longer and cost more to complete our clinical trials than we project, or we may not be able to complete them at all.

For budgeting and planning purposes, we have projected the date for the commencement, continuation and completion of our various clinical trials. However, a number of factors, including scheduling conflicts with participating clinicians and clinical institutions, capacity constraints, and difficulties in identifying and enrolling patients who meet trial eligibility criteria, may cause significant delays. We may not commence or complete clinical trials involving any of our products as projected or may not conduct them successfully.

During the second half of 2015, we began enrollment of our company-sponsored, Phase 2 clinical trial to establish the feasibility of our lead product, LN-144, and to assess its overall safety in patients with metastatic melanoma. However, we may experience difficulties in patient enrollment in our clinical trials for a variety of reasons. The timely completion of clinical trials in accordance with their protocols depends, among other things, on our ability to enroll a sufficient number of patients who remain in the study until its conclusion. In addition, our clinical trials will compete with other clinical trials for product candidates that are in the same therapeutic areas as our product candidates, and this competition will reduce the number and types of patients available to us, because some patients who might have opted to enroll in our trials may instead opt to enroll in a trial being conducted by one of our competitors. Accordingly, we cannot guarantee that the trial will progress as planned or as scheduled. Delays in patient enrollment and capacity constraints may result in increased costs or may affect the timing or outcome of our ongoing clinical trial and planned clinical trials, which could prevent completion of these trials and adversely affect our ability to advance the development of our product candidates.

We expect to rely on medical institutions, academic institutions or clinical research organizations to conduct, supervise or monitor some or all aspects of clinical trials involving our products. We will have less control over the timing and other aspects of these clinical trials than if we conducted them entirely on our own. If we fail to commence or complete, or experience delays or capacity constraints in, any of our planned clinical trials, our stock price and our ability to conduct our business as currently planned could be harmed.

We currently anticipate that we will have to rely on our manufacturing partners to manufacture our adoptive cell therapy products for clinical trials. If they fail to commence or complete, or experiences delays in, manufacturing our adoptive cell therapy products, our planned clinical trials will be delayed, which will adversely affect our stock price and our ability to conduct our business as currently planned.

Clinical trials are expensive, time-consuming and difficult to design and implement, and our clinical trial costs may be higher than for more conventional therapeutic technologies or drug products.

Clinical trials are expensive and difficult to design and implement, in part because they are subject to rigorous regulatory requirements. Because our product candidates are based on new technologies and manufactured on a patient-by-patient basis, we expect that they will require extensive research and development and have substantial manufacturing costs. In addition, costs to treat patients with relapsed/refractory cancer and to treat potential side effects that may result from our product candidates can be significant. Some clinical trial sites may not bill, or obtain coverage from, Medicare, Medicaid, or other third-party payors for some or all of these costs for patients enrolled in our clinical trials, and we may be required by those trial sites to pay such costs. Accordingly, our clinical trial costs are likely to be significantly higher per patient than those of more conventional therapeutic technologies or drug products. In addition, our proposed personalized product candidates involve several complex and costly manufacturing and processing steps, the costs of which will be borne by us. Depending on the number of patients we ultimately enroll in our trials, and the number of trials we may need to conduct, our overall clinical trial costs may be higher than for more conventional treatments.

Our clinical trials may fail to demonstrate adequately the safety and efficacy of our product candidates, which would prevent or delay regulatory approval and commercialization.

The clinical trials of our product candidates are, and the manufacturing and marketing of our products will be, subject to extensive and rigorous review and regulation by numerous government authorities in the United States and in other countries where we intend to test and market our product candidates. Before obtaining regulatory approvals for the commercial sale of any of our product candidates, we must demonstrate through lengthy, complex and expensive preclinical testing and clinical trials that our product candidates are both safe and effective for use in each target indication. In particular, because our product candidates are subject to regulation as biological drug products, we will need to demonstrate that they are safe, pure, and potent for use in their target indications. Each product candidate must demonstrate an adequate risk versus benefit profile in its intended patient population and for its intended use. The risk/benefit profile required for product licensure will vary depending on these factors and may include not only the ability to show tumor shrinkage, but also adequate duration of response, a delay in the progression of the disease, and/or an improvement in survival. For example, response rates from the use of our product candidates may not be sufficient to obtain regulatory approval unless we can also show an adequate duration of response. Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure 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. The results of studies in one set of patients or line of treatment may not be predictive of those obtained in another. We expect there may be greater variability in results for products processed and administered on a patient-by-patient basis, as anticipated for our product candidates, than for “off-the-shelf” products, like many other drugs. There is typically an extremely high rate of attrition from the failure of product candidates proceeding through clinical trials. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy profile despite having progressed through preclinical studies and initial clinical trials. A number of companies in the biopharmaceutical industry have suffered significant setbacks in advanced clinical trials due to lack of efficacy or unacceptable safety issues, notwithstanding promising results in earlier trials. Most product candidates that begin clinical trials are never approved by regulatory authorities for commercialization.

In addition, even if such trials are successfully completed, we cannot guarantee that the FDA or foreign regulatory authorities will interpret the results as we do, and more trials could be required before we submit our product candidates for approval. To the extent that the results of the trials are not satisfactory to the FDA or foreign regulatory authorities for support of a marketing application, we may be required to expend significant resources, which may not be available to us, to conduct additional trials in support of potential approval of our product candidates.

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

The timely completion of clinical trials in accordance with their protocols depends, among other things, on our ability to enroll a sufficient number of patients who remain in the trial until its conclusion. We may experience difficulties in patient enrollment in our clinical trials for a variety of reasons, including:

- capacity limitations at our contract manufacturers;
- the size and nature of the patient population;
- the patient eligibility criteria defined in the protocol;
- the size of the study population required for analysis of the trial's primary endpoints;
- the proximity of patients to trial sites;
- the design of the trial;
- our ability to recruit clinical trial investigators with the appropriate competencies and experience;
- competing clinical trials for similar therapies or other new therapeutics not involving cell based immunotherapy;
- clinicians' and patients' perceptions as to the potential advantages and side effects of the product 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;
- our ability to obtain and maintain patient consents; and
- the risk that patients enrolled in clinical trials will not complete a clinical trial.

In addition, our clinical trials will compete with other clinical trials for product candidates that are in the same therapeutic areas as our product candidates, and this competition will reduce the number and types of patients available to us, because some patients who might have opted to enroll in our trials may instead opt to enroll in a trial being conducted by one of our competitors. Because the number of qualified clinical investigators is limited, we expect to conduct some of our clinical trials at the same clinical trial sites that some of our competitors use, which will reduce the number of patients who are available for our clinical trials at such clinical trial sites. Moreover, because our product candidates represent a departure from more commonly used methods for cancer treatment, potential patients and their doctors may be inclined to use conventional therapies, such as chemotherapy and approved immunotherapies, rather than enroll patients in any future clinical trial. In addition, potential enrollees may opt to participate in alternate clinical trials because of the length of time between the time that their tumor is excised and the TIL is infused back into the patient.

Even if we are able to enroll a sufficient number of patients in our clinical trials, delays in patient enrollment may result in increased costs or may affect the timing or outcome of the planned clinical trials, which could prevent completion of these trials and adversely affect our ability to advance the development of our product candidates.

Our product candidates may cause undesirable side effects or have other properties that could halt their clinical development, prevent their regulatory approval, limit their commercial potential or result in significant negative consequences.

Undesirable side effects caused by our product candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or other comparable foreign regulatory authorities. Results of our trials could reveal a high and unacceptable severity and prevalence of side effects or unexpected characteristics.

If unacceptable toxicities arise in the development of our product candidates, we or the FDA or comparable foreign regulatory authorities could order us to cease clinical trials or deny approval of our product candidates for any or all targeted indications. Treatment-related side effects could also affect patient recruitment or the ability of enrolled subjects to complete the trial or result in potential product liability claims. In addition, these side effects may not be appropriately recognized or managed by the treating medical staff, as toxicities resulting from personalized cell therapy are not normally encountered in the general patient population and by medical personnel. Any of these occurrences may harm our business, financial condition and prospects significantly.

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

Our product candidates are biologics and the process of manufacturing our products is complex, highly- regulated and subject to multiple risks. The manufacture of our product candidates involves complex processes, including harvesting tumor fragments from patients, multiplying the cells to obtain the desired dose, and ultimately infusing the cells back into a patient. As a result of the complexities, the cost to manufacture biologics is generally higher than traditional small molecule chemical compounds, and the manufacturing process is less reliable and is more difficult to reproduce. Our manufacturing process will be susceptible to product loss or failure due to logistical issues associated with the collection of tumor cells, or starting material, from the patient, shipping such material to the manufacturing site, shipping the final product back to the patient, and infusing the patient with the product, manufacturing issues associated with the differences in patient starting tumors, interruptions in the manufacturing process, contamination, equipment failure, improper installation or operation of equipment, vendor or operator error, capacity constraints, inconsistency in cell growth, and variability in product characteristics. Even minor deviations from normal manufacturing processes could result in reduced production yields, product defects, and other supply disruptions. If for any reason we lose a patient’s tumor, or later-developed product at any point in the process, the manufacturing process for that patient will need to be restarted and the resulting delay may adversely affect that patient’s outcome. If microbial, viral, or other contaminations are discovered in our product candidates or in the manufacturing facilities in which our product candidates are made, such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination.

Because our product candidates are manufactured for each particular patient, we will be required to maintain a chain of identity with respect to the patient's tumor as it moves from the patient to the manufacturing facility, through the manufacturing process, and back to the patient. Maintaining such a chain of identity is difficult and complex, and failure to do so could result in adverse patient outcomes, loss of product, or regulatory action including withdrawal of our products from the market. Further, as product candidates are developed through preclinical to late stage clinical trials towards approval and commercialization, it is common that various aspects of the development program, such as manufacturing methods, are altered along the way in an effort to optimize processes and results. Such changes carry the risk that they will not achieve these intended objectives, and any of these changes could cause our product candidates to perform differently and affect the results of planned clinical trials or other future clinical trials.

Currently, our product candidates are manufactured using processes by our third-party research institution collaborators that we may not intend to use for more advanced clinical trials or commercialization. Although we are working to develop commercially viable processes, doing so is a difficult and an uncertain task, and there are risks associated with scaling to the level required for advanced clinical trials or commercialization, including, among others, cost overruns, potential problems with process scale-out, process reproducibility, stability issues, lot consistency, and timely availability of raw materials. As a result of these challenges, we may experience delays in our clinical development and/or commercialization plans. We may ultimately be unable to reduce the cost of goods for our product candidates to levels that will allow for an attractive return on investment if and when those product candidates are commercialized.

We expect our manufacturing strategy will involve the use of one or more CMOs, or establishing our own capabilities and infrastructure, including a manufacturing facility. We would expect that development of our own manufacturing facility would provide us with enhanced control of material supply for both clinical trials and the commercial market, enable the more rapid implementation of process changes, and allow for better long-term margins. However, we have no experience as a company in developing a manufacturing facility and may never be successful in developing our own manufacturing facility or capability. We may establish multiple manufacturing facilities as we expand our commercial footprint to multiple geographies, which may lead to regulatory delays or prove costly. Even if we are successful, our manufacturing capabilities could be affected by cost-overruns, unexpected delays, equipment failures, labor shortages, natural disasters, power failures, and numerous other factors that could prevent us from realizing the intended benefits of our manufacturing strategy and have a material adverse effect on our business.

In addition, the manufacturing process for any products that we may develop is subject to FDA and foreign regulatory authority approval process, and we will need to contract with manufacturers who can meet all applicable FDA and foreign regulatory authority requirements on an ongoing basis. If we or our CMOs are unable to reliably produce products to specifications acceptable to the FDA or other regulatory authorities, we may not obtain or maintain the approvals we need to commercialize such products. Even if we obtain regulatory approval for any of our product candidates, there is no assurance that either we or our CMOs will be able to manufacture the approved product to specifications acceptable to the FDA or other regulatory authorities, to produce it in sufficient quantities to meet the requirements for the potential launch of the product, or to meet potential future demand. Any of these challenges could delay completion of clinical trials, require bridging clinical trials or the repetition of one or more clinical trials, increase clinical trial costs, delay approval of our product candidate, impair commercialization efforts, increase our cost of goods, and have an adverse effect on our business, financial condition, results of operations and growth prospects.

The deviations in our proposed new products from existing products may require us to perform additional testing, which will increase the cost, and extend the time for obtaining approval.

Our TIL based therapy is based on the adoptive cell therapy (ACT) technology that we licensed from the NIH and that is presently available as a physician-sponsored investigational therapy for the treatment of Stage IV metastatic melanoma in the U.S. at the National Cancer Institute, MD Anderson Cancer Center, and the H. Lee Moffitt Cancer & Research Institute. The current method of treatment is very labor intensive and expensive, which has limited its widespread application. We are developing new processes that we anticipate will enable more efficient manufacturing of our products. We may have difficulty demonstrating that the products produced from our new processes are identical to the existing products. The FDA may require additional clinical testing before permitting a larger clinical trial with the new processes, and also the product may not be as efficacious in the new clinical trials. Cellular products are not considered as well characterized products because there are hundreds of markers present on these cells, and even small changes in manufacturing processes could alter the cell types. It is unclear at this time which of those markers are critical for success of these cells to combat cancer, so our ability to predict the outcomes with newer manufacturing processes is limited. The changes that we may make to the existing manufacturing process may require additional testing, which may increase costs and timelines associated with these developments.

In addition to developing a TIL based therapy on existing ACT technology, we are currently evaluating the desirability of conducting clinical trials of our products in combination with other existing drugs. These combination therapies will require additional testing and clinical trials will require additional FDA regulatory approval and will increase our future cost of development.

We will be unable to commercialize our products if our trials are not successful.

Our research and development programs are at an early stage. We must demonstrate our products' safety and efficacy in humans through extensive clinical testing. We may experience numerous unforeseen events during, or as a result of, the testing process that could delay or prevent commercialization of our products, including but not limited to the following:

- safety and efficacy results in various human clinical trials reported in scientific and medical literature may not be indicative of results we obtain in our clinical trials;
- after reviewing test results, we or our collaborators may abandon projects that we might previously have believed to be promising;
- we, our collaborators or regulators, may suspend or terminate clinical trials if the participating subjects or patients are being exposed to unacceptable health risks; and
- the effects our potential products have may not be the desired effects or may include undesirable side effects or other characteristics that preclude regulatory approval or limit their commercial use if approved.

Clinical testing is very expensive, can take many years, and the outcome is uncertain. It can take as much as 12 months or more before we learn the results from any clinical trial using our adoptive cell therapy with TIL. The data collected from our clinical trials may not be sufficient to support approval by the FDA of our TIL-based product candidates for the treatment of solid tumors. The clinical trials for our products under development may not be completed on schedule and the FDA may not ultimately approve any of our product candidates for commercial sale. If we fail to adequately demonstrate the safety and efficacy of any product candidate under development, we may not receive regulatory approval for those products, which would prevent us from generating revenues or achieving profitability.

Our research and development efforts are to a large extent dependent upon the CRADA.

Although we opened our own research and development laboratory in 2014, it may take time to fully develop our research and development infrastructure. As a result, we conduct a portion of our research and development under the CRADA we entered into with the NCI. The CRADA outlines the research and development related to the development of improved methods of large scale TIL generation for the ACT treatment of patients with metastatic melanoma, bladder, lung, triple-negative breast, and HPV-associated cancers. We are obligated to make annual payments of $2,000,000 under the CRADA. In addition, although the CRADA has a five year term, either party to the CRADA has the right to terminate the CRADA upon 60 days' notice to the other party. As a result, no assurance can be given that the NCI will not terminate, or that we will renew, the CRADA that expires in August 2016 and that the CRADA will, therefore, remain in effect until we complete our desired research thereunder.

We expect to use the results of the NCI's research to support the filing with the FDA of investigational new drug applications, or INDs, to conduct more advanced clinical trials of our products. However, we have limited control over the nature or timing of the NCI's clinical trials and limited visibility into their day-to-day activities. The research we are funding constitutes only a small portion of the NCI's overall research. Other research being conducted by Dr. Rosenberg may at times receive higher priority than research on our programs. These factors could adversely affect the timing of our IND filings and our ability to conduct future planned clinical trials.

Under the CRADA, we have an option to negotiate commercialization licenses from the NIH to intellectual property relating to TIL-based product candidates developed in the course of the CRADA research plan. However, we would have to negotiate with the NIH for such a license. There can be no assurance that we would be able to successfully complete such negotiations and ultimately acquire the rights to the intellectual property surrounding the additional product candidates that we may seek to acquire. Further, to the extent we would like to negotiate a license to a patent filed before the CRADA was entered into, another party may object to the NIH granting us a license during a 30-day public notification period, and the NIH may decide not to grant us the license.

We will need additional financing in order to complete the development and commercialization of our various product candidates.

Our research and development and our operating costs have been substantial and are expected to increase. We expect to continue to spend substantial amounts to continue the clinical development of LN-144 and our other product candidates. As of March 31, 2016, we had $99.2 million in cash, cash equivalents and short-term investments (which does not take into account the $95.7 million of net proceeds from our June 2016 Private Placement). We believe that this cash available to us will be sufficient to fund our operations for at least the next 12 months. However, changing circumstances may cause us to increase our spending significantly faster than we currently anticipate, and we may require additional capital for the further development and commercialization of our product candidates and may need to raise additional funds sooner if we choose to expand more rapidly than we presently anticipate.

We cannot be certain that additional funding will be available on acceptable terms, or at all. We have no committed source of additional capital and if we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we may have to significantly delay, scale back or discontinue the development or commercialization of our product candidates or other research and development initiatives. Our license and collaboration agreements may also be terminated if we are unable to meet the payment obligations under the agreements. We could be required to seek collaborators for our product candidates at an earlier stage than otherwise would be desirable or on terms that are less favorable than might otherwise be available or relinquish or license on unfavorable terms our rights to product candidates in markets where we may otherwise would seek to pursue our own development or commercialization.

Raising additional capital may cause dilution to our existing stockholders, restrict our operations or require us to relinquish rights to our technologies or product candidates.

We may seek additional capital through a combination of public and private equity offerings, debt financings, strategic partnerships and alliances and licensing arrangements. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms may include liquidation or other preferences that adversely affect your rights as a stockholder. The incurrence of indebtedness would result in increased fixed payment obligations and could involve certain restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. If we raise additional funds through strategic partnerships and alliances and licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies or product candidates, or grant licenses on terms unfavorable to us.

We are subject to extensive regulation, which can be costly, time consuming and can subject us to unanticipated delays; even if we obtain regulatory approval for some of our products, those products may still face regulatory difficulties.

All of our potential products, cell processing and manufacturing activities, are subject to comprehensive regulation by the FDA in the United States and by comparable authorities in other countries. The process of obtaining FDA and other required regulatory approvals, including foreign approvals, is expensive and often takes many years and can vary substantially based upon the type, complexity and novelty of the products involved. In addition, regulatory agencies may lack experience with our technologies and products, which may lengthen the regulatory review process, increase our development costs and delay or prevent their commercialization.

No adoptive cell therapy using tumor infiltrating lymphocytes has been approved for marketing in the U.S. by the U.S. Food and Drug Administration (FDA). Consequently, there is no precedent for the successful commercialization of products based on our technologies. In addition, we have had only limited experience in filing and pursuing applications necessary to gain regulatory approvals, which may impede our ability to obtain timely FDA approvals, if at all. We have not yet sought FDA approval for any adoptive cell therapy product. We will not be able to commercialize any of our potential products until we obtain FDA approval, and so any delay in obtaining, or inability to obtain, FDA approval would harm our business.

If we violate regulatory requirements at any stage, whether before or after marketing approval is obtained, we may be fined, forced to remove a product from the market and experience other adverse consequences including delay, which could materially harm our financial results. Additionally, we may not be able to obtain the labeling claims necessary or desirable for the promotion of our products. We may also be required to undertake post-marketing trials. In addition, if we or others identify side effects after any of our adoptive cell therapies are on the market, or if manufacturing problems occur, regulatory approval may be withdrawn and reformulation of our products may be required.

We may not be able to license new TIL technology from the NIH and others.

An important element of our intellectual property portfolio is to license additional rights and technologies from the NIH. Our inability to license the rights and technologies that we have identified, or that we may in the future identify, could have a material adverse impact on our ability to complete the development of our products or to develop additional products. No assurance can be given that we will be successful in licensing any additional rights or technologies from the NIH and others. Failure to obtain additional rights and licenses may detrimentally affect our planned development of additional product candidates and could increase the cost, and extend the timelines associated with our development of such other products.

The market opportunities for our product candidates may be limited to those patients who are ineligible for or have failed prior treatments and may be small.

The FDA often approves new therapies initially only for use in patients with relapsed or refractory metastatic disease. We expect to initially seek approval of our product candidates in this setting. Subsequently, for those products that prove to be sufficiently beneficial, if any, we would expect to seek approval in earlier lines of treatment and potentially as a first line therapy, but there is no guarantee that our product candidates, even if approved, would be approved for earlier lines of therapy, and, prior to any such approvals, we may have to conduct additional clinical trials.

Our projections of both the number of people who have the cancers we are targeting, as well as the subset of people with these cancers in a position to receive second or third line therapy, and who have the potential to benefit from treatment with our product candidates, are based on our beliefs and estimates. These estimates have been derived from a variety of sources, including scientific literature, surveys of clinics, patient foundations, or market research by third parties, and may prove to be incorrect. Further, new studies may change the estimated incidence or prevalence of these cancers. The number of patients may turn out to be lower than expected. Additionally, the potentially addressable patient population for our product candidates may be limited or may not be amenable to treatment with our product candidates, and may also be limited by the cost of our treatments and the reimbursement of those treatment costs by third party payors. For instance, we expect our lead product candidate, LN-144, to initially target a small patient population that suffers from metastatic melanoma. Even if we obtain significant market share for our product candidates, because the potential target populations are small, we may never achieve profitability without obtaining regulatory approval for additional indications.

We are required to pay substantial royalties and lump sum benchmark payments under our license agreements with the NIH, and we must meet certain milestones to maintain our license rights.

Under our license agreements with the NIH for our adoptive cell therapy technologies, we are currently required to pay both substantial benchmark payments and royalties to that institution based on our revenues from sales of our products utilizing the licensed technologies, and these payments could adversely affect the overall profitability for us of any products that we may seek to commercialize. In order to maintain our license rights under the NIH license agreements, we will need to meet certain specified milestones, subject to certain cure provisions, in the development of our product candidates. There is no assurance that we will be successful in meeting all of the milestones in the future on a timely basis or at all.

Because our current products represent, and our other potential product candidates will represent novel approaches to the treatment of disease, there are many uncertainties regarding the development, the market acceptance, third-party reimbursement coverage and the commercial potential of our product candidates.

There is no assurance that the approaches offered by our products will gain broad acceptance among doctors or patients or that governmental agencies or third-party medical insurers will be willing to provide reimbursement coverage for proposed product candidates. Moreover, we do not have verifiable internal marketing data regarding the potential size of the commercial market for our product candidates, nor have we obtained independent marketing surveys to verify the potential size of the commercial markets for our current product candidates or any future product candidates. Since our current product candidates and any future product candidates will represent new approaches to treating various conditions, it may be difficult, in any event, to accurately estimate the potential revenues from these product candidates. Accordingly, we may spend large amounts of money trying to obtain approval for product candidates that have an uncertain commercial market. The market for any products that we successfully develop will also depend on the cost of the product. We do not yet have sufficient information to reliably estimate what it will cost to commercially manufacture our current product candidates, and the actual cost to manufacture these products could materially and adversely affect the commercial viability of these products. Our goal is to reduce the cost of manufacturing and providing our therapies. However, unless we are able to reduce those costs an acceptable amount, we may never be able to develop a commercially viable product. If we do not successfully develop and commercialize products based upon our approach, or find suitable and economical sources for materials used in the production of our products, we will not become profitable, which would materially and adversely affect the value of our common stock.

Our TIL therapy may be provided to patients in combination with other agents provided by third parties. The cost of such combination therapy may increase the overall cost of TIL therapy and may result in issues regarding the allocation of reimbursements between our therapy and the other agents, all of which may affect our ability to obtain reimbursement coverage for the combination therapy from third party medical insurers.

No assurance can be given that we will be able to develop a new, FDA-compliant, more efficient, lower cost manufacturing process upon which our business plan to commercialize TIL-based products is dependent.

Pursuant to the CRADA, and in cooperation with our contract manufacturers and potentially other manufacturers, we are developing improved methods for the generating and selecting autologous TILs, and to develop methods for large-scale production of autologous TILs that are in accord with current Good Manufacturing Practices (“cGMP”) procedures. Developing a new, scaled-up, pharmaceutical manufacturing process that can more efficiently and cost effectively, and in a more automated manner measure, produce and control the physical and/or chemical attributes of our products in a cGMP facility is subject to many uncertainties and difficulties. We have never manufactured our adoptive cell therapy product candidate on any scale, commercial or otherwise, nor our partners. As a result, we cannot give any assurance that we will be able to establish a manufacturing process that can produce our products at a cost or in quantities necessary to make them commercially viable. Moreover, our third-party manufacturers will have to continually adhere to current cGMP regulations enforced by the FDA through its facilities inspection program. If the facilities of these manufacturers cannot pass a pre-approval plant inspection, the FDA premarket approval of our products will not be granted. In complying with cGMP and foreign regulatory requirements, we and any of our third-party manufacturers will be obligated to expend time, money and effort in production, record-keeping and quality control to assure that our products meet applicable specifications and other requirements. If we or any of our third-party manufacturers fail to comply with these requirements, we may be subject to regulatory action. No assurance can be given that we will be able to develop such a manufacturing process, or that our partners will thereafter be able to establish and operate such a production facility.

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

We face an inherent risk of product liability as a result of the clinical testing of our product candidates and will face an even greater risk if we commercialize any products. For example, we may be sued if our product candidates cause or are perceived to cause injury or are found to be otherwise unsuitable during clinical 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 or 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 product candidates. Even successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in:

- decreased demand for our product candidates;
- injury to our reputation;
- withdrawal of clinical trial participants;
- initiation of investigations by regulators;
- costs to defend the related litigation;
- a diversion of management's time and our resources;
- substantial monetary awards to trial participants or patients;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenue;
- exhaustion of any available insurance and our capital resources;
- the inability to commercialize any product candidate; and
- a decline in our share price.

Our inability to obtain sufficient product liability insurance at an acceptable cost to protect against potential product liability claims could prevent or inhibit the commercialization of products we develop, alone or with corporate collaborators. Our insurance policies may also have various exclusions, and we may be subject to a product liability claim for which we have no coverage. While we have obtained clinical trial insurance for our Phase 2 clinical trial of LN-144, we may have to pay 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. Even if our agreements with any future corporate collaborators entitle us to indemnification against losses, such indemnification may not be available or adequate should any claim arise.

We face significant competition from other biotechnology and pharmaceutical companies and from non-profit institutions.

Competition in the field of cancer therapy is intense and is accentuated by the rapid pace of technological development. Research and discoveries by others may result in breakthroughs which may render our products obsolete even before they generate any revenue. There are products currently under development by others that could compete with the products that we are developing. Many of our potential competitors have substantially greater research and development capabilities and manufacturing, marketing, financial and managerial resources than we do. Our competitors may:

- develop safer or more effective immunotherapies and other therapeutic products;
- reach the market more rapidly, reducing the potential sales of our products; or
- establish superior proprietary positions.

Potential competitors in the market for treating metastatic melanoma are companies such as Bristol-Myers Squibb, Roche/Genentech, Merck, Amgen, Pfizer, and GlaxoSmithKline, which already have products on the market or in development. Other companies, such as Novartis, Celgene, Kite Pharma, Juno Therapeutics, and Adaptimmune, which are focused on genetically engineered T cell technologies to treat cancer, may also be competitors. All of these companies, and most of our other current and potential competitors have substantially greater research and development capabilities and financial, scientific, regulatory, manufacturing, marketing, sales, human resources, and experience than we do. Many of our competitors have several therapeutic products that have already been developed, approved and successfully commercialized, or are in the process of obtaining regulatory approval for their therapeutic products in the United States and internationally.

Universities and public and private research institutions in the U.S. and Europe are also potential competitors. For example, a Phase 3 study comparing TIL to standard ipilimumab in patients with metastatic melanoma is currently being conducted in Europe by the Netherlands Cancer Institute, the Copenhagen County Herlev University Hospital, and the University of Manchester. While these universities and public and private research institutions primarily have educational objectives, they may develop proprietary technologies that lead to other FDA approved therapies or that secure patent protection that we may need for the development of our technologies and products.

Our lead product candidate, LN-144, is a therapy for the treatment of refractory metastatic melanoma. Currently, there are numerous companies that are developing various alternate treatments for melanoma. Accordingly, LN-144 faces significant competition in the melanoma treatment space from multiple companies. Even if we obtain regulatory approval of LN-144, the availability and price of our competitors' products could limit the demand and the price we are able to charge for our melanoma therapy. We may not be able to implement our business plan if the acceptance of our products is inhibited by price competition or the reluctance of physicians to switch from other methods of treatment to our product, or if physicians switch to other new therapies, drugs or biologic products or choose to reserve our product for use in limited circumstances.

We will be dependent on third party vendors to design, build, maintain and support our manufacturing and cell processing facilities.

As a result of our current strategy to outsource most of our manufacturing, we rely very heavily on third parties to perform for us the manufacturing of our products for our clinical trials. We also license a significant portion of our technology from others and, at this time, do not own any intellectual properties or technologies. We intend to rely upon our contract manufacturers to produce large quantities of materials needed for clinical trials and potentially product commercialization. Third party manufacturers may not be able to meet our needs with respect to timing, quantity or quality. If we are unable to contract for a sufficient supply of needed materials on acceptable terms, or if we should encounter delays or difficulties in our relationships with manufacturers, our clinical testing may be delayed, thereby delaying the submission of products for regulatory approval or the market introduction and subsequent sales of our products. Any such delay may lower our revenues and potential profitability.

If any third party collaborator breaches or terminates its agreement with us, or fails to conduct its activities in a timely manner, the commercialization of our products under development could be slowed down or blocked completely. It is possible that our collaborators will change their strategic focus, pursue alternative technologies or develop alternative products, either on their own or in collaboration with others, as a means for developing treatments for the diseases targeted by our collaborative programs. The effectiveness of our collaborators in marketing our products will also affect our revenues and earnings.

We intend to continue to enter into additional third party collaborative agreements in the future. However, we may not be able to successfully negotiate any additional collaborative arrangements. If established, these relationships may not be scientifically or commercially successful.

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

Despite the implementation of security measures, our internal computer systems and those of our contract research organizations and other contractors and consultants are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. While we have not experienced any such system failure, accident or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a disruption of our drug development programs. For example, the loss of clinical study data from completed or ongoing clinical studies for a product candidate could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach were to result in a loss of or damage to our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the further development of any product candidates could be delayed.

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

As of June 30, 2016, we had 23 employees, 14 of whom are engaged in research and development. The loss of the services of any of executive officers or senior research personnel could delay our product development programs and our research and development efforts. In order to develop our business in accordance with our business plan, we will have to hire additional qualified personnel, including in the areas of research, manufacturing, clinical trials management and regulatory affairs. We have sufficient funds to hire what we believe are the necessary employees to support our planned operations in the near term. However, competition for qualified employees among companies in the biotechnology and biopharmaceutical industry is intense, and no assurance can be given that we will be able attract, hire, retain and motivate the highly skilled employees that we need. As our development and commercialization plans and strategies develop, and as we continue to transition into operating as a public company, we must add a significant number of additional research and development, managerial, operational, and other personnel. Future growth will impose significant added responsibilities on members of management, including:

- identifying, recruiting, integrating, maintaining, and motivating additional employees;

- managing our internal development efforts effectively, including the clinical and FDA review process for our product candidates, while complying with our contractual obligations to contractors and other third parties; and

- improving our operational, financial and management controls, reporting systems, and procedures.

Our future financial performance and our ability to commercialize our product candidates will depend, in part, on our ability to effectively manage any future growth, and our management may also have to divert a disproportionate amount of its attention away from day-to-day activities in order to devote a substantial amount of time to managing these growth activities. Our efforts to manage our growth are complicated by the fact that all of our executive officers have joined us since June 2015. This lack of long-term experience working together may adversely impact our senior management team's ability to effectively manage our business and growth.

We currently rely, and for the foreseeable future will continue to rely, in substantial part on certain independent organizations, advisors and consultants to provide certain services. There can be no assurance that the services of these independent organizations, advisors and consultants will continue to be available to us on a timely basis when needed, or that we can find qualified replacements. In addition, if we are unable to effectively manage our outsourced activities or if the quality or accuracy of the services provided by consultants is compromised for any reason, our clinical trials may be extended, delayed, or terminated, and we may not be able to obtain regulatory approval of our product candidates or otherwise advance our business. There can be no assurance that we will be able to manage our existing consultants or find other competent outside contractors and consultants on economically reasonable terms, if at all.

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

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

We may evaluate various acquisitions and strategic partnerships, including licensing or acquiring complementary products, intellectual property rights, technologies, or businesses. Any potential acquisition or strategic partnership may entail numerous risks, including:

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

- our inability to generate revenue from acquired technology and/or products sufficient to meet our objectives in undertaking the acquisition or even to offset the associated acquisition and maintenance costs.

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

In April 2014, we received a subpoena in the SEC investigation now known as "In the Matter of Certain Stock Promotions." We are currently discussing with the Staff of the SEC a proposed settlement of this matter.

On April 23, 2014 we received a subpoena from the SEC that stated that the staff of the SEC was conducting an investigation then designated as In the Matter of Galena Biopharma, Inc. File No. HO 12346 (now known as In the Matter of Certain Stock Promotions) and that the subpoena was issued to us as part of the foregoing investigation. The SEC's subpoena and accompanying letter did not indicate whether we were, or were not, under investigation. We produced documents in response to the subpoena and have since fully cooperated with the SEC's investigation.

We have recently been informed by the Staff of the SEC that the SEC's investigation, in part, involves the conduct of our former Chief Executive Officer, Manish Singh, during the period between September 2013 and April 2014. We understand that, as it pertains to the Company's former Chief Executive Officer, the investigation has focused on the failure by authors of certain articles about the Company to disclose that they were compensated by one of our former investor relations firms. We understand that it is the position of the SEC Staff that the conduct of our former Chief Executive Officer with respect to these articles may be imputed to the Company.

In order to resolve this matter, we have agreed with the Staff of the SEC to a proposed settlement framework under which we would consent to the entry of an order requiring that we cease and desist from any future violations of certain provisions of the federal securities laws, without admitting or denying any allegations, and agree to a financial penalty. We are currently discussing with the Staff of the SEC the amount of the financial penalty that we would pay as part of this settlement. We do not anticipate that the amount of this penalty will have a material impact on our cash position. The proposed settlement is contingent upon reaching agreement with the Staff of the SEC on a complete set of settlement terms and approval by the Commissioners of the SEC, neither of which can be assured.

Risks Related To Government Regulation

The FDA regulatory approval process is lengthy and time-consuming, and we may experience significant delays in the clinical development and regulatory approval of our product candidates.

We have not previously submitted a BLA to the FDA, or similar approval filings to comparable foreign authorities. A BLA must include extensive preclinical and clinical data and supporting information to establish the product candidate's safety and effectiveness for each desired indication. The BLA must also include significant information regarding the chemistry, manufacturing and controls for the product. We expect the novel nature of our product candidates to create further challenges in obtaining regulatory approval. For example, the FDA has limited experience with commercial development of cell therapies for cancer. Accordingly, the regulatory approval pathway for our product candidates may be uncertain, complex, expensive and lengthy, and approval may not be obtained.

We may also experience delays in completing planned clinical trials for a variety of reasons, including delays related to:

- capacity constraints at our contract manufacturers;

- the availability of financial resources to commence and complete the planned trials;
- reaching agreement on acceptable terms with prospective CROs and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- obtaining approval at each clinical trial site by an independent institutional review board, or IRB;
- recruiting suitable patients to participate in a trial;
- having patients complete a trial or return for post-treatment follow-up;
- clinical trial sites deviating from trial protocol or dropping out of a trial;
- adding new clinical trial sites; or
- manufacturing sufficient quantities of qualified materials under cGMPs and applying them on a subject by subject basis for use in clinical trials.

We could also encounter delays if physicians encounter unresolved ethical issues associated with enrolling patients in clinical trials of our product candidates in lieu of prescribing existing treatments that have established safety and efficacy profiles. Further, a clinical trial may be suspended or terminated by us, the IRBs for the institutions in which such trials are being conducted, the Data Monitoring Committee for such trial, or by the FDA or other regulatory authorities due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a product candidate, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. If we experience termination of, or delays in the completion of, any clinical trial of our product candidates, the commercial prospects for our product candidates will be harmed, and our ability to generate product revenue will be delayed. In addition, any delays in completing our clinical trials will increase our costs, slow down our product development and approval process and jeopardize our ability to commence product sales and generate revenue.

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 manufacturing, marketing and promotion of the product candidate in those countries. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from, and greater than, those in the United States, including additional preclinical studies or clinical trials as clinical studies conducted in one jurisdiction may not be accepted by regulatory authorities in other jurisdictions. In many jurisdictions outside the United States, a product candidate must be approved for reimbursement before it can be approved for sale in that jurisdiction. In some cases, the price that we 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.

Even if we receive regulatory approval of our product candidates, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our product candidates.

Any regulatory approvals that we receive for our product candidates will require surveillance to monitor the safety and efficacy of the product candidate. The FDA may also require a risk evaluation and mitigation strategy in order to approve our product candidates, which could entail requirements for a medication guide, physician communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. In addition, if the FDA or a comparable foreign regulatory authority approves our product candidates, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion, import, export and recordkeeping for our product candidates will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with cGMPs and cGCPs for any clinical trials that we conduct post-approval. Later discovery of previously unknown problems with our product candidates, including adverse events of unanticipated severity or frequency, or with our third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in, among other things:

- restrictions on the marketing or manufacturing of our product candidates, withdrawal of the product from the market, or voluntary or mandatory product recalls;
- fines, warning letters or holds on clinical trials;
- refusal by the FDA to approve pending applications or supplements to approved applications filed by us or suspension or revocation of license approvals;
- product seizure or detention, or refusal to permit the import or export of our product candidates; and
- injunctions or the imposition of civil or criminal penalties.

The FDA's and other regulatory authorities' policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability.

Coverage and reimbursement may be limited or unavailable in certain market segments for our product candidates, which could make it difficult for us to sell our product candidates profitably.

Successful sales of our product candidates, if approved, depend on the availability of coverage and adequate reimbursement from third-party payors. In addition, because our product candidates represent new approaches to the treatment of cancer, we cannot accurately estimate the potential revenue from our product candidates.

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. Obtaining coverage and adequate reimbursement from governmental healthcare programs, such as Medicare and Medicaid, and commercial payors is critical to new product acceptance.

Government authorities and third-party payors, such as private health insurers and health maintenance organizations, decide which drugs and treatments they will cover and the amount of reimbursement. Reimbursement by a third-party payor may depend upon a number of factors, including, but not limited to, the third-party 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 of a product from a government or other third-party payor is a time-consuming and costly process that could require us to provide to the payor supporting scientific, clinical and cost-effectiveness data for the use of our products. Even if we obtain coverage for a given product, the resulting reimbursement payment rates might not be adequate for us to achieve or sustain profitability or may require co-payments that patients find unacceptably high. Patients are unlikely to use our product candidates unless coverage is provided and reimbursement is adequate to cover a significant portion of the cost of our product candidates.

In the United States, no uniform policy of coverage and reimbursement for products exists among third-party payors. 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 product candidates to each payor separately, with no assurance that coverage and adequate reimbursement will be obtained.

Third-party payors, whether domestic or foreign, or governmental or commercial, are developing increasingly sophisticated methods of controlling healthcare costs. In both the United States and certain foreign jurisdictions, there have been a number of legislative and regulatory changes to the health care system that could impact our ability to sell our products profitably. In particular, in 2010, the Healthcare Reform Act was enacted. The Healthcare Reform Act and its implementing regulations, among other things, revised the methodology by which rebates owed by manufacturers to the state and federal government for covered outpatient drugs and certain biologics, including our product candidates, under the Medicaid Drug Rebate Program are calculated, increased the minimum Medicaid rebates owed by most manufacturers under the Medicaid Drug Rebate Program, extended the Medicaid Drug Rebate program to utilization of prescriptions of individuals enrolled in Medicaid managed care organizations, subjected manufacturers to new annual fees and taxes for certain branded prescription drugs, and provided incentives to programs that increase the federal government's comparative effectiveness research.

Other legislative changes have been proposed and adopted in the United States since the Healthcare Reform Act was enacted. In August 2011, the Budget Control Act of 2011, among other things, created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions of Medicare payments to providers up to 2% per fiscal year, which went into effect on April 1, 2013 and will remain in effect until 2024, unless additional congressional action is taken. In January 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, or the ATRA, which, among other things, reduced Medicare payments to several providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

There 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 and/or impose price controls may adversely affect:

- the demand for our product candidates, if we obtain regulatory approval;
- our ability to set a price that we believe is fair for our products;
- our ability to generate revenue and achieve or maintain profitability;
- the level of taxes that we are required to pay; and
- the availability of capital.

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

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

We are exposed to the risk of employee fraud or other illegal activity by our employees, independent contractors, 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 laws in the United States and similar foreign fraudulent misconduct laws, 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 involve the improper use of information obtained in the course of patient recruitment for clinical trials.

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 may 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 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. In addition, the approval and commercialization of any of our product candidates outside the United States will also likely subject us to foreign equivalents of the healthcare laws mentioned above, among other foreign laws.

Risks Related To Our Intellectual Property

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

Competitors may infringe the patents of our licensors. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. In addition, in an infringement proceeding, a court may decide that one or more of our patents is not valid or is unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation or defense proceedings could put one or more of our patents at risk of being invalidated, held unenforceable, or interpreted narrowly and could put our patent applications at risk of not issuing. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business. In the event of a successful claim of infringement against us, we may have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, obtain one or more licenses from third parties, pay royalties or redesign our infringing products, which may be impossible or require substantial time and monetary expenditure.

Periodic maintenance fees on any issued patent are due to be paid to the United States Patent and Trademark Office, or USPTO, and foreign patent agencies in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Noncompliance events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. In such an event, our competitors might be able to enter the market, which would have a material adverse effect on our business.

We may incur substantial costs as a result of litigation or other proceedings relating to patent and other intellectual property rights.

The cost to us of any litigation or other proceeding relating to intellectual property rights, even if resolved in our favor, could be substantial. Some of our competitors may be better able to sustain the costs of complex patent litigation because they have substantially greater resources. If there is litigation against us, we may not be able to continue our operations.

Should third parties file patent applications, or be issued patents claiming technology also used or claimed by us, we may be required to participate in interference proceedings in the USPTO to determine priority of invention. We may be required to participate in interference proceedings involving our issued patents and pending applications. We may be required to cease using the technology or to license rights from prevailing third parties as a result of an unfavorable outcome in an interference proceeding. A prevailing party in that case may not offer us a license on commercially acceptable terms.

Issued patents covering our product candidates could be found invalid or unenforceable if challenged in court or the USPTO.

If we or one of our licensing partners initiate legal proceedings against a third party to enforce a patent covering one of our product candidates, the defendant could counterclaim that the patent covering our product candidate, as applicable, 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. Third parties may also raise similar claims before administrative bodies in the United States or abroad, even outside the context of litigation. Such mechanisms include re-examination, post grant review, and equivalent proceedings in foreign jurisdictions (e.g., opposition proceedings). Such proceedings could result in revocation or amendment to our patents in such a way that they no longer 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, our patent counsel and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on our product candidates. Such a loss of patent protection could have a material adverse impact on our business.

If we are unable to protect our proprietary rights, we may not be able to compete effectively or operate profitably.

Our success is dependent in part on maintaining and enforcing the patents and other proprietary rights that we have licensed and may develop, and on our ability to avoid infringing the proprietary rights of others. All of our intellectual property rights are licensed from another entity, and as such the preparation and prosecution of these patents and patent applications was not performed by us or under our control. Furthermore, patent law relating to the scope of claims in the biotechnology field in which we operate is still evolving and, consequently, patent positions in our industry may not be as strong as in other more well-established fields. The patent positions of biotechnology companies can be highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. No consistent policy regarding the breadth of claims allowed in biotechnology patents has emerged to date.

The issuance of a patent is not conclusive as to its validity or enforceability and it is uncertain how much protection, if any, will be given to the patents we have licensed from the NIH or from Moffitt if either the NIH, Moffitt or we attempt to enforce the patents and/or if they are challenged in court or in other proceedings, such as oppositions, which may be brought in foreign jurisdictions to challenge the validity of a patent. A third party may challenge the validity or enforceability of a patent after its issuance by the Patent Office. It is possible that a competitor may successfully challenge our patents or that a challenge will result in limiting their coverage. Moreover, the cost of litigation to uphold the validity of patents and to prevent infringement can be substantial. If the outcome of litigation is adverse to us, third parties may be able to use our patented invention without payment to us. Moreover, it is possible that competitors may infringe our patents or successfully avoid them through design innovation. To stop these activities we may need to file a lawsuit. These lawsuits are expensive and would consume time and other resources, even if we were successful in stopping the violation of our patent rights. In addition, there is a risk that a court would decide that our patents are not valid and that we do not have the right to stop the other party from using the inventions. There is also the risk that, even if the validity of our patents were upheld, a court would refuse to stop the other party on the ground that its activities are not covered by, that is, do not infringe, our patents.

Should third parties file patent applications, or be issued patents claiming technology also used or claimed by our licensor(s) or by us in any future patent application, we may be required to participate in interference proceedings in the United States Patent and Trademark Office to determine priority of invention for those patents or patent applications that are subject to the first-to-invent law in the United States, or may be required to participate in derivation proceedings in the United States Patent and Trademark Office for those patents or patent applications that are subject to the first-inventor-to-file law in the United States. We may be required to participate in such interference or derivation proceedings involving our issued patents and pending applications. We may be required to cease using the technology or to license rights from prevailing third parties as a result of an unfavorable outcome in an interference proceeding or derivation proceeding. A prevailing party in that case may not offer us a license on commercially acceptable terms.

We cannot prevent other companies from licensing most of the same intellectual properties that we have licensed or from otherwise duplicating our business model and operations.

The intellectual properties that we are using to develop TIL-based cancer therapy products were licensed to us by the NIH. The issued or pending patents that the NIH licensed to us are exclusive, and specific with respect to melanoma, breast, HPV-associated, bladder and lung cancers. No assurance can be given that the NIH has not previously licensed, or that the NIH hereafter will not license to other biotechnology companies some or all of the non-exclusive technologies available to us under the NIH License Agreement. In addition, one pending U.S. patent application in the NIH License Agreement is not owned solely by the NIH. No assurance can be given that NIH's co-owner of the certain pending U.S. patent application in the License Agreement has not previously licensed, or that the co-owner thereafter will not license, to other biotechnology companies some or all of the technologies available to us. Co-ownership of these intellectual properties will create issues with respect to our ability to enforce the intellectual property rights in courts, and will create issues with respect to the accountability of one entity with respect to the other.

Since the NCI, MD Anderson Cancer Center, and the H. Lee Moffitt Cancer & Research Institute and others already use the ACT technology in therapy for the treatment of Stage IV metastatic melanoma, their methods and data are also available to third parties, who may want to enter into our line of business and compete against us. We currently do not own any exclusive rights on our entire product portfolio that could be used to prevent third parties from duplicating our business plan or from otherwise directly competing against us. While additional technologies that may be developed under our CRADA may be licensed to us on an exclusive basis, no assurance can be given that our existing exclusive rights and will be sufficient to prevent others from competing with us and developing substantially similar products.

The use of our technologies could potentially conflict with the rights of others.

Our potential competitors or others may have or acquire patent rights that they could enforce against us. If they do so, then we may be required to alter our products, pay licensing fees or cease activities. If our products conflict with patent rights of others, third parties could bring legal actions against us or our collaborators, licensees, suppliers or customers, claiming damages and seeking to enjoin manufacturing and marketing of the affected products. If these legal actions are successful, in addition to any potential liability for damages, we could be required to obtain a license in order to continue to manufacture or market the affected products. We may not prevail in any legal action and a required license under the patent may not be available on acceptable terms or at all.

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 dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biopharmaceutical industry involve both technological and legal complexity, and is therefore costly, time-consuming and inherently uncertain. In addition, the United States has recently enacted and is currently implementing wide-ranging patent reform legislation. Recent U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and 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. Depending on decisions by the U.S. Congress, the federal courts, and the USPTO, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future. While we do not believe that any of the patents owned or licensed by us will be found invalid based on this decision, we cannot predict how future decisions by the courts, the U.S. Congress or the USPTO may impact the value of our patents.

We have limited foreign intellectual property rights and may not be able to protect our intellectual property rights throughout the world.

We have limited intellectual property rights outside the United States. Filing, prosecuting and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and further, may export otherwise infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States. These products may compete with our 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, trade secrets and other intellectual property protection, particularly those relating to biopharmaceutical products, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

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 used or disclosed confidential information of these third parties or our employees' former employers. Litigation may be necessary to defend against these claims. 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.

Risks Related To Our Securities

We may be subject to claims for rescission or damages in connection with certain sales of shares of our common stock in the open market.

In January 2014, the SEC declared effective a registration statement that we filed to cover the resale of shares issued and sold (or to be issued and sold) by certain selling stockholders. On March 11, 2016, that registration statement (and the prospectus contained therein) became ineligible for future use, and selling stockholders could no longer sell any shares of our common stock in open market transactions by means of that prospectus. We believe that certain stockholders did sell up to 128,500 shares of our common stock in open market transactions in May 2016 by means of the ineffective registration statement/prospectus. Accordingly, those sales were not made in accordance with Sections 5 and 10(a)(3) of the Securities Act, and the purchasers of those shares may have rescission rights (if they still own the shares) or claims for damages (if they no longer own the shares). In addition, we also may have indemnification obligations to the selling stockholders. The amount of any such liability is uncertain.

Our existing directors and executive officers hold a substantial amount of our common stock and may be able to influence significant corporate decisions.

As of June 17, 2016, our officers and directors beneficially owned approximately 10% of our outstanding common stock. These stockholders, if they act together, may be able to materially affect the outcome of matters presented to our stockholders, including the election of our directors and other corporate actions such as:

- A merger with or into another company;
- A sale of substantially all of our assets; and
- Amendments to our articles of incorporation.

Additionally, the decisions of these stockholders may conflict with our interests or those of our other stockholders and the market price of our stock may be adversely affected by market volatility.

Our stock price may be volatile, and our stockholders' investment in our stock could decline in value.

The market price of our common stock is likely to be volatile and could fluctuate widely in response to many factors, including but not limited to:

- announcements of the results of clinical trials by us or our competitors;
- developments with respect to patents or proprietary rights;
- announcements of technological innovations by us or our competitors;
- announcements of new products or new contracts by us or our competitors;
- actual or anticipated variations in our operating results due to the level of development expenses and other factors;
- changes in financial estimates by securities analysts and whether our earnings meet or exceed such estimates;
- conditions and trends in the pharmaceutical, biotechnology and other industries;
- receipt, or lack of receipt, of funding in support of conducing our business;
- regulatory developments within, and outside of, the United States;
- litigation or arbitration;
- general volatility in the financial markets;
- general economic, political and market conditions and other factors; and
- the occurrence of any of the risks described in this prospectus.

You may experience future dilution as a result of future equity offerings or other equity issuances.

We will have to raise additional capital in the future. To raise additional capital, we may in the future offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock. We cannot assure you that we will be able to sell shares in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering. The price per share at which we sell additional shares of our common stock or other securities convertible into or exchangeable for our common stock in future transactions may be higher or lower than the price per share in this offering.

Future sales of our common stock may depress our stock price.

As of June 17, 2016, we had over 58 million shares of common stock outstanding, most of which are currently unrestricted, freely tradable shares. However, as a result of the registration of the shares included in this prospectus, a total of 9,684,000 shares of currently outstanding common stock that are owned by the selling stockholders will be able to be freely sold on the market In addition, we are required to register the re-sale of 11,368,633 shares of common stock issuable upon conversion of our Series B Preferred (following our receipt of stockholder approval of the conversion features of the Series B Preferred). An additional approximately 9,270,000 shares formerly registered for resale are eligible for public resale under Rule 144. The sudden release of 9,684,000 additional freely trading shares included in this prospectus onto the market, or the perception that such shares (as well as the shares potentially issuable upon conversion of the Series B Preferred) will or could come onto the market, could have an adverse effect on the trading price of our stock. No prediction can be made as to the effect, if any, that sales of the shares included in this or any other prospectus or subject to Rule 144 sales, or the availability of such shares for sale, will have on the market prices prevailing from time to time. Nevertheless, the possibility that substantial amounts of common stock may be sold in the public market may adversely affect prevailing market prices for our common stock and could impair our ability to raise capital through the sale of our equity securities.

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

Although we have research coverage by securities and industry analysts, if coverage is not maintained, the market price for our stock may be adversely affected. Our stock price also may decline if any analyst who covers us issues an adverse or erroneous opinion regarding us, our business model, our intellectual property or our stock performance, or if our clinical trials and operating results fail to meet analysts' expectations. If one or more analysts cease coverage of us or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our stock price or trading volume to decline and possibly adversely affect our ability to engage in future financings

If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results. As a result, we could become subject to sanctions or investigations by regulatory authorities and/or stockholder litigation, which could harm our business and have an adverse effect on our stock price.

As a public reporting company, we are subject to various regulatory requirements, including the Sarbanes-Oxley Act of 2002, which requires our management to assess and report on our internal control over financial reporting. Until September 2015, we were a small company with few employees and we did not have sufficient personnel within our finance department to properly conduct all of internal control procedures and activities that require segregation of powers and responsibilities. As a result, as of December 31, 2014, we did not maintain effective internal control over our financial reporting systems. In June 2015 we hired a seasoned Chief Financial Officer to establish effective internal controls over our reporting. As of December 31, 2015, we believe we have remedied any material weaknesses and have sufficient controls in place to comply with the Sarbanes-Oxley Act of 2002. Nevertheless, in future years, our testing, or the subsequent testing by our independent registered public accounting firm, may reveal deficiencies in our internal controls that we would be required to remediate in a timely manner so as to be able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act each year. If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner each year, we could be subject to sanctions or investigations by the SEC, NASDAQ or other regulatory authorities which would require additional financial and management resources and could adversely affect the market price of our common stock. Material weaknesses in our internal controls could result in a loss of investor confidence in our financial reports.

Our board could issue one or more additional series preferred stock without stockholder approval with the effect of diluting existing stockholders and impairing their voting and other rights.

Our articles of incorporation authorize the issuance of up to 50,000,000 shares of "blank check" preferred stock (of which 17,000 are designated as Series A Convertible Preferred Stock and 11,500,000 are designated as Series B Preferred Stock) with designations, rights and preferences as may be determined from time to time by our board of directors. Our board is empowered, without stockholder approval, to issue one or more additional series of preferred stock with dividend, liquidation, conversion, voting or other rights which could dilute the interest of, or impair the voting power of, our common stockholders. The issuance of an additional series of preferred stock could be used as a method of discouraging, delaying or preventing a change in control. For example, it would be possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to effect a change in control of our company.

We do not anticipate paying cash dividends for the foreseeable future, and therefore investors should not buy our stock if they wish to receive cash dividends.

We have never declared or paid any cash dividends or distributions on our common stock. We currently intend to retain our future earnings to support operations and to finance expansion and, therefore, we do not anticipate paying any cash dividends on our common stock in the foreseeable future.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements which relate to future events or to our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results to be materially different from any future results expressed or implied by the forward-looking statements. In some cases, you can identify forward-looking statements by the use of words such as “believe,” “anticipate,” “intend,” “plan,” “estimate,” “may,” “could,” “anticipate,” “predict,” or “expect” and similar expressions. You should not place undue reliance on forward-looking statements since they involve known and unknown risks, uncertainties and other factors that are, in many cases, beyond our control. Forward-looking statements are not guarantees of future performance. Actual events or results may differ materially from those discussed in the forward-looking statements as a result of various factors. Except as required by applicable law, we do not undertake any obligation to publicly update any forward-looking statements, whether as a result of new information, future developments or otherwise. Important factors that could cause actual results to differ materially from those reflected in our forward-looking statements include, among others:

- capacity constraints at our contract manufacturers;
- our inability to obtain regulatory approval for, or successfully commercialize, our leading product candidate, LN-144 or our other product candidates, such as LN-145;
- our inability to secure and maintain relationships with collaborators and contract manufacturers;
- difficultly in enrolling patients in our clinical trials, and uncertainty of clinical trial results;
- our history of operating losses and inability to ever become profitable;
- our limited history of complying with public company reporting requirements;
- uncertainty and volatility in the price of our common stock;
- the costs and effects of existing and potential governmental investigation and litigation;
- our inability to meet the continued listing requirements of The NASDAQ Global Market;
- our inability to develop, implement and maintain appropriate internal controls in the future;
- uncertainty as to our employees’, independent contractors’ compliance with regulatory standards and requirements and insider trading rules;
- dependence on the efforts of third-parties to conduct and oversee our clinical trials for our product candidates, to manufacture clinical supplies of our product candidates, and to commercialize our product candidates;
- the extent of government regulations;
- a loss of any of our key management personnel;

- our inability to develop or commercialize our product candidates due to intellectual property rights held by third parties and our inability to protect the confidentiality of our trade secrets; and

- our inability to access capital in the future to fund proposed operations.

All written and verbal forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. We caution investors not to rely too heavily on the forward-looking statements we make or that are made on our behalf. We undertake no obligation, and specifically decline any obligation, to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise.

In addition, you should refer to the section of this prospectus entitled “Risk Factors” for a discussion of other important factors that may cause our actual results to differ materially from those expressed or implied by our 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 our 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.

USE OF PROCEEDS

We are registering these shares pursuant to the registration rights granted to the investors in the Private Placement. As a result, we will not receive any proceeds from the sale of the common stock by the selling stockholders pursuant to this prospectus. All proceeds from the sale of the shares will be for the account of the selling stockholders. The selling stockholders may sell these shares in the market or otherwise, at market prices prevailing at the time of sale, at prices related to the prevailing market price, or at negotiated prices.

MARKET PRICE OF AND DIVIDENDS ON COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

Market Information

Since February 26, 2015, our common stock has been listed for trading on The NASDAQ Global Market under the symbol “LBIO”. From October 23, 2013 until February 26, 2015, our common stock was quoted on the OTCQB market of the OTC Markets.

The following table shows the high and low prices of our common shares on the OTCQB and The NASDAQ Global Market. The following quotations reflect inter-dealer prices, without retail mark-up, mark-down or commission and may not necessarily represent actual transactions. On July 29, 2016, the last reported sales price of our common stock as reported on The NASDAQ Global Market was $8.84.

Fiscal Year Ending December 31, 2016	**High**	**Low**
First Quarter	$ 7.73	$ 4.24
Second Quarter	$ 9.07	$ 4.81
Third Quarter (through July 29, 2016)	$ 8.86	$ 4.90

Fiscal Year Ended December 31, 2015	**High**	**Low**
First Quarter	$ 15.03	$ 7.60
Second Quarter	$ 13.89	$ 8.02
Third Quarter	$ 10.29	$ 5.42
Fourth Quarter	$ 8.45	$ 5.27

Fiscal Year Ended December 31, 2014	**High**	**Low**
First Quarter	$ 10.00	$ 4.75
Second Quarter	$ 11.25	$ 5.50
Third Quarter	$ 8.50	$ 6.07
Fourth Quarter	$ 8.40	$ 4.97

Stockholders

As of July 29, 2016, there were approximately 100 holders of record of our common stock, not including any persons who hold their stock in “street name.”

Dividends

We have not paid any dividends on our common stock to date and do not anticipate that we will pay dividends in the foreseeable future. Any payment of cash dividends on our common stock in the future will be dependent upon the amount of funds legally available, our earnings, if any, our financial condition, our anticipated capital requirements and other factors that the Board of Directors may think are relevant. However, we currently intend for the foreseeable future to follow a policy of retaining all of our earnings, if any, to finance the development and expansion of our business and, therefore, do not expect to pay any dividends on our common stock in the foreseeable future.

Under the terms of each of the Series A Preferred and the Series B Preferred, we may not declare, pay or set aside any dividends on shares of any class or series of capital stock (other than dividends on shares of common stock payable in shares of common stock) unless the holders of the Series A Preferred and Series B Preferred first receive, or simultaneously receive, an equal dividend on each outstanding share of Series A Preferred or the Series B Preferred, respectively.

SELECTED FINANCIAL DATA

The following table presents our selected financial data. The selected statements of income data for each of the years in the three-year period ended December 31, 2015, and the selected balance sheet data as of December 31, 2014 and 2015, are derived from our audited financial statements included in this prospectus. The selected statements of income data for the three months ended March 31, 2016 and 2015 and the selected consolidated balance sheet data as of March 31, 2016 are derived from our unaudited financial statements contained herein. The selected statements of income data for each of the years in the two-year period ended December 31, 2012, and the selected balance sheet data as of December 31, 2013, 2012 and 2011, are derived from our audited financial statements not included in this prospectus. We have prepared the unaudited financial information set forth below on the same basis as our audited financial statements and have included all adjustments, consisting of only normal recurring adjustments, that we consider necessary for a fair presentation of our financial position and operating results for such periods.

The results for any interim period are not necessarily indicative of the results that may be expected for a full year. Additionally, our historical results are not necessarily indicative of future results. The information set forth below should be read together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and the accompanying notes appearing elsewhere in this prospectus.

	Three Months Ended March 31,		Years Ended December 31,				
	2016	2015	2015	2014	2013	2012	2011
	(Unaudited)		(Dollars in thousands, except per share amounts)				
Net revenue	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operating expenses:							
Research and development	4,192	2,398	15,470	3,849	2,154	1,656	1,756
Impairment of intangible assets	-	-	-	-	-	-	160
General and administrative	2,818	2,900	12,390	8,192	3,831	6,476	19,303
Cost of Lion transaction - related party	-	-	-	-	16,656	-	-
Other income (loss)	126	-	200	6	(2,741)	4,825	(4,476)
Net loss	$ (6,884)	$ (5,298)	$ (27,660)	$ (12,035)	$ (25,382)	$ (3,308)	$ (25,694)
Net loss per share	$ (0.14)	$ (0.14)	$ (0.62)	$ (0.48)	$ (3.47)	$ (4.14)	$ (33.84)

	As of March 31,	As of December 31,				
	2016	2015	2014	2013	2012	2011
	(Unaudited)	(Dollars in thousands)				
Total assets	$ 100,768	$ 105,653	$ 46,507	$ 19,874	$ 29	$ 568
Total liabilities	1,830	1,630	$ 1,662	$ 2,270	$ 11,349	$ 13,349
Derivative liabilities	-	-	-	-	-	$ 7,938
Total stockholders' equity	$ 98,938	$ 104,023	$ 44,845	$ 17,604	$ (11,319)	$ (12,781)

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

The following discussion and analysis of our results of operations and financial condition should be read in conjunction with our financial statements and the notes to those financial statements that are included elsewhere in this prospectus. Our discussion includes forward-looking statements based upon current expectations that involve risks and uncertainties, such as our plans, objectives, expectations and intentions. Actual results and the timing of events could differ materially from those anticipated in these forward-looking statements as a result of a number of factors, including those set forth under the "Business" section and elsewhere in this prospectus. We use words such as "anticipate," "estimate," "plan," "project," "continuing," "ongoing," "expect," "believe," "intend," "may," "will," "should," "could," and similar expressions to identify forward-looking statements. All forward-looking statements included in this prospectus are based on information available to us on the date hereof and, except as required by law, we assume no obligation to update any such forward-looking statements.

Overview

We are a clinical-stage biotechnology company focused on the development and commercialization of novel cancer immunotherapy products designed to harness the power of a patient's own immune system to eradicate cancer cells. Our lead program is an adoptive cell therapy utilizing tumor-infiltrating lymphocytes (TIL), which are T cells derived from patients' tumors, for the treatment of metastatic melanoma. TIL therapy is being developed in collaboration with the National Cancer Institute (NCI). A patient's immune system, particularly their TIL, plays an important role in identifying and killing cancer cells. TIL therapy involves growing a patient's TIL in special culture conditions outside the patient's body, or ex vivo, and then infusing the T cells back into the patient in combination with interleukin-2 (IL-2). By taking TIL away from the immune-suppressive tumor microenvironment in the patient, the T cells can rapidly proliferate. Billions of TIL, when infused back into the patient, are more able to search out and eradicate the tumor.

Although we were formed in 2007, we did not commence our current biotechnology business until 2011. In May 2013 we completed a restructuring of all of our outstanding debt and equity securities (the "Restructuring") and raised $1.25 million through the sale of our common stock. As part of the Restructuring, we converted $7.2 million of senior secured promissory notes, $1.7 million of bridge promissory notes, and $0.3 million in other outstanding debt into shares of common stock at a conversion price of $1.00 per share. On September 26, 2013, we amended and restated our Articles of Incorporation to, among other things, effect a 1-for-100 reverse stock split (pro-rata reduction of outstanding shares) of our common stock, increase (after the reverse stock split) the number of our authorized number of shares of common stock to 150,000,000 shares, and authorize the issuance of 50,000,000 shares of "blank check" preferred stock, $0.001 par value per share.

In November 2013, in order to fund our anticipated growth and expected research and development expenses, we raised a total of $23,290,600 in a private placement of shares of our common stock, shares of a new series of preferred stock designated as "Series A Convertible Preferred Stock," and warrants to purchase shares of common stock. Because of the capital raised in November 2013, in 2014 we were able to increase our operations, hire additional employees and consultants and, by the end of 2014, we were able to open our own research and development facilities in Tampa, Florida, near the H. Lee Moffitt Cancer & Research Institute (Moffitt) on the campus of the University of South Florida. On December 22, 2014 we closed an underwritten offering of 6,000,000 shares of our common stock, including shares sold pursuant to the exercise in full of the underwriters' option to purchase additional shares, at a price of $5.75 per share. The net proceeds to us from the offering were approximately $32.2 million. In 2015 we continued to increase our operations and hire additional employees and officer. On March 3, 2015 we closed a second underwritten public offering of 9,200,000 shares of our common stock, including shares sold pursuant to the exercise in full of the underwriters' option to purchase additional shares, at a price of $8.00 per share. The net proceeds to us from the second public offering were approximately $68.2 million. In June 2016, we raised a total of $100 million in a private placement of shares of our common stock and a new series of preferred stock designated as "Series B Preferred Stock." As a result of the financings effected in November 2013, December 2014 and March 2015, we had, as of December 31, 2015, $103.7 million in cash, cash equivalents and short-term investments (which does not take into account the $95.7 million of net proceeds from our June 2016 offering).

During the third quarter of 2015, we initiated a Phase 2 clinical trial of our lead product candidate, LN-144, for the treatment of refractory metastatic melanoma. The purpose of the single-arm study is to evaluate the safety, efficacy and feasibility of autologous TIL infusion (LN-144).

In 2011, we acquired from the National Institutes of Health (NIH) a non-exclusive, worldwide right and license to certain NIH patents and patent applications to develop and manufacture autologous TIL for the treatment of metastatic melanoma, ovarian, breast, and colorectal cancers. Under a Cooperative Research and Development Agreement (CRADA) with the U.S. Department of Health and Human Services, as represented by the NCI, we support the in vitro development of improved methods for the generation and selection of TIL, the development of large-scale production of TIL, and clinical trials using these improved methods of generating TIL. On January 22, 2015, we executed an amendment to the CRADA to include four new indications. On February 9, 2015, the NIH granted us an exclusive, worldwide license to treat metastatic melanoma with TIL therapy, and on October 2, 2015, the NIH license agreement was amended to include the exclusive rights to treat breast, lung, bladder and HPV-associated cancers with TIL therapy. The amendment also removed our non-exclusive rights to treat colorectal and ovarian cancers with TIL therapy. Under the currently amended CRADA, we are required to pay the NIH a total of $300,000 annually. In addition to our CRADA, we also conduct research and development on TIL technology at our research facility in Tampa, Florida.

As a development stage company that is currently engaged in the development of novel cancer immunotherapy products, we have not generated any revenues from our biotechnology business or otherwise since our formation. We currently do not anticipate that we will generate any revenues during the remainder of 2016 from the sale or licensing of our products. Our ability to generate revenues in the future will depend on our ability to complete the development of our product candidates and to obtain regulatory approval for them.

Research and development activities are central to our business model. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect our research and development expenses to increase over the next several years as we continue to conduct our clinical trial for our products and as we increase our research and development efforts in other cancer indications. However, it is difficult to determine with certainty the duration and completion costs of our current or future preclinical programs and clinical trials of our product candidates.

The duration, costs and timing of our clinical trials and development of our product candidates will depend on a number of factors that include, but are not limited to, the number of patients that enroll in the trial, per patient trial costs, number of sites included in the trial, discontinuation rates of patients, duration of patient follow-up, efficacy and safety profile of the product candidate, and the length of time required to enroll eligible patients. Additionally, the probability of success for our product candidate will depend on a number of factors, including competition, manufacturing capability and cost efficiency, and commercial viability.

Results of Operations for the Years Ended December 31, 2015, 2014 and 2013

Costs and expenses

Research and Development Expense (in thousands)

	Year Ended December 31,			Aggregate Change	
	2015	2014	2013	2015 from 2014	2014 from 2013
Research and development expense	$ 15,470	$ 3,849	$ 2,154	$ 11,621	$ 1,695
Stock-based compensation expense included in research and development expense	$ 2,248	$ 1,144	$ 825	$ 1,104	$ 319

Research and development expense consists of costs incurred in performing research and development activities, clinical trials, personnel costs for research and development employees and consultants, rent at our research and development facility in Tampa, Florida, cost of laboratory supplies, manufacturing expenses, and fees paid to third parties, including the NCI and our third party contract manufacturer that will process and manufacture our products for our clinical trial. Research and development expenses also include amounts paid to the National Institutes of Health under terms of our license agreements, and to the NCI under the CRADA.

During the year ended December 31, 2015, our research and development costs increased by $11.6 million when compared to the same period in 2014. The increase was mainly attributable to the expansion of our CRADA in 2015, the general expansion of our research and development efforts, the establishment of our Tampa, Florida, research facility in the fourth quarter of 2014 and the initiation of our Phase II clinical trial in September 2015. Research and development costs were $2.7 million in 2014 compared to $1.3 million for the year ended December 31, 2013. Research and development expenses in 2014 increased over 2013 as we expanded our research and development activities including: engaging Lonza to commence establishing a centralized TIL manufacturing center, entering into a clinical trial grant agreement with Moffitt Cancer Center, and opening our own research and development laboratory in Tampa, Florida.

For the years ended December 31, 2015, 2014 and 2013, we incurred $2.2 million, $1.1 million and $0.8 million, respectively, of non-cash stock-based compensation costs. The increases during the last three years were attributable to the increase in our hiring in support of our increased clinical development activities.

General and Administrative Expense (in thousands)

	Year Ended December 31,			Aggregate Change	
	2015	2014	2013	2015 from 2014	2014 from 2013
General and administrative expenses	$ 12,390	$ 8,192	$ 3,831	$ 4,198	$ 4,361
Stock-based compensation expense included in general administrative expense	$ 6,275	$ 2,670	$ 1,925	$ 3,605	$ 745

General and administrative expenses during these periods included personnel costs for our employees engaged in general and administrative activities, legal fees, audit and tax fees, consultants and professional services, and general corporate expenses. For the year ended December 31, 2015 our general and administrative expenses increased by $4.2 million, or 51% as compared to the year ended December 31, 2014. For the year ended December 31, 2014, our general and administrative expenses increased by $4.4 million, or 114% compared to the prior year comparable period. The increase in our general and administrative expenses during the years ended December 31, 2015 and 2014 was due to the increase in our overall corporate activities, including business development and increases in employment related expenses, insurance costs and legal fees. For the years ended December 31, 2015, 2014 and 2013, we incurred $6.3 million, $2.7 million, and $1.9 million, respectively, of non-cash stock-based compensation costs. Share based compensation includes stock and options granted to our executive officers, our employees, our directors, and our consultants and advisors. As a result of our increased operations and the additional employees, our general and administrative expenses in the future are expected to continue to increase.

Cost of Lion Transaction (Related Party).

In July 2013, we entered into an Agreement and Plan of Merger (the “Lion Agreement”) with Lion Biotechnologies, Inc., a privately held Delaware corporation. Under the Lion Agreement, Lion Biotechnologies, Inc.’s stockholders received, in exchange for all of their issued and outstanding shares of common stock, an aggregate of 1,340,000 shares of our common stock with a fair value of $6,700,000. Under the Lion Agreement, we also were obligated to issue an additional 1,350,000 shares of common stock upon the achievement of certain milestones related to our financial performance and position. These other milestones were achieved in the fourth quarter of 2013 and, as a result, we issued all 1,350,000 shares (having a fair value of $9,956,250) in 2013. The value of the shares issued under the Lion Agreement was recognized and recorded as an expense in 2013. The purpose of the Lion Agreement was to acquire access to technical and managerial resources to build our current and future products, which we believed would enhance or future operations and enable us to obtain additional funding. The technical resources that we acquired included access to next generation T-cell technologies (including term sheets for such technologies), access to cancer vaccine technologies that Lion Biotechnologies, Inc. was evaluating at Harvard University, NIH, Baylor University and other institutions, and other proprietary technologies and ideas on novel T-cell manufacturing technologies that that company was designing.

Other Income/(Expense) (in thousands)

	Year Ended December 31,			Aggregate Change	
	2015	2014	2013	2015 from 2014	2014 from 2013
Interest Income	$ 200	$ 6	$ (445)	$ 194	$ 6
Cost to induce exchange transaction	$ -0-	$ -0-	$ (2,296)	$ -0-	$ 2,296

Interest income results from our interest-bearing cash and investment balances. Interest income for the year ended December 31, 2015 increased over 2014 and 2013 due to the higher cash balances in 2015 as a result of the proceeds received from our equity financings in late 2014 and early 2015. In 2013, we incurred interest expense on our promissory notes which were restructured in 2013.

In May 2013 we completed a restructuring of our unregistered debt and equity securities (the “Restructuring”) and raised $1.25 million. Creditors holding (i) an aggregate of approximately $7.2 million (including accrued interest and penalties) of the senior secured notes (the “Senior Secured Notes”), (ii) an aggregate of approximately $1.7 million (including accrued interest and penalties) of bridge promissory notes (the “12% Secured Notes”), and (iii) an aggregate of approximately $0.3 million of other outstanding debt converted these debts into shares of common stock at a conversion price of $1.00 per share. In connection with the Restructuring, we also sold a total of 3,605,069 shares of common stock for $1,250,000. The effect of the Restructuring and related stock sales and transactions was to extinguish all outstanding secured and unsecured promissory notes (representing liabilities of approximately $8,373,000 in the aggregate) and to raise a total of $1,350,000 of cash from the sale of the securities. We recorded a non-cash expense of $2,296,000 in 2013 as a result of the Restructuring (cost to induce exchange transaction).

Net Loss

We had a net loss of $27.7 million, $12.0 million, and $25.4 million for the years ended December 31, 2015, 2014 and 2013, respectively. The increase in our net loss during 2015 was due to an increase in general and administrative expenses, as described above, along with the expansion of our research and development activities. We anticipate that we will continue to incur net losses in the future as we further invest in our research and development activities, including our clinical development, and we do not expect to generate any revenues in the near term.

Cash Flows from Operating, Investing and Financing Activities (in thousands):

	Year Ended December 31,		
	2015	2014	2013
Net cash provided by (used in):			
Operating activities	$ (18,381)	$ (8,633)	$ (3,661)
Investing activities	$ (91,153)	$ (1,592)	$ (13)
Financing activities	$ 78,267	$ 35,462	$ 23,346
Net (decrease) increase in cash and cash equivalents	$ (31,267)	$ 25,237	$ 19,672

Net cash used in operating activities was approximately $18.4 million in 2015 compared to approximately $8.6 million and $3.7 million in 2014 and 2013, respectively. Net cash used in operating activities primarily consisted of cash payments related to the increased spending within our research and development group in support of our clinical development programs as well as the increase in our administrative functions as we scaled up our business in support of our clinical activities. The timing of cash requirements may vary from period to period depending on our research and development activities, including our planned clinical trials.

Net cash used in investing activities was approximately $91.2 million in 2015 compared to net cash used in investing activities of approximately $1.6 million and $13,000 in 2014 and 2013, respectively. The increase in investing activities in 2015 related to our investment of the approximately $100 million in proceeds we received from the 2014 and 2015 equity raises. Net cash used in investing activities in 2015 related to net purchases of short-term investments and capital expenditures. Capital expenditures were approximately $1.1 million, $1.6 million and $13,000 in 2015, 2014 and 2013, respectively. The objective of our investment policy is to ensure the safety and preservation of our capital while maximizing total return.

Net cash provided by financing activities was approximately $78.3 million in 2015 compared to approximately $35.5 million and $23.3 million in 2014 and 2013, respectively. Net cash provided by financing activities during the years reported related to the proceeds from the sale of our securities. In the first quarter of 2015, we completed an underwritten public offering in which we received net proceeds of approximately $68.3 million. Net cash provided by financing activities in 2015 and 2014 also included proceeds from the exercise of outstanding warrants of approximately $9.7 million and $3.2 million, respectively.

Results of Operations for the Three Months Ended March 31, 2016 and 2015

Costs and expenses

Research and Development

	For the Three Months Ended March 31,		Aggregate Change
	2016	**2015**	**2016 from 2015**
Research and development	$ 4,192	$ 2,398	$ 1,794
Stock-based compensation expense included in research and development expense	$ 585	$ 387	$ 198

During the three months ended March 31, 2016, our research and development costs increased by $1.8 million, or 75% when compared to the same period in 2015 due to the general expansion of our research and development efforts, the expansion of our Tampa, Florida, research facility and the initiation of our Phase 2 clinical trial. For the three months ended March 31, 2016 and 2015 we incurred $0.6 million and $0.4 million, respectively, of non-cash stock-based compensation costs. The increases in our research and development expenses were attributable to the increase in our hiring in support of our increased clinical development activities.

General and Administrative

	For the Three Months Ended March 31,		Aggregate Change
	2016	**2015**	**2016 from 2015**
General and Administrative expenses	$ 2,818	$ 2,900	$ (82)
Stock-based compensation expense included in general and administrative expense	$ 1,194	$ 1,080	$ 114

General and administrative expenses during these periods included compensation-related costs for our employees engaged in general and administrative activities (other than employees engaged in research and development), legal fees, audit and tax fees, consultants and professional services, and general corporate expenses. For the three months ended March 31, 2016, our general and administrative expenses remained consistent when compared to the same period in 2015. In the three-month periods ended March 31, 2016 and 2015 we incurred $1.2 million, and $1.1 million, respectively, of non-cash stock-based compensation costs. Share based compensation included stock and options granted to our executive officers, our employees, our directors, and our consultants and advisors. As a result of our increased operations and the additional employees, our general and administrative expenses in the future are expected to continue to increase.

Net Loss

We had a net loss of $6.9 million and $5.3 million, for the three months ended March 31, 2016 and 2015, respectively. The increase in our net loss during 2016 period was due to an increase in research and development expenses, as described above, specifically the expansion of our clinical trial activities. We anticipate that we will continue to incur net losses in the future as we continue to invest in our research and development, and we do not expect to generate any revenues in the near term.

Cash Flows from Operating, Investing and Financing Activities (in thousands):

	For the three months ended March 31,	
	2016	**2015**
Net cash provided by (used in):		
Operating activities	$ (4,552)	$ (3,459)
Investing activities	(147)	(782)
Financing activities	-	70,612
Net (decrease) increase in cash and cash equivalents	$ (4,699)	$ 66,371

Net cash used in operating activities was approximately $4.6 million for the first three months of 2016 compared to approximately $3.5 million in the same period in 2015. Net cash used in operating activities primarily consisted of cash payments related to the increased spending within our research and development group in support of our clinical development programs as well as the increase in our administrative functions as we scaled up our business in support of our clinical activities. The timing of cash requirements may vary from period to period depending on our research and development activities, including our planned clinical trials.

Net cash used in investing activities was approximately $0.1 million for the quarter ended March 31, 2016 compared to net cash used in investing activities of approximately $0.8 million in the first quarter of 2015. Net cash used in investing activities in the first three months of 2016 related to net purchases of short-term investments and capital expenditures. Capital expenditures for the first quarter ended March 31, 2016 were approximately $0.02 million and $0.7 in 2016 and 2015, respectively.

Net cash provided by financing activities was $0 in 2016 compared to approximately $70.6 million in 2015 due to the underwritten public offering that occurred in March 2015.

Liquidity and Capital Resources

As of March 31, 2016, we had cash, cash equivalents, short-term investments of $99.2 million, and net working capital of $97.5 million (which amounts do not take into account the $95.7 million of net proceeds we generated from our June 2016 Private Placement).

As of March 31, 2016, we had no long-term debt obligations or other similar long-term liabilities other than various obligations under our CRADA and our license agreements. We have no financial guarantees, debt or lease agreements or other arrangements that could trigger a requirement for an early payment or that could change the value of our assets. We do not have any bank credit lines.

During the remainder 2016, we expect to continue to further ramp up our research and development activities, which will increase the amount of cash we will use in our operations. Our budget for 2016 includes significantly increased spending for clinical trials with LN-144 our lead product candidate and LN-145, and on research and development for other indications and TIL enhancements. In addition, we anticipate that we will have higher payroll expenses as we increase our professional staff. Based on the funds we had available at June 30, 2016, we believe that we have sufficient capital to fund our anticipated operating expenses for at least the next 12 months.

In January 2014, the SEC declared effective a registration statement that we filed to cover the resale of shares issued and sold (or to be issued and sold) by certain selling stockholders. In connection with the filing of our Annual Report on Form 10-K for the fiscal year ended December 31, 2015 on March 11, 2016, as a result of the Company not being eligible to use Form S-3 on that date, that registration statement (and the prospectus contained therein) became ineligible for future use, and selling stockholders could no longer sell any shares of our common stock in open market transactions by means of that prospectus. We believe that certain stockholders did sell up to 128,500 shares of our common stock in open market transactions in May 2016 by means of the ineffective registration statement/prospectus. Accordingly, those sales were not made in accordance with Sections 5 and 10(a)(3) of the Securities Act of 1933, as amended, and the purchasers of those shares may have rescission rights (if they still own the shares) or claims for damages (if they no longer own the shares). In addition, we also may have indemnification obligations to the selling stockholders. The amount of any such liability is uncertain. Should we be required to make payments to investors as a result of these unregistered sales of shares, our liquidity could be negatively impacted.

Inflation

Inflation and changing prices have had no effect on our continuing operations over our two most recent fiscal years.

Recent Accounting Pronouncements

See Note 2 of our financial statements included in this prospectus for a discussion of recent accounting pronouncements.

Critical Accounting Policies

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements and accompanying notes, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses, and related disclosure of contingent assets and liabilities. When making these estimates and assumptions, we consider our historical experience, our knowledge of economic and market factors and various other factors that we believe to be reasonable under the circumstances. Actual results may differ under different estimates and assumptions.

The accounting estimates and assumptions discussed in this section are those that we consider to be the most critical to an understanding of our financial statements because they inherently involve significant judgments and uncertainties.

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 estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting periods. Actual results could differ from these estimates. Significant estimates include valuation of available-for-sale investments, accounting for potential liabilities, the valuation allowance associated with our company’s deferred tax assets, and the assumptions made in valuing stock instruments issued for services.

Stock-Based Compensation

We periodically issue stock options and warrants to employees and non-employees in non-capital raising transactions for services and for financing costs. We adopted Financial Accounting Standards Board ("FASB") guidance effective January 1, 2006, and are using the modified prospective method in which compensation cost is recognized beginning with the effective date (a) for all share-based payments granted after the effective date and (b) for all awards granted to employees prior to the effective date that remain unvested on the effective date. We account for stock option and warrant grants issued and vesting to non-employees in accordance with accounting guidance whereby the fair value of the stock compensation is based on the measurement date as determined at either (a) the date at which a performance commitment is reached, or (b) the date at which the necessary performance to earn the equity instrument is complete.

We estimate the fair value of stock options using the Black-Scholes option-pricing model, which was developed for use in estimating the fair value of options that have no vesting restrictions and are fully transferable. This model requires the input of subjective assumptions, including the expected price volatility of the underlying stock and the expected life of stock options. Projected data related to the expected volatility of stock options is based on the historical volatility of the trading prices of our common stock and the expected life of stock options is based upon the average term and vesting schedules of the options. Changes in these subjective assumptions can materially affect the fair value of the estimate, and therefore the existing valuation models do not provide a precise measure of the fair value of our employee stock options.

Contractual Obligations

We acquire assets still in development and enter into research and development arrangements with third parties that often require milestone and royalty payments to the third party contingent upon the occurrence of certain future events linked to the success of the asset in development. Milestone payments may be required, contingent upon the successful achievement of an important point in the development life-cycle of the pharmaceutical product (e.g., approval of the product for marketing by a regulatory agency). If required by the arrangement, we may have to make royalty payments based upon a percentage of the sales of the pharmaceutical product in the event that regulatory approval for marketing is obtained. Because of the contingent nature of these milestone payments, they are not included in the table of contractual obligations.

These arrangements may be material individually, and in the event that milestones for multiple products covered by these arrangements were reached in the same period, the aggregate charge to expense could be material to the results of operations in any one period. In addition, these arrangements often give us the discretion to unilaterally terminate development of the product, which would allow us to avoid making the contingent payments.

Our current contractual obligations at December 31, 2015 that will require future cash payments are as follows:

	Payments due by period (in thousands)				
Contractual obligations	**Total**	**Less than 1 Year**	**1-3 years**	**3-5 years**	**More than 5 years**
Long-Term Debt Obligations	-	-	-	-	-
Rent Obligations	$ 701	$ 215	$ 486	-	-
NIH minimum obligations	$ 630	$ 390	$ 120	$ 120	-
Moffitt obligations	$ 725	$ 725	-	-	-
CRADA minimum obligations	$ 8,000	$ 2,000	$ 6,000	$ -	-
Other Long-Term Liabilities Reflected on the Company’s Balance Sheet under GAAP	-	-	-	-	-
Total	$ 10,056	$ 3,330	$ 6,606	$ 120	$ -

Each of the CRADA and certain of our license agreements under which we may be required to pay quarterly or annual fees is generally cancelable by us, given appropriate prior written notice and, as such, is excluded from the table above, unless the fees were already incurred at December 31, 2015. The annual amount payable by us to maintain the CRADA and certain of our license agreements is approximately $2 million. Although our CRADA expires in August 2016, for the purposes of this table we assumed that this agreement will be renewed on the same terms and continued for another three years. Other than as disclosed in the table above, the payment obligations under the license agreements, as well as under the Moffitt Agreement, are contingent upon future events such as our achievement of specified development, regulatory and commercial milestones and we are required to make development milestone payments and royalty payments in connection with the sale of products developed under these agreements. As of December 31, 2015, we were unable to estimate the timing or likelihood of achieving the milestones or making future product sales and, therefore, any related payments are not included in the table above.

Off-Balance Sheet Arrangements

At March 31, 2016, we had no obligations that would require disclosure as off-balance sheet arrangements.

Quantitative and Qualitative Disclosures About Market Risk

Our investments in marketable securities, which are composed primarily of corporate debt securities, are subject to default, changes in credit rating and changes in market value. The primary objective of our investment activities is to preserve principal. These investments are also subject to interest rate risk and will decrease in value if market rate interest rates increase. As of March 31, 2016, marketable securities we owned were $60.3 million. Due to the nature of these investments, if market interest rates were to increase immediately and uniformly by 10% from levels as of June 23, 2016, the decline in fair value would not be material. If interest rates had declined by 10% in the year ended December 31, 2015 or quarter ended March 31, 2016, the decrease in earned interest in those periods would not have had a material effect on our results of operations or cash flows for those periods.

BUSINESS

Overview

We are a clinical-stage biotechnology company focused on the development and commercialization of novel cancer immunotherapy products designed to harness the power of a patient's own immune system to eradicate cancer cells. Our lead program is an adoptive cell therapy utilizing tumor-infiltrating lymphocytes (TIL), which are T cells derived from patients' tumors, for the treatment of metastatic melanoma. We are also pursuing the development of TIL for other solid tumor cancer indications. In February 2016, we announced that the US Food and Drug Administration (FDA) allowed our Investigational New Drug (IND) application to conduct clinical studies using our TIL therapy in cervical and head and neck cancers.

A patient's immune system, particularly their TIL, plays an important role in identifying and killing cancer cells. TIL consist of a heterogeneous population of T cells that can recognize a wide variety of cancer-specific mutations and can overcome tumor escape mechanisms. TIL therapy involves growing a patient's TIL in special culture conditions outside the patient's body, or ex vivo, and then infusing the T cells back into the patient in combination with interleukin-2 (IL-2). By taking TIL away from the immune-suppressive tumor microenvironment in the patient, the T cells can rapidly proliferate. Billions of TIL, when infused back into the patient, are better able to search out and potentially eradicate the tumor.

During the second half of 2015, we opened enrollment in a Phase 2 clinical trial of our lead product candidate, LN-144, for the treatment of refractory metastatic melanoma. This single-arm study is for patients with metastatic melanoma whose disease has progressed following treatment with at least one systemic therapy.

In an online article published in May 2016 from the Journal of Clinical Oncology, data was presented from 101 metastatic melanoma patients treated with TIL therapy in a Phase 2 clinical trial conducted at the National Cancer Institute (NCI) by Dr. Steven Rosenberg, M.D., Ph.D., and colleagues. In the trial, patients with metastatic melanoma were equally divided into two groups. Both groups were treated according to a standard TIL protocol using a lympho-depleting preparative regimen prior to an intravenous infusion of TIL, with high-dose IL-2 given intravenously to physiologic tolerance after the TIL was infused. The second group also received total body irradiation. 54% of all patients treated with TIL therapy achieved an objective response. An objective response occurs when there is a complete remission or a partial remission of the tumor. A complete remission requires a complete disappearance of all detectable evidence of disease, and a partial remission typically requires at least approximately 50% regression of measurable disease without new sites of disease. The publication reported that, of the 101 patients, 24 (24%) had experienced a complete remission (CR). With a median potential follow up time of 40.9 months, only one of the patients who had achieved a CR had recurred. Overall survival (OS) was 51% at 3 years. Toxicities from treatment were primarily associated with the known adverse effects of nonmyeloablative chemotherapy and administration of high-dose IL-2.

In further support of our internal research and clinical development activities, we have a Cooperative Research and Development Agreement (CRADA) with the U.S. Department of Health and Human Services, as represented by the NCI, through which we are funding the research and development of TIL-based product candidates for the treatment of advanced solid tumors. Pursuant to the CRADA, we fund TIL research and clinical trials that are being conducted by Dr. Steven Rosenberg. This five-year CRADA expires in August 2016 unless the parties agree to extend it. We are currently in discussions with the NCI to renew this agreement.

We have a worldwide, exclusive patent license from the National Institutes of Health (NIH) for intellectual property to develop, manufacture and commercialize TIL therapy for the treatment of melanoma, which was amended in 2015 to include the exclusive license of this intellectual property for the treatment of lung cancer, HPV-associated cancers, breast cancer, and bladder cancer. We also have an exclusive license from the NIH for intellectual property relating to a TIL-based therapy for use in melanoma in which TIL that express various inhibitory receptors such as 4-1BB (also known as CD137), PD-1, TIM-3 and LAG-3 are selected and expanded for infusion into the patient. TIL that express these proteins are associated with higher tumor reactivity than other TIL populations, so fewer cells may be needed to be therapeutically effective.

During 2015, we received orphan drug designation for LN-144 in the United States to treat metastatic melanoma. This designation provides seven years of market exclusivity in the United States, subject to certain limited exceptions. However, the orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review or approval process.

We are pursuing refractory metastatic melanoma as our first target indication because of the promising initial NCI results and the commercial opportunity inherent in the significant unmet need of this patient population. Melanoma is a common type of skin cancer, accounting for approximately 74,000 patients diagnosed and 9,900 deaths each year in the United States according to the American Cancer Society's Cancer Estimated 2015 Facts and Figures. According to the NCI's Surveillance, Epidemiology and End Results (SEER) program, about 4-7% of patients with melanoma have metastatic disease. Patients with relapsed/refractory metastatic melanoma following treatment under the current standards of care have a particularly dire prognosis with very few curative treatment options.

In addition to the research and development being conducted under the CRADA, in 2014 we established our own internal research and development capabilities in Tampa, Florida, near the H. Lee Moffitt Cancer & Research Institute (Moffitt) on the campus of the University of South Florida, to explore the next-generation of TIL technology and new product candidates.

Company History

We filed our original Articles of Incorporation with the Secretary of State of Nevada on September 17, 2007. Until March 2010, we were an inactive company known as Freight Management Corp. On March 15, 2010, we changed our name to Genesis Biopharma, Inc., and in 2011 we commenced our current business. In May 2013 we completed a restructuring of our outstanding debt and equity securities (the "Restructuring") and raised $1.25 million through the sale of our common stock. As part of the Restructuring, we converted $7.2 million of senior secured promissory notes, $1.7 million of bridge promissory notes, and $0.3 million in other outstanding debt into shares of common stock at a conversion price of $1.00 per share. On July 24, 2013, we acquired Lion Biotechnologies, Inc., a Delaware corporation. On September 26, 2013, we amended and restated our Articles of Incorporation to, among other things, change our name to Lion Biotechnologies, Inc., effect a 1-for-100 reverse stock split (pro-rata reduction of outstanding shares) of our common stock, increase (after the reverse stock split) the number of our authorized number of shares of common stock to 150,000,000 shares, and authorize the issuance of 50,000,000 shares of "blank check" preferred stock, $0.001 par value per share.

Our principal executive offices are located at 112 West 34th Street, 18th Floor, New York, New York 10120, and our telephone number at that address is (212) 946-4856. Our website is located at www.lionbio.com. Information on our website is not, and should not be considered, part of this prospectus.

Recent Developments

On June 1, 2016, we hired Maria Fardis, Ph.D. as our new President and Chief Executive Officer to succeed Elma Hawkins, Ph.D., who previously served as President and Chief Executive Officer of our company,

On June 7, 2016, we completed the Private Placement in which we issued 9,684,000 shares of our common stock and 11,368,633 shares of our new Series B Preferred, in each case for $4.75 per share. We received net proceeds of approximately $95.7 million from the Private Placement, after paying placement agent fees and estimated offering expenses, which we will use to fund our research and development and for working capital purposes.

On June 7, 2016, we appointed Wayne Rothbaum to serve as the Interim Chairman of the board of directors. We also agreed to appoint Iain Dukes to serve as a director beginning as of a specified future date.

Molly Henderson, our Chief Financial Officer, has notified us that her last day of employment with us will be August 16, 2016.

Strategy

Our goal is to be a leader in the development and commercialization of cell-based immunotherapies to treat solid tumors. We are developing a portfolio of TIL-based product candidates with the potential to meaningfully improve survival and quality of life for cancer patients. Key elements of our strategy include:

Expedite clinical development, regulatory approval, and commercialization of our lead product candidate

Based on results from NCI-sponsored clinical trials, we plan to advance our lead product candidate, LN-144, for the treatment of patients with refractory metastatic melanoma. We filed an IND with the FDA in December 2014 to initiate a company-sponsored Phase 2 single-arm, multicenter clinical trial of LN-144 in patients with refractory metastatic melanoma. We began enrollment of this study in the second half of 2015.

If data from this company-sponsored Phase 2 trial are consistent with previous results from the NCI, we will initiate a multicenter, registration trial. Assuming the results from the registration trial are positive, we will discuss with the FDA the filing of a Biologic License Application (BLA) for approval of LN-144 as a treatment for patients with refractory metastatic melanoma. The FDA may grant accelerated approval for product candidates for serious conditions that fill an unmet medical need based on a surrogate or intermediate clinical endpoint, including an objective response rate, because such response rate is considered reasonably likely to predict a real clinical benefit of longer life. We believe our accelerated approval strategy may be warranted given the limited options for patients with refractory metastatic melanoma. However, even if the FDA grants accelerated approval, confirmatory trials may still be required by the FDA.

Continue collaboration with our partners, and increase our internal research and development activities, to improve and develop adoptive cell therapy technologies

As of June 30, 2016, we had 14 employees in our research and development group in our R&D facility in Tampa, Florida. We anticipate further hiring in 2016 in support of expanding our research activities. In addition, our Cooperative Research and Development Agreement (“CRADA”) with the NCI offers us the opportunity to identify technologies for development based on human proof-of-concept data, which reduces the risk in our product portfolio. We are exploring the treatment of additional solid tumor indications, including cervical, head and neck, lung, bladder, and breast cancers. In early 2016, we received the allowance of our IND in head and neck cancer and cervical cancer. The INDs are based on human proof-of-concept results generated by the NCI under the CRADA. Our CRADA with the NCI expires in 2016 but may be extended for an additional five years. We intend to work to further identify future product candidates, including products based on additional novel immunotherapy technology. Our goal is to exclusively license and develop, and obtain regulatory marketing approval for TIL-based technologies to treat a variety of solid cancers based on data from NCI-sponsored clinical trials that we are funding under the CRADA.

Establish commercialization capabilities of current and future pipeline products

We continue to invest in improving the process and efficiency of manufacturing our product candidates. We plan to use contract manufacturing organizations (CMOs) to supply our TIL-based products for our clinical trials in the near term. CMOs limit the amount of upfront capital investment; however, we have encountered capacity constraints and we may establish our own manufacturing facilities in the future for better margins, greater capacity and rapid implementation of innovative changes. We intend to carefully manage our cost structure, and reduce the long-term cost of manufacturing our products, although there can be no assurance that we will be able to reduce our manufacturing costs to commercially attractive levels.

Immune system

The immune system recognizes danger signals and responds to threats at a cellular level. The most significant components of the cellular aspect of the adaptive immune response are T cells (or T lymphocytes), so called because they generally mature in the thymus. T cells can be distinguished from other white blood cells by T cell receptors present on their cell surface. These receptors contribute to tumor surveillance by helping T cells recognize infected cells as well as cancerous cells. T cells are involved in both sensing and killing infected or cancerous cells, as well as coordinating the activation of other cells in an immune response.

Although the immune system is designed to identify foreign or abnormal proteins expressed on tumor cells, this process is often defective, or not operating optimally, in cancer patients. The defective process sometimes occurs when the cancer cells closely resemble healthy cells and go unnoticed or if tumors lose their protein expression. Additionally, cancer cells employ a number of mechanisms to escape immune detection to suppress the effect of the immune response. Some tumors also encourage the production of regulatory T cells that prevent cytotoxic T cells from attacking the cancer.

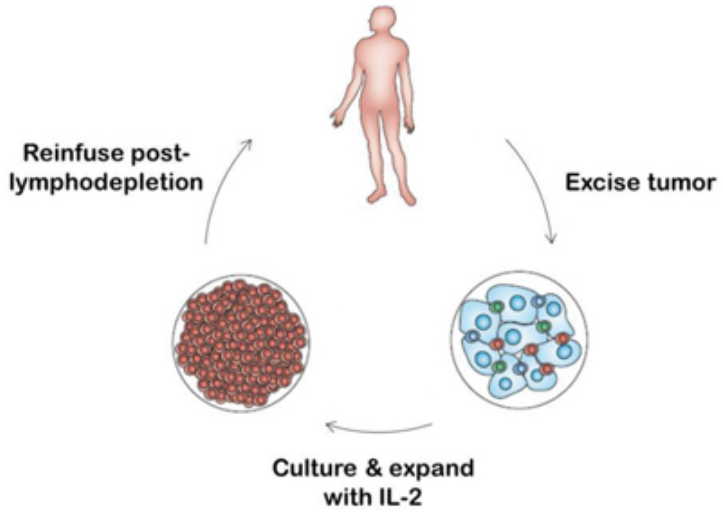
Cancer immunotherapy

Despite the progress that has been made over the past several decades, effective treatment of cancer, especially solid tumors, continues to be challenging. Some reasons solid tumors are so difficult to treat are: (i) in many solid tumors, multiple genes (as many as hundreds of genes) are mutated, and solid tumors are heterogeneous, (ii) it is not always clear which particular mutations are critical, and (iii) tumors can adapt and find a way to evade treatments that target a single mutation. In addition, the tumor can suppress the patient's natural immune response. When T cells with cancer-specific receptors are absent, present in low numbers, of poor quality or rendered inactive by suppressive mechanisms employed by tumor tissue, the cancer can grow and spread to various organs. In addition, standard of care treatments for cancer can be deleterious to T cells' ability to kill cancer.

We believe that adoptive cell therapy, with the use of human cells as therapeutic entities to reengage the immune system, will be the next significant advancement in the treatment of cancer. These cellular therapies may avoid the long-term side effects associated with current treatments and have the potential to be effective regardless of the type of previous treatments patients have experienced. We believe TIL therapy in particular has the potential to treat solid tumors by increasing the effectiveness and number of a patient's cancer-specific T cells.

Tumor-infiltrating lymphocytes

Adoptive cell therapy with TIL involves (1) harvesting T cells from a patient's tumor, (2) culturing and expanding the number of TIL, and (3) infusing the functional TIL back into the patient followed by treatment with IL-2. TIL are a heterogeneous population of T cells that can recognize and kill cancer cells. Currently, the TIL manufacturing process that we are developing takes approximately five to six weeks from receipt of the patient's tumor to infusion of the TIL back into the patient. We intend to treat patients with a single infusion of TIL after they receive a short chemotherapy lymphodepletion regimen, which is intended to improve the survival and proliferative capacity of the newly infused T cells. After infusion, the TIL can proliferate inside a patient and potentially infiltrate the tumor microenvironment to eliminate large numbers of cancer cells. TIL can overcome several mechanisms of tumor escape to which endogenous T cells may be susceptible.

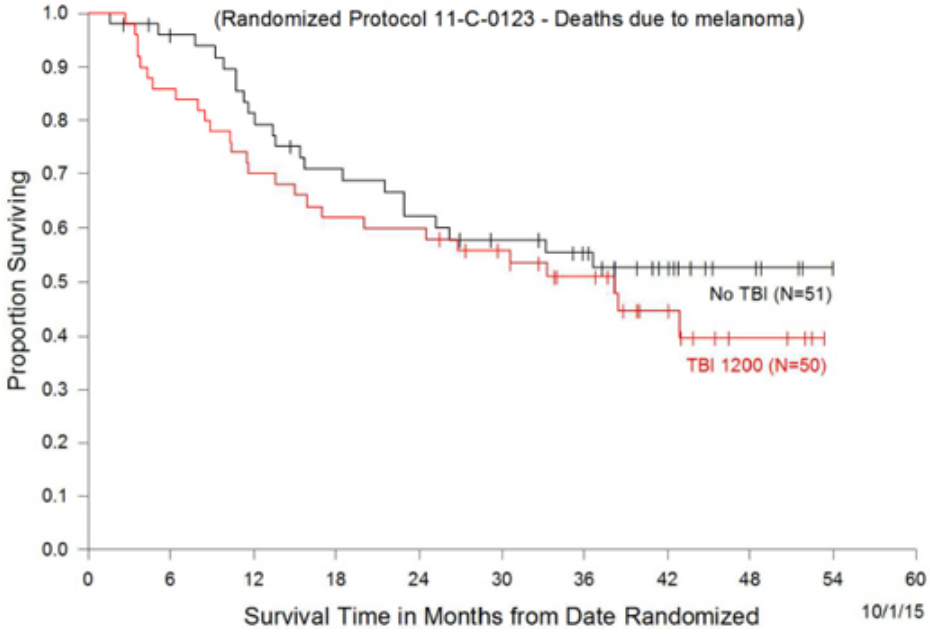


Clinical results with TIL in metastatic melanoma

To date, hundreds of metastatic melanoma patients have already been treated with TIL therapy at different hospitals in the US, Europe, Canada, and Israel. Clinical responses have been relatively consistent: approximately half of the melanoma patients treated with TIL have an objective response (i.e. tumor regression of 50% or more), and approximately 10-24 percent of patients have a complete response with no evidence of disease remaining after only one administration). Many patients respond to TIL therapy despite experiencing tumor progression after previously being treated with other therapies.

In an online article published in May 2016 from the Journal of Clinical Oncology, data was presented from 101 metastatic melanoma patients treated with TIL therapy in a Phase 2 clinical trial conducted at the National Cancer Institute (NCI) by Dr. Steven Rosenberg, M.D., Ph.D., and colleagues. In the trial, patients with metastatic melanoma were equally divided into two groups. Both groups were treated according to a standard TIL protocol using a lympho-depleting preparative regimen prior to an intravenous infusion of TIL, with high-dose IL-2 given intravenously to physiologic tolerance after the TIL was infused. The second group also received total body irradiation. 54% of all patients treated with TIL therapy achieved an objective response. An objective response occurs when there is a complete remission or a partial remission of the tumor. A complete remission requires a complete disappearance of all detectable evidence of disease, and a partial remission typically requires at least approximately 50% regression of measurable disease without new sites of disease. The publication reported that, of the 101 patients, 24 (24%) had experienced a complete remission (CR). With a median potential follow up time of 40.9 months, only one of the patients who had achieved a CR had recurred. Overall survival (OS) was 51% at 3 years. Toxicities from treatment were primarily associated with the known adverse effects of nonmyeloablative chemotherapy and administration of high-dose IL-2.

Survival of Patients with Metastatic Melanoma Treated with Autologous Tumor Infiltrating Lymphocytes and IL-2



Source: Steven A. Rosenberg, Society of Immunotherapy of Cancer, 2015

In a publication in Clinical Cancer Research in July 2011, data was presented from 93 patients with metastatic melanoma who were treated at the NCI with TIL therapy (after a lymphodepletion regimen of either chemotherapy alone or with two different doses of radiation) followed by IL-2. Of these patients, 20 out of 93 (22%) achieved a complete tumor regression, and 32 (34%) patients achieved a partial remission for a total overall response rate of 56%, 19 of the 20 complete response patients were reported to have ongoing complete responses beyond three years. The 5-year survival rate of 29% for all 93 patients was similar regardless of prior treatment, with the possible exception of the 5-year survival rate of 44% for the 11 patients who progressed after receiving prior anti-CTLA4 treatment.

Product pipeline

We are developing a portfolio of TIL-based products for the treatment of solid tumors. Our lead pipeline candidate, LN-144, is an adoptive cell therapy using TIL to treat patients with refractory metastatic melanoma. In addition to LN-144, we intend to develop additional TIL-based pipeline products to treat a variety of solid tumors, as well as next-generation TIL therapies that are more potent and less costly to manufacture. Under our CRADA, we are providing research and development funding to the NCI for the development of TIL therapies. Depending on the data developed from these efforts, we expect to expand our product development efforts to develop TIL products for other indications. In addition, at our research and development facility in Tampa, Florida, we are developing and evaluating a variety of technologies that can potentially improve the growth and potency of TIL.

Metastatic Melanoma

We are developing LN-144 to treat metastatic melanoma. Melanoma is a common type of skin cancer, accounting for approximately 76,800 patients diagnosed and 10,130 deaths each year in the United States according to the American Cancer Society, Cancer Facts and Figures estimates for 2015. Patients with relapsed/refractory metastatic melanoma following treatment under the current standards of care have a particularly dire prognosis with very few curative treatment options.

The National Comprehensive Cancer Network (NCCN) has recently updated its recommendations for the treatment of patients with unresectable or metastatic melanoma. Initial therapy can include checkpoint inhibitors either alone or in combination (ipilimumab, nivolumab, pembrolimumab), targeted therapies for patients with BRAF mutations (dabrafenib/trametinib, vemurafenib/cobimetinib combinations or single agents) or a clinical trial. For patients not responding or progressing and having an adequate clinical status, agents selected from the previous list but of a different therapeutic class can be used as well as high dose IL-2 or a clinical trial. Patients who do not respond to the current second-line therapies have very few treatment options and typically have a very poor prognosis.

HPV-Associated Cancers

We are developing our next product candidate to treat cervical and head and neck cancers. In December 2015, we filed an IND application with the FDA to conduct clinical trials in these cancers, and in February, 2016 we announced that the IND was allowed thereby permitting us to begin clinical trials in these indications with our product. According to the American Cancer Society's Cancer Facts and Figures estimates for 2015, it is estimated that approximately 12,900 women are diagnosed in the United States every year with cervical cancer. If cervical cancer has spread to surrounding tissues or organs and/or the regional lymph nodes, the five-year survival rate is 57%. If the cancer has spread to a distant part of the body, the five-year survival rate is 16%. Head and neck cancer accounts for about 3% of all cancers in the United States. This year, an estimated 59,300 people (43,400 men and 15,900 women) will develop head and neck cancer. It is estimated that 12,300 deaths (8,900 men and 3,400 women) will occur in 2016.

Safety

Overall, toxicities or adverse events during TIL therapy have almost entirely been associated with the either the lymphodepletion regimen or the high-dose IL-2 therapy given after TIL infusion. Few adverse events have been documented following the TIL infusion itself, with Grade 3 or higher events rarely found. Severe and life threatening toxicities due to TIL therapy occur mostly in the first week after cell infusion but generally resolve within a few weeks. To date, some patients have experienced vitiligo and uveitis, but there has been no other evidence of off-target effects associated with TIL therapy.

Early toxicities related specifically to the infusion of TIL (those which are seen immediately following the cell infusion and prior to IL-2 administration) are generally mild and include fevers, chills, headache, and malaise. Toxicities which occur following administration of IL-2 but are thought to be related to the cells include immune mediated events such as vitiligo, transient uveitis, hearing loss, and vestibular dysfunction. The use of the non-myeloablative lymphodepletion regimen prior to cell administration increases the toxicity of this treatment as profound myelosuppression occurs in all patients.

The standard approach to the administration of high-dose IL-2 in all studies is to continue dosing until patients can no longer tolerate treatment. The most commonly seen grade 4 events are pulmonary and renal impairment, and mental status changes. These toxicities may sometimes require intubation for protection of the patient's airway. Although these patients require significant supportive measures during this period, all toxicities are reversible and the overwhelming majority of patients have suffered no long term sequelae following this treatment regimen. However, fatal complications are possible and it is therefore only appropriate to carry out this experimental treatment in the context of life threatening metastatic cancer.

Development strategy

In February 2015, the FDA allowed an IND to initiate our company-sponsored Phase 2, open-label, single-arm multicenter clinical trial to treat patients with LN-144 for refractory metastatic melanoma. Patients with refractory disease are those who have not responded to other, non-TIL treatments. If results are consistent with prior results at the NCI, we intend to initiate a larger trial for regulatory approval. The design of this larger trial has yet to be confirmed and will depend on discussions with the FDA and additional clinical data. At the end of 2015, we announced a collaboration to conduct clinical and preclinical research in immuno-oncology with MedImmune. This collaboration provides for Lion to fund and conduct two Phase 2a clinical trials combining MedImmune's investigational PD-L1 inhibitor durvalumab with our products. These trials are expected to begin in 2016.

Additionally, at the end of 2015, we filed an Investigational New Drug (IND) application with the FDA to conduct clinical trials of LN-145 in the treatment of cervical cancer, and head and neck squamous cell carcinoma (HNSCC). In early 2016, the FDA allowed our IND application.

In addition to our company-sponsored and NCI-sponsored clinical trials, Moffitt is conducting a trial to evaluate TIL therapy in combination with ipilimumab or nivolumab in patients with metastatic melanoma.

Other TIL-based Product Candidates

Under our CRADA with the NCI, we are providing research and development and clinical funding for the development of TIL therapy for a variety of solid tumor indications, including cervical, head and neck, bladder, breast, and lung cancers. Some of the work being conducted by the NCI includes a clinical trial involving TIL therapy to treat advanced human papilloma virus (HPV)-positive cervical cancer. Data from this trial was published in the Journal of Clinical Oncology in April 2015. Out of 9 cervical cancer patients treated with HPV-TIL, two experienced complete remissions reported as ongoing at 22 and 15 months, respectively. Another patient experienced a three-month partial remission. Additionally, the NCI has an ongoing trial to treat patients using TIL within lung cancer; only a couple patients have been treated so far. Depending on results from our research and development and clinical trials conducted at the NCI, we will determine whether to pursue the development and regulatory approval of TIL therapy for additional indications.

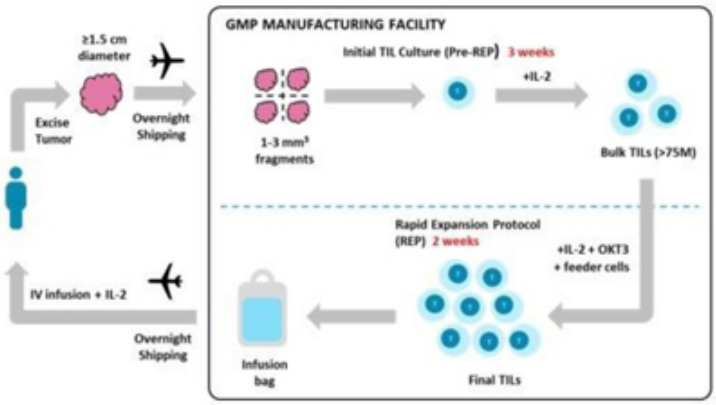
Selected TIL

The NCI also has a clinical trial ongoing to evaluate TIL selected for CD137 (also known as 4-1BB) expression to treat patients with metastatic melanoma. The NCI is working on a process to select TIL that express PD-1. This next-generation TIL technology supports more potent and efficient TIL production by selecting for TIL that express various inhibitory receptors, including 4-1BB, PD-1, TIM-3 and/or LAG-3. TIL that express these proteins are associated with higher tumor reactivity, so potentially fewer of the enriched cells are needed to be therapeutically effective. The technology has the potential to reduce the time and cost of manufacturing.

Process development/manufacturing

Our manufacturing and processing of TIL-based product candidates is based on the NCI's original manufacturing and processing of TIL, which we have modified so that it can be reproduced in a Good Manufacturing Process (cGMP) environment.

Because it is critical to rapidly treat patients with highly aggressive cancers, we are implementing in our company-sponsored Phase 2 clinical trial, a manufacturing process for LN-144 that takes approximately five to six weeks from receipt of the patient's tumor to infusion of the TIL back to the patient. The processing of LN-144 begins with the collection of the patient's tumor, which is then sent to a central processing facility, where the T cells are isolated. These cells are stimulated to proliferate, then propagated in cell culture flasks until sufficient cells are available for infusion back into the patient. The TIL is then washed at the cell processing site and shipped back to the clinical center where they can be administered to the patient. In preparation for administration of the TIL, the patient undergoes a short chemotherapy lymphodepletion regimen, which is intended to improve the survival and proliferative capacity of the newly infused T cells. The following diagram illustrates our proposed TIL manufacturing process.



We have entered into Manufacturing Services Agreements with Lonza Walkersville, Inc. (Lonza) and WuXi Apptech (WuXi) pursuant to which they have agreed to manufacture, package, ship and handle quality assurance and quality control of certain clinical trials for our TIL products. The production line for LN-144 is established at Lonza and is providing product for our Phase 2 trial in metastatic melanoma. We expect that the TIL production line at WuXi to be available to produce TIL product by early 2017. Cell processing activities will be conducted at both companies under current good manufacturing processes, or cGMP, using qualified equipment and materials. We expect to rely on Lonza and Wuxi to meet anticipated clinical trial demands. In the future, we may rely on them or other third parties, or develop our own manufacturing capabilities for the manufacturing and processing of TIL-based product candidates for our clinical trials. To meet projected needs for commercial sale quantities, we may develop our own commercial manufacturing facility to supply and process products. Developing our own manufacturing capabilities may require more costs than we anticipate or result in significant delays. If we are unable to develop our own manufacturing capabilities, we will rely on contract manufacturers, including both current and alternate suppliers, to ensure sufficient capacity is available for commercial purposes.

Commercialization plan

We currently have no sales, marketing or commercial product distribution capabilities and have limited experience as a company in marketing products. As we progress our clinical trials for our leading product candidates, we intend to further assess the costs and benefits associated with building our own sales and commercialization capabilities.

In the U.S., there are approximately 76,800 patients diagnosed with melanoma each year. About 4-7% of patients with melanoma have metastatic disease. If LN-144 is approved, we expect to commercialize the product in the U.S. with a focused specialty sales force targeting the top 50 hospitals and clinics that have experience in treating patients with IL-2. We believe we can address physicians who treat metastatic melanoma with a direct specialty sales force.

Additionally, we are developing our next product candidates to treat other cancer indications including cervical and head and neck cancers. It is estimated that approximately 13,000 women are diagnosed in the U.S. every year with cervical cancer. If cervical cancer has spread to surrounding tissues or organs and/or the regional lymph nodes, the five-year survival rate is 57%. If the cancer has spread to a distant part of the body, the five-year survival rate is 16%. Head and neck cancer accounts for about 3% of all cancers in the U.S. This year, an estimated 59,000 people (43,000 men and 16,000 women) will develop head and neck cancer in this country. It is estimated that 12,000 deaths (9,000 men and 3,000 women) will occur in 2016 from this disease.

Outside the US, we have not yet defined our regulatory and commercial strategy for our TIL products. Our commercial strategy for markets outside the US may include the use of strategic partners, distributors, a contract sales force or the establishment of our own commercial infrastructure. We plan to further evaluate these alternatives as we approach approval for one of our product candidates.

As additional product candidates advance through our pipeline, our commercial plans may change. Clinical data, size of the development programs, size of the target market, size of a commercial infrastructure, intellectual property protection and manufacturing needs may all influence our U.S., Europe and rest-of-world strategies.

Intellectual property

Intellectual property is of importance in our field and in biotechnology generally. We seek to protect and enhance proprietary technology, inventions, and improvements that are commercially important to the development of our business by seeking, maintaining, and defending patent rights, whether developed internally or licensed from third parties. We plan also to rely on regulatory protection afforded through orphan drug designations, data exclusivity, market exclusivity and patent term extensions where available. To achieve this objective, a strategic focus for us has been to identify and license key patents that provide protection and serve as an optimal platform to enhance our intellectual property and technology base.

We have conducted an extensive freedom-to-operate (FTO) analysis of the current patent landscape with respect to our lead product candidate, and based on the analysis, we believe that we have the FTO for TIL therapy. However, the area of patent and other intellectual property rights in biotechnology is an evolving one with many risks and uncertainties.

Research, development and license agreements

Currently, our research and development is conducted with the NIH under the CRADA and at our own internal research and development laboratory in Tampa, Florida, near the H. Lee Moffitt Cancer & Research Institute (Moffitt) on the campus of the University of South Florida. See Part II—Item 7 —"Management's Discussion and Analysis of Financial Condition and Results of Operations" of this report for additional detail regarding our research and development activities.

National Institutes of Health and the National Cancer Institute Cooperative Research and Development Agreement

Effective August 5, 2011, we signed a Cooperative Research and Development Agreement (CRADA) with the National Institutes of Health and the National Cancer Institute (NCI). Under the terms of the five-year cooperative research and development agreement, we have been working with Dr. Steven A. Rosenberg, to develop adoptive cell immunotherapies that are designed to destroy metastatic melanoma cells using a patient's tumor infiltrating lymphocytes.

On January 22, 2015, we entered into an amendment to the CRADA to include four new indications. As amended, in addition to metastatic melanoma, the CRADA now also includes the development of TIL therapy for the treatment of patients with bladder, lung, triple-negative breast, and HPV-associated cancers. Under the amendment, the NCI also has agreed to provide us with samples of all tumors covered by the amendment for performing studies related to improving TIL selection and/or TIL scale-up production and process development.

Each party to the CRADA individually owns all inventions, data and materials produced solely by its employees in the course of performing the activities under the CRADA. The parties jointly own any inventions and materials that are produced by employees of both parties in the course of performing activities under the CRADA. Subject to certain conditions, this collaboration provides us with the first option to negotiate commercialization licenses from the NIH to intellectual property relating to TIL-based product candidates conceived or first reduced to practice in performance of the CRADA research plan. This includes the right to negotiate a license to intellectual property related to TIL-based product candidates that are being tested in multiple clinical trials that we are funding under the CRADA. We may exercise this right by providing written notice after either (1) we receive notice that a patent application covering an invention has been filed, or (2) the date on which we file a patent application for an invention. We then have ten months to negotiate the license with the NIH. These time periods may be extended by the U.S. Public Health Service upon good cause. Pursuant to the terms of the CRADA, we are currently required to make quarterly payments of $500,000 to the NCI for support of research activities. To the extent we license patent rights relating to a TIL-based product candidate, we will be responsible for all patent-related expenses and fees, past and future, relating to the TIL-based product candidate. In addition, we will be required to supply certain test articles, including TIL, grown and processed under cGMP conditions, suitable for use in clinical trials, where we hold the IND for such clinical trial. The CRADA has a five-year term expiring on August 5, 2016. Although there can be no assurance, we anticipate that we will renew the agreement on similar terms. The CRADA may be terminated at any time by mutual written consent. We or NCI may unilaterally terminate the CRADA for any reason or for no reason at any time by providing written notice at least 60 days before the desired termination date.

Development and Manufacture TIL

Effective October 5, 2011, we entered into a Patent License Agreement with the National Institutes of Health, an agency of the United States Public Health Service within the Department of Health and Human Services ("NIH"), which License Agreement was subsequently amended on February 9, 2015 and October 2, 2015. Pursuant to the License Agreement as amended, NIH granted to us an exclusive worldwide right and license to develop and manufacture certain proprietary autologous tumor infiltrating lymphocyte adoptive cell therapy products for the treatment of metastatic melanoma, bladder, lung, breast and HPV-associated cancers, including cervical and head and neck. The License Agreement requires us to pay royalties based on a percentage of net sales (which percentage is in the mid-single digits and subject to certain annual minimum royalty payments), a percentage of revenues from sublicensing arrangements, and lump sum benchmark royalty payments on the achievement of certain clinical and regulatory milestones for each of the various indications and other direct costs incurred by NIH pursuant to the agreement.

Exclusive Patent License Agreement

On February 10, 2015, we entered into an exclusive Patent License Agreement with the NIH under which we received an exclusive, world-wide license to the NIH's rights in and to two patent-pending technologies related to methods for improving tumor-infiltrating lymphocytes for adoptive cell therapy. The licensed technologies relate to the more potent and efficient production of TIL from melanoma tumors by selecting for T-cell populations that express various inhibitory receptors. Unless terminated sooner, the license shall remain in effect until the last licensed patent right expires.

In consideration for the exclusive rights granted under the exclusive Patent License Agreement, we agreed to pay the NIH a non-refundable upfront licensing fee which was recognized as research and development expense during the year ended December 31, 2015. We also agreed to pay customary royalties based on a percentage of net sales (which percentage is in the mid-single digits), a percentage of revenues from sublicensing arrangements, and lump sum benchmark payments upon the successful completion of our first Phase 2 clinical study, the successful completion of our first Phase 3 clinical study, the receipt of the first FDA approval or foreign equivalent for a licensed product or process resulting from the licensed technologies, the first commercial sale of a licensed product or process in the United States, and the first commercial sale of a licensed product or process in any foreign country.

The following is a list of process and method patents and patent applications that we have licensed from the NIH under the NIH License Agreement:

Exclusive License:

Pat./Pub. No.	Title	Country	Status
20120244133	Methods of growing TILs in gas-permeable containers	US	Pending
9074185	Adoptive cell therapy with young T cells	US	Issued
14/771615	Methods of producing enriched populations of tumor-reactive t cells from tumor	US	Pending
8383099	Adoptive cell therapy with young T cells	US	Issued
20140030806	Adoptive cell therapy with young T cells	US	Pending

Non-exclusive License:

Pat./Pub. No.	Title	Country	Status
8034334	Immunotherapy with in vitro-selected antigen-specific lymphocytes after nonmyeloablative lymphodepleting chemotherapy	US	Issued
1545204	Immunotherapy with in vitro-selected antigen-specific lymphocytes after nonmyeloablative lymphodepleting chemotherapy	EP	Pending
2497552	Immunotherapy with in vitro-selected antigen-specific lymphocytes after nonmyeloablative lymphodepleting chemotherapy	CA	Issued
2003265948	Immunotherapy with in vitro-selected antigen-specific lymphocytes after nonmyeloablative lymphodepleting chemotherapy	AU	Granted
8287857	Immunotherapy with in vitro-selected antigen-specific lymphocytes after nonmyeloablative lymphodepleting chemotherapy	US	Issued

H. Lee Moffitt Cancer Center Research Collaboration Agreement

In September 2014, we entered into a two year research collaboration agreement with the H. Lee Moffitt Cancer Center and Research Institute, Inc ("Moffitt"). to jointly engage in transitional research and development of adoptive tumor-infiltrating lymphocyte cell therapy with improved anti-tumor properties and process. Total payments by us under the agreement approximate $1.5 million.

Exclusive License Agreement

On July 21, 2014, we entered into an Exclusive License Agreement (the "Moffitt License Agreement"), effective as of June 28, 2014, with the Moffitt under which we received an exclusive, world-wide license to Moffitt's rights in and to two patent-pending technologies related to methods for improving tumor-infiltrating lymphocytes for adoptive cell therapy. Unless earlier terminated, the term of the license extends until the earlier of the expiration of the last patent related to the licensed technology or 20 years after the effective date of the license agreement.

Pursuant to the Moffitt License Agreement, we paid an upfront licensing fee which was recognized as research and development expense during 2014. A patent issuance fee will also be payable under the Moffitt License Agreement, upon the issuance of the first U.S. patent covering the subject technology. In addition, we agreed to pay milestone license fees upon completion of specified milestones, customary royalties based on a specified percentage of net sales (which percentage is in the low single digits) and sublicensing payments, as applicable, and annual minimum royalties beginning with the first sale of products based on the licensed technologies, which minimum royalties will be credited against the percentage royalty payments otherwise payable in that year. We will also be responsible for all costs associated with the preparation, filing, maintenance and prosecution of the patent applications and patents covered by the Moffitt License Agreement related to the treatment of any cancers in the United States, Europe and Japan and in other countries selected that Moffitt and we agree to.

Our commercial success may depend in part on our ability to obtain and maintain patent and other proprietary protection for commercially important technology, inventions and know-how related to our business; defend and enforce our patents; preserve the confidentiality of our trade secrets; and operate without infringing the valid enforceable patents and proprietary rights of third parties. Our ability to stop third parties from making, using, selling, offering to sell or importing our products may depend on the extent to which we have rights under valid and enforceable patents or trade secrets that cover these activities. 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 commercial products and methods of manufacturing the same. We may rely, in some circumstances, on trade secrets to protect our technology. However, trade secrets can be difficult to protect.

We seek to protect our proprietary technology and processes, in part, by entering into confidentiality agreements with our employees, consultants, scientific advisors and contractors. We also seek to preserve the integrity and confidentiality of our data and trade secrets by maintaining physical security of our premises and physical and electronic security of our information technology systems. While we have confidence in these individuals, organizations and systems, agreements or security measures may be breached, and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or be independently discovered by competitors. To the extent that our consultants, contractors or collaborators use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions.

Competition

The biotechnology and pharmaceutical industries put significant resources in developing novel and proprietary therapies for the treatment of cancer. We compete with many different sources in the space of immunotherapy, including large and specialty pharmaceutical and biotechnology companies, academic research institutions and governmental agencies and public and private research institutions, as well as companies developing novel targeted therapies for cancer. Universities and public and private research institutions in the U.S. and Europe are also potential competitors. For example, a Phase 3 study comparing TIL to standard ipilimumab in patients with metastatic melanoma is currently being conducted in Europe by the Netherlands Cancer Institute, the Copenhagen County Herlev University Hospital, and the University of Manchester. While these universities and public and private research institutions primarily have educational objectives, they may develop proprietary technologies that lead to other FDA approved therapies or that secure patent protection that we may need for the development of our technologies and products. We anticipate that we will face intense and increasing competition as new drugs and therapies enter the market and advanced technologies become available.

Due to their promising clinical therapeutic effect in clinical exploratory trials, we anticipate substantial direct competition from other organizations developing advanced T-cell therapies. In particular, we expect to compete with therapies with genetically engineered T cells rendered reactive against tumor-associated antigens prior to their administration to patients. Genetically engineered T cells are being pursued by several companies, including Adaptimmune, Celgene (in collaboration with bluebird bio), Kite Pharma, Juno Therapeutics, Novartis and others.

While other types of cancer immunotherapies may potentially be used in combination with TIL, such as checkpoint blockers, to enhance efficacy, we also expect substantial direct competition from other types of immunotherapies. We face competition from immunotherapy treatments offered by companies such as Amgen, AstraZeneca, Bristol-Myers, Merck, and Roche. Immunotherapy is also being pursued by several biotechnology companies as well as by large-cap pharmaceutical companies. We cannot predict whether other types of immunotherapies may be enhanced and show greater efficacy and may have direct and substantial competition from such immunotherapies in the future.

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

Government regulations

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 investigational new drug application, or 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 at each clinical site before the 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 pivotal clinical trials;
- satisfactory completion of an FDA Advisory Committee review, if applicable;
- 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 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 investigations to assess compliance with Good Clinical Practices; 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 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 new 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.

Our current product candidates do not involve genetically-engineered cell, but our future product may. When a 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.

Human immunotherapy products are a new category of therapeutics. Because this is a relatively new and expanding area of novel therapeutic interventions, there can be no assurance as to the length of the trial period, the number of patients the FDA will require to be enrolled in the trials in order to establish the safety, efficacy, purity and potency of immunotherapy products, or that the data generated in these trials will be acceptable to the FDA to support marketing approval.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with current Good Clinical Practices, or 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.

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 the 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.

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

A sponsor may seek approval of its product candidate under programs designed to accelerate the 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 the new 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 trials or more efficient 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.

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 identify 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. However, the orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review or approval process.

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.

In 2015, we received orphan drug status for LN-144 in the treatment of patients with metastatic melanoma. We plan to seek orphan drug designation for some or all of our other product candidates in specific orphan indications in which there is a medically plausible basis for the use of these products.

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, product sampling and 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.

We rely, and expect to continue to rely, on third parties for the production of clinical quantities of our product candidates, and may rely in the future on third parties for the production of commercial quantities. 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.

Other Healthcare Laws and Compliance Requirements

Our sales, promotion, medical education 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, other divisions of the 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 Foreign Corrupt Practices Act, the False Claims Act, the Veterans Health Care Act, physician payment transparency laws, privacy laws, security laws, and additional state laws similar to the foregoing.

The federal Anti-Kickback Statute prohibits, among other things, the offer, receipt, or payment of remuneration in exchange for or to induce the referral of patients or the use of products or services 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. Many states have similar laws that apply to their state health care programs as well as private payors.

The False Claims Act, or FCA, imposes liability on persons who, among other things, present or cause to be presented false or fraudulent claims for payment by a federal health care program. The FCA has been used to prosecute persons submitting claims for payment that are inaccurate or fraudulent, that are for services not provided as claimed, or for services that are 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 sales and marketing practices. The federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, also created federal criminal statutes that prohibit, among other things, knowingly and willfully executing a scheme to defraud any healthcare benefit program, including private third-party payors and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services.

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 drug manufacturers 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. 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. Certain states also mandate implementation of commercial compliance programs, impose restrictions on drug manufacturer 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, including the final omnibus rule published on January 25, 2013, imposes specified requirements relating to the privacy, security and transmission of individually identifiable health information. Among other things, HITECH makes HIPAA’s privacy and security standards directly applicable to “business associates,” defined as independent contractors or agents of covered entities that create, receive, maintain or transmit protected health information in connection with providing a service for or on behalf of a covered entity. HITECH also increased the civil and criminal penalties that may be imposed against covered entities, business associates and possibly other persons, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorney’s fees and costs associated with pursuing federal civil actions. In addition, state laws govern the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and may not have the same effect.

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, the curtailment or restructuring of our operations, exclusion from participation in federal and state healthcare programs and imprisonment, any of which could adversely affect our ability to operate our business and our financial results.

Also, the U.S. Foreign Corrupt Practices Act and similar worldwide anti-bribery laws 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 availability of third-party coverage and reimbursement. Third-party payors include government health administrative authorities, 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, these third-party payors are increasingly challenging the price and examining the cost-effectiveness of medical products and services. In addition, significant uncertainty exists as to the reimbursement status of newly approved healthcare products. 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. It is time consuming and expensive for us to seek coverage and reimbursement from third-party payors. 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.

In addition, other legislative changes have been proposed and adopted since the Affordable Care Act was enacted. These changes include aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, starting in 2013, which will remain in effect through 2024 unless additional Congressional action is taken. In January 2013, 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.

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.

In the EU, member states require both regulatory clearances by the national competent authority and a favorable ethics committee opinion prior to the commencement of a clinical trial. Under the EU regulatory systems, marketing authorization applications may be submitted under either a centralized or decentralized procedure. The centralized procedure provides for the grant of a single marketing authorization that is valid for all EU member states. It is compulsory for medicines produced by certain biotechnological processes. Because our products are produced in that way, we would be subject to the centralized process. Under the centralized procedure, pharmaceutical companies submit a single marketing authorization application to the EMA. Once granted by the European Commission, a centralized marketing authorization is valid in all EU member states, as well as the EEA countries Iceland, Liechtenstein and Norway. By law, a company can only start to market a medicine once it has received a marketing authorization.

Employees

As of June 30, 2016, we had 23 employees, all of whom are full-time, seven of whom hold Ph.D. or M.D. degrees, 16 of whom were engaged in research and development activities and seven of whom were engaged in business development, finance, or administrative support. None of our employees is subject to a collective bargaining agreement. We consider our relationship with our employees to be good.

Legal Proceedings

On April 23, 2014 we received a subpoena from the SEC that stated that the staff of the SEC was conducting an investigation then designated as In the Matter of Galena Biopharma, Inc. File No. HO 12346 (now known as In the Matter of Certain Stock Promotions) and that the subpoena was issued to us as part of the foregoing investigation. The SEC's subpoena and accompanying letter did not indicate whether we were, or were not, under investigation. We produced documents in response to the subpoena and have since fully cooperated with the SEC's investigation.

We have recently been informed by the Staff of the SEC that the SEC's investigation, in part, involves the conduct of our former Chief Executive Officer, Manish Singh, during the period between September 2013 and April 2014. We understand that, as it pertains to the Company's former Chief Executive Officer, the investigation has focused on the failure by authors of certain articles about the Company to disclose that they were compensated by one of our former investor relations firms. We understand that it is the position of the SEC Staff that the conduct of our former Chief Executive Officer with respect to these articles may be imputed to the Company.

In order to resolve this matter, we have agreed with the Staff of the SEC to a proposed settlement framework under which we would consent to the entry of an order requiring that we cease and desist from any future violations of certain provisions of the federal securities laws, without admitting or denying any allegations, and agree to a financial penalty. We are currently discussing with the Staff of the SEC the amount of the financial penalty that we would pay as part of this settlement. We do not anticipate that the amount of this penalty will have a material impact on our cash position. The proposed settlement is contingent upon reaching agreement with the Staff of the SEC on a complete set of settlement terms and approval by the Commissioners of the SEC, neither of which can be assured.

On April 8, 2016, a lawsuit titled Solomon Capital, LLC, Solomon Capital 401(K) Trust, Solomon Sharbat and Shelhav Raff against Lion Biotechnologies, Inc. was filed by Solomon Capital, LLC, Solomon Capital 401(k) Trust, Solomon Sharbat and Shelhav Raff against our company in the Supreme Court of the State of New York County of New York (index no. 651881/2016). The plaintiffs allege that, between June and November 2012 they provided us with $52,850 and that they advanced and paid on our behalf an additional $170,000. The complaint further alleges that we agreed to (i) provide them with promissory notes totaling $222,850, plus interest, (ii) issue a total of 111,425 shares to the plaintiffs (before the 1-for-100 reverse split of our common stock effected in September 2013), and (iii) allow the plaintiffs to convert the foregoing funds into our securities in the next transaction. The plaintiffs allege that they should have been able to convert their advances and payments into shares of our common stock in the Restructuring that we effected in May 2013. Based on the foregoing, the plaintiffs allege causes for breach of contract and unjust enrichment and demand judgment against us in an unspecified amount exceeding $1,500,000, plus interest and attorneys' fees.

On June 3, 2016, we filed an answer and counterclaims in the lawsuit. In our counterclaims, we allege that the plaintiffs misrepresented their qualifications to assist us in our fundraising and that they failed to disclose that they were under investigation for securities laws violations. We seek damages in an amount exceeding $500,000 and an order rescinding any and all agreements that the plaintiffs contend entitled them to obtain stock in our company. Our investigation of the allegations made by the plaintiffs is ongoing and we intend to vigorously defend the complaint and pursue our counterclaims.

Other than a described above, there are no other pending legal proceedings to which we are a party or of which our property is the subject. However, from time to time, we may be involved in various claims and legal proceedings relating to claims arising out of our operations. Regardless of outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

Properties

Our corporate offices are located at 112 West 34th Street, 18th Floor, New York, New York 10120. We currently lease these offices under a lease that expires on December 31, 2016 for a monthly rental of approximately $20,000.

In July 2014, we entered into a five -year lease with the University of South Florida Research Foundation for an approximately 5,100 square foot facility located at 3802 Spectrum Boulevard Tampa, Florida 33612. The facility is part of the University of South Florida research park and is used as our research and development facilities. Our monthly base rent for this facility was $10,443 for the first year, and increases by 3% annually. We have the option to extend the lease term of this facility for an additional five-year period on the same terms and conditions, except that the base rent for the renewal term will be increased in accordance with the applicable consumer price index.

We believe that our existing facilities are adequate to meet our current needs, and that suitable additional alternative spaces will be available in the future on commercially reasonable terms.

MANAGEMENT AND DIRECTORS

The following table sets forth certain information concerning our executive officers, directors and director nominee as of the date of this prospectus.

Name	Age	Position
Maria Fardis, Ph.D.	48	President, Chief Executive Officer and Director
Molly Henderson (5)	45	Chief Financial Officer and Corporate Secretary
Michael T. Lotze, MD	64	Chief Scientific Officer, Vice President of Research and Development
Steven A. Fischkoff, MD	64	Chief Medical Officer
Wayne P. Rothbaum	48	Interim Chairman of the Board
Merrill A. McPeak(3)	80	Director
Sanford J. Hillsberg(1)(2)	68	Director
Jay Venkatesan(1)(2)(3)	44	Director
Ryan Maynard(3)	47	Director
Dr. Iain Dukes(4)	58	Director Nominee

(1) Member of our Compensation Committee
(2) Member of our Nominating and Corporate Governance Committee
(3) Member of our Audit Committee
(4) We anticipate that Dr. Dukes will be appointed to our board of directors in August 2016.
(5) Ms. Henderson has notified us that her last day of employment with us will be August 16, 2016.

The following is a biographical summary of the experience of our directors and executive officers.

Maria Fardis, Ph.D. Dr. Fardis has served as our President and Chief Executive Officer since June 1, 2016 and as a member of our Board of Directors since June 7, 2016. Dr. Fardis served as the Chief Operating Officer of Acerta Pharma, LLC, a clinical-stage biopharmaceutical company, from January 2015 to March 2016. From 2011 to 2014, she worked at Pharmacyclics, Inc., which she joined as Senior Director of Global Project Management, and was promoted to Vice President, Alliance and Global Project Management in December 2011, was appointed Executive Vice President, Alliances and Operations in September 2012 and was appointed Chief of Oncology Operations and Alliances in March 2013. Prior to joining Pharmacyclics, from August 2001 to April 2012, Dr. Fardis held increasingly senior positions in Medicinal Chemistry and the project and portfolio management department at Gilead Sciences, Inc., most recently serving as Associate Director, Project and Portfolio Management. Dr. Fardis received her Ph.D. in Organic Chemistry from the University of California Berkeley and her B.S. in chemistry, *summa cum laude*, from the University of Illinois, Urbana-Champaign, where she received her degree with a "Bronze Tablet" and was elected to Phi Beta Kappa. Dr. Fardis received an MBA with the highest honors from Golden Gate University. We believe that Dr. Fardis is highly qualified to serve as a member of the Board because of her experience both as an executive of biopharmaceutical companies and as a scientist.

Molly Henderson. Ms. Henderson has served as our Chief Financial Officer and Corporate Secretary since June 8, 2015. Ms. Henderson served as the Chief Business and Financial Officer, Senior Vice President of VirtualScopics, Inc., a public company provider of imaging solutions to the pharmaceutical, biotechnology, and medical device industries, from May 2008 to August 2013, and as that company’s Chief Financial Officer from May 2003 to May 2008. From 2013 to 2015, Ms. Henderson relocated her family to Europe, during which time Ms. Henderson advised start-up companies in Switzerland. Earlier in her career, Ms. Henderson served as the Corporate Controller of Ultralife, Inc., a publicly-held provider of high performance lithium battery solutions. Prior to Ultralife, Ms. Henderson was a Manager in the audit division of PricewaterhouseCoopers LLP. Ms. Henderson received her M.B.A. and B.S. degrees from the State University of New York at Buffalo.

Michael T. Lotze, MD. Dr. Lotze has served as our Chief Scientific Officer and our Vice President of Research and Development since March 28, 2016. From 2002 until he joined us in 2016, Dr. Lotze worked at the University of Pittsburgh, where he held a number of positions, including director of the Division of Surgical Oncology, Co-leader of Biologic Therapy and Gene Therapy in its Cancer Institute, professor of immunology, surgery and bioengineering; vice chair of research in the department of surgery; and assistant vice chancellor in the university's six schools of health sciences. He was also director of strategic partnerships within the University of Pittsburgh Cancer Institute and the Catalyst Program in the Clinical and Translational Research Institute. He also was the president of the Society for the Immunotherapy of Cancer, the Director of the Centers of Excellence for the Federation of Clinical Immunology Societies, a Co-founder of the Translational Research Cancer Center Consortium and the Translational Research in Mitochondria, Aging, and Disease, as well as the Co-Chairman of the International DAMPs and HMGB1 Symposia. Dr. Lotze has held several senior scientific and research positions at GlaxoSmithKline Pharmaceuticals and Metacine, Inc. Dr. Lotze completed his MD at the Northwestern University Medical School, and his post-graduate studies at the M. D. Anderson Tumor Institute, Strong Memorial Hospital, National Cancer Institute, and the University of Pittsburgh.

Steven Alan Fischkoff, MD. Dr. Fischkoff has served as our Chief Medical Officer since February 4, 2016. From December 2009 until he joined us in 2016, Dr. Fischkoff was the Vice President, Clinical and Medical Affairs at Celgene Cellular Therapeutics. Prior thereto, for three years he was the Vice President, Clinical Development at Palatin Technologies, Inc. Dr. Fischkoff has also held senior clinical positions at Medarex, Inc. and Knoll Pharmaceuticals/Abbott Laboratories. Dr. Fischkoff spent 15 years in academic positions at the National Cancer Institute and the medical schools of the University of Maryland and the University of Pennsylvania. He received an MD from the University of Pennsylvania.

Wayne P. Rothbaum. Mr. Rothbaum has served as a member of our Board of Directors since June 7, 2016. Mr. Rothbaum is currently the President of Quogue Capital LLC, a life sciences investment fund he founded in 2001. Beginning in 2012, Mr. Rothbaum served as the co-founder and largest investor of Acerta Pharma, B.V., a Dutch biotech focused on developing selective, covalent small molecules to treat cancer and inflammation. Acerta Pharma was sold to AstraZeneca in February 2016. From February 2013 until its sale in February 2016, Mr. Rothbaum served as the executive chairman of Acerta Pharma. From 1993 until 2001, Mr. Rothbaum led the biotechnology practice at the strategic consulting firm The Carson Group. Mr. Rothbaum graduated Phi Beta Kappa from Binghamton University in 1990 with a dual major in political science and psychology and received his Master's degree in international economics from The George Washington University. We believe that Mr. Rothbaum is highly qualified to serve as a member of the Board on the basis of his business background and education, his investment experience as the manager of an investment fund focused on the life sciences industry, and his experience serving in a leadership capacity with other biotechnology companies.

Merrill A. McPeak . General (Ret.) McPeak has served as a member of our Board of Directors since July 2011. From February 2015 until the appointment of Mr. Rothbaum as our new Interim Chairman, General McPeak was the lead director on our Board of Directors. General McPeak also served as our unpaid, interim Chief Executive Officer from January 14, 2013 until July 24, 2013. General McPeak currently is the President of McPeak and Associates, a consulting firm that he founded in 1995. He has previously served as a director of several public companies, including Tektronix, Inc., Trans World Airlines, Inc., and ECC International Corp., where he was for many years the chairman of the Board. General McPeak has served as a director of Research Solutions, Inc., a company engaged in developing systems to reuse published content, since November 2010, of Aerojet Rocketdyne Holdings, Inc., an aerospace and defense contractor, since March 2013, and of Lilis Energy, Inc., an independent oil and gas producer, since January, 2015. He was Chairman of the Board of Coast Plating, Inc., a privately held turnkey provider of metal processing and metal finishing services, from January 2009 until the company was acquired by Trive Capital and renamed Valence Surface Technologies, now the country's largest independently owned aerospace and defense metal processing company. He continues to be a Director of that company. He helped found, and from December 2003 to February 2012 was Chairman of the Board of EthicsPoint, Inc., a provider of risk management and compliance software-as-a-service that was acquired in 2012 and restyled Navex Global. General McPeak remained a member of the Board of Directors of Navex Global until that company was sold in 2014. In 2010, General McPeak was a director of Point Blank Solutions, Inc., a former public company that on April 14, 2010 filed a voluntary petition for relief under Chapter 11 of the United States Code in the U.S. Bankruptcy Court for the District of Delaware.

From 1990 until his retirement from active military service in late-1994, General McPeak was Chief of Staff of the United States Air Force. As a member of the Joint Chiefs of Staff, General McPeak was a military advisor to the Secretary of Defense and the President of the United States. General McPeak received a Bachelor of Arts degree in economics from San Diego State College and a Master of Science degree in international relations from George Washington University, and is a member of the Council on Foreign Relations. Since July 2010, General McPeak has been Chairman of the American Battlefield Monuments Commission. We believe that General McPeak is highly qualified to serve as a member of the Board because of his extensive leadership experience, including his experience in the military and as a director on numerous public and private company Boards of Directors.

Sanford J. Hillsberg. Mr. Hillsberg has served as a member of our Board of Directors since September 3, 2013. Mr. Hillsberg has been an attorney with TroyGould PC since 1976 and is a member of that firm's Management Committee. Mr. Hillsberg has served as the Chairman of the Board of Directors of Galena Biopharma, Inc., a publicly-held biopharmaceutical company focused on developing oncology treatments, since 2007. Mr. Hillsberg was a founder and until December 2007, served as a director and Secretary of ImmunoCellular Therapeutics, Ltd., a publicly-held clinical-stage biotechnology company focused on developing immune-based therapies to treat cancer, and its predecessor company since February 2004. Mr. Hillsberg served as a director and Secretary of Duska Therapeutics, Inc., a publicly-held biopharmaceutical company, and its predecessor company from 1999 until January 2006. He previously served as a director and Vice President of Medco Research, Inc., a then publicly-held pharmaceutical company. Mr. Hillsberg is a member of the Board of Governors of Cedars-Sinai Medical Center and has also previously served as a Commissioner of the Quality and Productivity Commission of the City of Los Angeles. Mr. Hillsberg holds a B.A. degree from the University of Pennsylvania and a J.D. degree from Harvard Law School. We believe that Mr. Hillsberg is highly qualified to serve as a member of the Board because of Mr. Hillsberg's extensive prior experience in founding and serving on the Boards of a number of pharmaceutical and biotech companies as well as his expertise in legal and other related matters pertaining to the operation of publicly traded pharmaceutical companies.

Jay Venkatesan, M.D. Dr. Venkatesan has served as a member of our Board of Directors since September 3, 2013. Dr. Venkatesan is currently a Managing Partner of Alpine BioVentures, a Director of Exicure Therapeutics, and a Director of Cellular BioTherapies, Inc. He also currently serves as President and a Director Officer of Alpine ImmuneSciences, a biotechnology company developing a novel protein immunotherapy platform for the treatment of cancer and autoimmune diseases. Previously, Dr. Venkatesan was Executive Vice President and General Manager of Oncothyreon, Inc. (Nasdaq: ONTY), a publicly-traded biotechnology company focused on the development of therapeutics for the treatment of cancer and rare diseases. He joined Oncothyreon following its acquisition of Alpine BioSciences, where Dr. Venkatesan served as the founder and CEO. Alpine Biosciences, Inc. was a private nanotherapeutics company focused on rare diseases and oncology. Dr. Venkatesan also is the Managing Member and Portfolio Manager of Ayer Capital Management LP, a position that he held since founding that dedicated health care investment fund in 2008. Prior to founding Ayer Capital, he was a Director at Brookside Capital Partners, the hedge fund affiliate of Bain Capital, where he co-managed a portfolio of public and private investments across biopharmaceuticals, medical devices, and healthcare services. Previously, he was involved in healthcare venture investing at Patricof & Co. Ventures and in consulting at McKinsey & Company. Dr. Venkatesan received his M.D. from the University of Pennsylvania School of Medicine and his MBA from the Wharton School of the University of Pennsylvania. He received his B.A., *magna cum laude* , from Williams College, where he was elected to Phi Beta Kappa. We believe that Dr. Venkatesan is highly qualified to serve as a member of the Board because of his medical and business background and education, his investment experience as the manager of an investment fund, and his experience as an officer of biotechnology companies.

Ryan Maynard. Mr. Maynard has served as a member of our Board of Directors since February 16, 2015. Mr. Maynard currently is the Executive Vice President and Chief Financial Officer of Rigel Pharmaceuticals, Inc., a clinical-stage drug development public company. He joined Rigel in September 2001 as Corporate Controller and was appointed as an Assistant Secretary in October 2001. In June 2006 he became Rigel's Vice President of Finance and Acting Chief Financial Officer and became its Vice President and Chief Financial Officer in January 2007. Prior to joining Rigel, Mr. Maynard was Corporate Controller and Director of Finance and Accounting for Personify, Inc., an e-commerce software company, from November 1999 to April 2001. From July 1998 to October 1999 he served as Controller of General Magic, Inc. and from July 1994 to June 1998 he held various positions at Siliconix, Inc., most recently as Senior Finance Manager. He previously worked at Ernst & Young LLP. Mr. Maynard holds a B.S. in Commerce—Accounting from Santa Clara University. We believe that Mr. Maynard is highly qualified to serve as a member of the Board because of his extensive experience as the Chief Financial Officer of a publicly traded pharmaceutical companies, as well as his expertise in auditing and financial and other related matters pertaining to the operation of publicly traded pharmaceutical companies.

Dr. Iain Dukes. We anticipate that Dr. Dukes will be appointed to our Board of Directors in August 2016. Dr. Dukes previously served as Senior Vice-President and Head of Business Development and Licensing for Merck Research Laboratories through May 2016. He joined Merck in August 2013. Prior to joining Merck, Dr. Dukes was Vice-President of External Research & Development at Amgen, from August 2010 to August 2013. From 2007 to 2010, Dr. Dukes was the President and Chief Executive Officer, and a member of the board of directors, of Essentialis Therapeutics, a clinical stage biotechnology company focused on the development of breakthrough medicines for the treatment of rare metabolic diseases. From 2000 to 2007, Dr. Dukes was Vice President of Scientific and Technology Licensing at GlaxoSmithKline, and prior to that, from 1990 to 1999, he held various positions at Glaxo Wellcome, including Head of Exploratory Development for Metabolic and Urogenital Diseases and Head of Ion Channel Drug Discovery Group. Dr. Dukes holds Master of Jurisprudence and Doctorate of Philosophy degrees from the University of Oxford, a Master of Science degree in Cardiovascular Studies from the University of Leeds and a Bachelor of Science degree in Pharmacology from the University of Bath. We believe that Dr. Dukes is highly qualified to serve as a member of the Board because of his extensive experience in the pharmaceutical industry, including in senior management roles.

Recent Management Changes

From January 1, 2015 until June 1, 2016, Elma Hawkins, Ph.D. was our President and Chief Executive Officer.

Molly Henderson, our Chief Financial Officer, has notified us that her last day of employment with us will be August 16, 2016.

Relationships

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

Board of Directors

Our board of directors currently consists of six members. In accordance with our articles of incorporation and bylaws, the number of members of our board of directors is determined from time to time by our board or by stockholder vote. Each director holds office until his or her successor is duly elected and qualified or until his earlier death, resignation or removal. At any meeting of our board of directors, a majority of the total number of directors then in office constitutes a quorum for all purposes. Directors are elected for a period of one year and thereafter serve until the next annual meeting at which their successors are duly elected by our stockholders.

Our directors each serve for a one-year term. There is no limit on the number of terms a director may serve on our board of directors. Directors may be removed, with or without cause, upon the affirmative vote of the holders of at least a majority of the voting power of the outstanding shares of our capital stock entitled to vote generally in the election of directors, voting together as a single class. Our articles of incorporation also provide that any vacancy on our board of directors may be filled by a majority of the directors then in office.

Our board of directors and its committee has supervisory authority over our company.

In connection with our June 7, 2016 Private Placement, we entered into the purchase agreement and a registration rights agreement with institutional and other accredited investors in that offering. The purchase agreement included certain provisions requiring that the number of directors constituting the full Board of Directors of our company be increased from five to seven directors and that Mr. Wayne P. Rothbaum be appointed to serve on our Board of Directors as our Interim Chairman. On June 1, 2016, our Board was increased to seven directors, and on June 7, 2016 Mr. Rothbaum joined our Board and became the Interim Chairman of the Board. In the purchase agreement, we also agreed to appoint Dr. Iain Dukes to the Board of Directors effective as of a future date, and that, until the earlier of (i) the date Quogue Capital LLC, or Quogue, an affiliate of Mr. Rothbaum, beneficially owns less than 5% of our outstanding common stock, and (ii) June 30, 2017, which we refer to as the "effective period," we will take no other action to (x) change the size of our Board, (y) amend, in any respect, our articles of incorporation or bylaws, or (z) enter into any agreement to do any of the foregoing, in each case, without the prior written consent of Quogue. During the effective period, we also have agreed that either Mr. Rothbaum or Dr. Dukes will be appointed to the Compensation Committee, Audit Committee and Nominating and Governance Committee of our Board of Directors. We anticipate that Dr. Dukes will be appointed to our Board prior to our Annual Meeting scheduled to be held on August 16, 2016 (the "2016 Annual Meeting"), and that either Mr. Rothbaum and/or Dr. Dukes will be appointed to each of our Compensation Committee, Audit Committee and Nominating and Governance Committee.

Director Independence

Our Board had determined that Sanford Hillsberg, Jay Venkatesan, Merrill McPeak, Ryan Maynard, Wayne P. Rothbaum and Dr. Iain Dukes qualify as "independent directors" as defined under The Nasdaq Stock Market's listing standards and the rules of the SEC, and have no material relationships with us (either directly or as a partner, stockholder or officer of any entity) that are inconsistent with a finding of their independence as members of our Board of Directors. Our Board has determined that Messrs. Maynard, McPeak, and Venkatesan, the current members of our Audit Committee, also are "independent" for purposes of service as the members of our Audit Committee.

Committees of Our Board of Directors

Our Board has a standing Audit Committee, Nominating and Governance Committee, and Compensation Committee.

Audit Committee.

The Audit Committee operates pursuant to a written charter. Among other things, the Audit Committee is responsible for:

- reviewing and discussing with management and the independent registered public accounting firm our annual and quarterly financial statements and related disclosures;
- hiring our independent registered public accounting firm, and coordinating the oversight and review of the adequacy of our internal control over financial reporting with both management and the independent registered public accounting firm; and
- reviewing and, if appropriate, approving all transactions between our company or its subsidiaries and any related party.

Ryan Maynard, as Chairman, Jay Venkatesan, and General Merrill McPeak constitute all of the members of the Audit Committee. All of the members of the Audit Committee are non-employee directors and independent as defined under The Nasdaq Stock Market's listing standards. Mr. Maynard is a chief financial officer of a public company. Because of his knowledge of financial, audit and accounting matters, our Board has designated him as the "audit committee financial expert" of the Audit Committee. We anticipate that either Mr. Rothbaum or Dr. Dukes will be appointed to our Audit Committee prior to, or shortly following, the 2016 Annual Meeting.

Nominating and Governance Committee

The Nominating and Governance Committee recommends candidates to be nominated for election as directors at our annual meeting, consistent with criteria approved by our Board; develops and regularly reviews corporate governance principles and related policies for approval by our Board; oversees the organization of our Board to discharge our Board's duties and responsibilities properly and efficiently; and sees that proper attention is given and effective responses are made to stockholder concerns regarding corporate governance.

Usually, nominees for election to our Board are proposed by our existing directors. In identifying and evaluating individuals qualified to become Board members, our current directors will consider such factors as they deem appropriate to assist in developing a Board of Directors and committees thereof that are diverse in nature and comprised of experienced and seasoned advisors. Our Board of Directors has not adopted a formal policy with regard to the consideration of diversity when evaluating candidates for election to our Board. However, our Board believes that membership should reflect diversity in its broadest sense, but should not be chosen nor excluded based on race, color, gender, national origin or sexual orientation. In this context, our Board does consider a candidate's experience, education, industry knowledge and, history with the Company, and differences of viewpoint when evaluating his or her qualifications for election to our Board. In evaluating such candidates, our Board seeks to achieve a balance of knowledge, experience and capability in its composition. In connection with this evaluation, our Board determines whether to interview the prospective nominee, and if warranted, one or more directors interview prospective nominees in person or by telephone.

Our Nominating and Governance Committee consisted of Jay Venkatesan, as Chairman, and Sanford J. Hillsberg. The Nominating and Governance Committee met once in 2015. We anticipate that either Mr. Rothbaum or Dr. Dukes will be appointed to our Nominating and Governance Committee prior to, or shortly following, the Annual Meeting.

Compensation Committee

The Compensation Committee is responsible for the compensation of our executives and directors. As part of its responsibilities, the Compensation Committee has the following duties and responsibilities:

- Establish annual base salary amounts for executive officers and, based upon discussions with the Chief Executive Officer, annual incentive levels and the financial and any other goals to be met to earn annual and long-term incentive awards.

- Review and evaluate the performance and leadership of the Chief Executive Officer and determine the amounts of annual and any long-term incentive awards and any adjustment to the annual salary amounts based upon such performance and other factors as the Committee deems appropriate.

- Review with the Chief Executive Officer his/her evaluation of the performance of the other executive officers and determine with the Chief Executive Officer, and recommend Board approval of, the amounts of annual and any long-term incentive awards and any adjustments to the annual salary amounts based upon such performance and other factors as the Committee deems appropriate.

- Review the compensation of non-employee directors and recommend to the Board, for its approval, the components and amounts of compensation for non-employee directors as well as review periodically and make recommendations to the Board in connection with directors and officers indemnification and insurance matters.

As part of its other responsibilities, the Compensation Committee reviews and approves any reports required by the SEC for inclusion in the annual report and proxy statement, provides general oversight of our compensation structure, and, if deemed necessary, retains and approves the terms of the retention of compensation consultants and other compensation experts. Other specific duties and responsibilities of the Compensation Committee include reviewing senior management selection and overseeing succession planning; reviewing and approving objectives relevant to executive officer compensation; administering our equity-based and incentive compensation plans; and establishing compensation policies and practices for service on our Board and its committees and for the Chairman of our Board. The Compensation Committee operates pursuant to a written charter, which is available on our website, www.lbio.com.

Our Board of Directors has determined that each of the current members of the Compensation Committee, Sanford J. Hillsberg, as Chairman, and Jay Venkatesan, is "independent" under the current independence standards of the Nasdaq marketplace rules. In evaluating their independence, our Board of Directors considered all factors relevant to determining whether the directors have a relationship with our company that is material to the director's ability to be independent of management in connection with the duties of a compensation committee member, including the source of compensation of the directors (such as consulting, advisory or compensatory fees paid by our company to the director). We anticipate that either Mr. Rothbaum or Dr. Dukes will be appointed to our Compensation Committee prior to, or shortly following, the Annual Meeting.

In the Compensation Committee's sole discretion, the Committee has the authority to retain or obtain the advice of a compensation consultant, legal counsel or other advisor after taking into consideration the independence of such compensation consultant, legal counsel or other advisor. Unless expressly required by applicable law or by the rules and regulations of Nasdaq, any compensation consultant, legal counsel or other advisor retained by the Compensation Committee, or who otherwise provides advice to the Compensation Committee, is not required to be independent.

The Compensation Committee is directly responsible for the appointment, compensation, oversight and termination of the work of any compensation consultant, legal counsel or other advisor retained by the Committee. Our company is responsible for the payment of all reasonable compensation, as determined and approved by the Compensation Committee, that is owed to any compensation consultant, legal counsel or other advisor retained by the Compensation Committee.

Unless prohibited by applicable law, Nasdaq's rules and regulations or our bylaws, the Compensation Committee may delegate to one or more of its members or to our executive officers its authority with respect to compensation determinations for our non-executive officers and employees consistent with applicable law.

In 2015, the Compensation Committee granted our Chief Executive Officer the authority to grant options to (i) newly hired non-executive employees, and (ii) non-executive employees as part of year-end bonus compensation. The Compensation Committee established a pool of shares that is available for grant as options by our Chief Executive Officer to non-executive employees, and established certain parameters within which non-executive options could be granted by our Chief Executive Officer.

The executive officers of our company are responsible for maintaining the employee compensation policies for our company, including ensuring that the policies are sufficiently attractive to retain our company's existing employees and to incentivize prospective employees. For a description of the processes and procedures used by the Compensation Committee for the consideration and determination of executive and director compensation, see "Executive Compensation-Compensation Discussion and Analysis."

Board Leadership Structure and Role in Risk Oversight

Our Board of Directors believes it is important to select the Company's Chairman and Chief Executive Officer in the manner it considers in the best interests of the Company at any given time. Our Board of Directors did not elect a Chairman of the Board in 2015. In connection with the Private Placement, we agreed with the investors in such offering that we would appoint Mr. Rothbaum to serve as the Interim Chairman of our Board of Directors. Mr. Rothbaum is not an officer or employee of our company. Our Board believes that the Chairman and Chief Executive Officer positions may be filled by one individual or by two different individuals, as determined by our Board of Directors based on circumstances then in existence.

Our Board of Directors is currently comprised of a majority of individuals who are independent from the management of the Company and, assuming that the nominees are elected at the Annual Meeting, six of the seven members of our Board will continue to be independent directors. Our Board of Directors and its committees meet regularly throughout the year to assure that the independent directors are well briefed and informed with regard to the Company's affairs. Each of the independent directors has unfettered access to any employee within the Company and each director is encouraged to call upon whatever employee he or she deems fit to secure the information each director feels is important to his or her understanding of our Company. In this fashion, we seek to maintain well informed, independent directors who are prepared to make informed decisions regarding our business affairs.

Management is responsible for the day-to-day management of risks the Company faces, while our Board of Directors as a whole plays an important role in overseeing the identification, assessment and mitigation of such risks. Our Board of Directors reviews information regarding the Company's finances and operations, as well as the risks associated with each. For example, the oversight of financial risk management lies primarily with our Board's Audit Committee, which is empowered to appoint and oversee our independent auditors, monitor the integrity of our financial reporting processes and systems of internal controls and provide an avenue of communication among our independent auditors, management and our Board of Directors. The Company's Compensation Committee is responsible for overseeing the management of risks relating to the Company's compensation plans and arrangements. In fulfilling its risk oversight responsibility, our Board of Directors, as a whole and acting through any established committees, regularly consults with management to evaluate and, when appropriate, modify our risk management strategies.

Code of Ethics

Our Board of Directors has adopted a code of ethics that applies to our officers, directors and employees ("**Code of Ethics**"). A copy of our Code of Ethics will be furnished without charge to any person upon written request. Requests should be sent to: Secretary, Lion Biotechnologies, Inc., 112 West 34th Street, 18th Floor, New York, New York 10120, and is available on our website at www.lbio.com.

Compensation Committee Interlocks and Insider Participation

None of the members of our Compensation Committee has ever been an officer or employee of our Company or any of its subsidiaries. None of our company's named executive officers (as set forth under "Executive Compensation") has ever served as a director or member of the compensation committee (or other board committee performing equivalent functions) of another entity, one of whose executive officers served in either of those capacities for our company.

EXECUTIVE COMPENSATION-COMPENSATION DISCUSSION AND ANALYSIS

Overview of Executive Compensation Program

The Compensation Committee of our Board of Directors is responsible for establishing the compensation of our Chief Executive Officer and, based on discussions with our Chief Executive Officer, establishing the compensation of our other executive officers. The Compensation Committee has, in the past, at times included the other members of our Board in its deliberations regarding the salaries of our executive officers.

This section explains the objectives of our executive compensation program, the compensation decisions we made in 2015 and early 2016 with respect to 2015 compensation, and the factors we considered in making those decisions. This section focuses on the compensation of officers who are listed as our "named executive officers" in this prospectus. These officers are: Elma Hawkins, our former President and Chief Executive Officer, James Bender, Ph.D., Vice President-Manufacturing, Laszlo Radvanyi, Ph.D., our former Chief Scientific Officer, Michael Handelman, our former Chief Financial Officer, and Molly Henderson, who became our new Chief Financial Officer in June 2015. Mr. Handelman and Dr. Radvanyi resigned in June 2015 and October 2015, respectively. Molly Henderson, our Chief Financial Officer, has notified us that her last day of employment with us will be August 16, 2016.

Compensation Objectives and Philosophy

Our executive compensation program is designed principally to:

- attract, motivate and retain talented and dedicated executive officers;
- correlate discretionary annual cash bonuses to the achievement of corporate business and financial objectives; and
- provide our executive officers with appropriate long-term incentives that directly correlate to the enhancement of stockholder value, as well as facilitate executive retention.

To achieve these objectives, we establish (i) annual base salaries at levels that we believe are competitive with base salaries of executives in other comparable publicly-held biopharmaceutical companies, and (ii) discretionary year-end annual cash bonuses based in part on the achievement of key operational and financial goals. We also grant employee stock options as a retention tool and as a means to align the executive's long-term interests with those of our stockholders, with the ultimate objective of affording our executives an appropriate incentive to help us to improve stockholder value. Our Compensation Committee does not have any formal policies for allocating compensation among the foregoing three components. Rather, our Compensation Committee uses its judgment to determine the appropriate level and mix of compensation on an annual basis with the goal to balance current cash compensation with equity awards to reward both short-term and long-term performance. Our Compensation Committee evaluates both employee performance and compensation to maintain our company's ability to attract and retain highly-qualified executives in key positions and to assure that compensation provided to our executives remains competitive when compared to the compensation paid to similarly situated executives of companies that we consider comparable to our company.

Until January 2015, we also issued shares of restricted stock to our executives in order to provide them with a long-term equity incentive. The shares of restricted stock vested over a period of several years and were subject to forfeiture. However, our Compensation Committee currently has no intention to issue additional shares of restricted stock as part of our compensation policies.

Compensation Determination Process and the Role of Executive Officers in Compensation Decisions

We conduct an annual review of executive compensation, generally in November or December of each year, with a presentation by our Chief Executive Officer to our Board of Directors and Compensation Committee regarding each element of our executive compensation arrangements. Our Board/Compensation Committee's most recent review occurred on December 7, 2015, and the Compensation Committee granted year-end options to our executive officers at a meeting held on December 28, 2015. At the Compensation Committee's direction, our Chief Executive Officer typically prepares an executive compensation review for each executive officer, including our Chief Executive Officer, which includes recommendations for:

- a proposed year-end cash bonus, if any, (i) payable under the terms of each executive officer's employment agreement and (ii) under our discretionary cash bonus program, in each case based on the achievement of individual and/or corporate objectives and the applicable terms of the employment agreements;
- a proposed increase, if any, in base salary for the upcoming year; and
- an award, if any, of stock options for the year under review.

As part of the compensation review, our Compensation Committee also considers changes to an executive's employment agreement, compensation arrangements, responsibilities or severance arrangements.

In accordance with Nasdaq requirements, the Compensation Committee also meets in so-called executive session without the Chief Executive Officer to consider and make recommendations to our Board of Directors regarding the Chief Executive Officer's compensation, including base salary and cash bonus. The Compensation Committee awards year-end annual stock option grants to our Chief Executive Officer and other executive officers. With the exception of these executive sessions of the Compensation Committee, our Chief Executive Officer generally participates in all deliberations of the Compensation Committee and of our Board of Directors relating to executive compensation. From time to time at the request of the Compensation Committee, members of our executive management team, including our Chief Financial Officer, may provide information to the Compensation Committee and may attend all or a portion of Board of Directors or Compensation Committee meetings at which executive officer compensation issues are addressed.

In conjunction with the year-end annual compensation review, or as soon as practicable after the fiscal year-end (but no later than March 15 of each year), our Chief Executive Officer recommends to the Compensation Committee the corporate objectives and other criteria to be utilized for purposes of determining cash bonuses for the upcoming year. The Compensation Committee in its discretion may revise our Chief Executive Officer's recommendations or make its own recommendations to our Board of Directors, which may in turn suggest further revisions. At the end of the year, the Compensation Committee, in consultation with our Chief Executive Officer, reviews each performance goal and determines the extent to which we achieved such goals. For a description of some of the goals established for 2015, see "2015 Named Executive Officer Compensation—Annual and Special Cash Bonuses," below.

Setting Executive Compensation

Compensation Committee, Board of Directors and Chief Executive Officer

The Compensation Committee of our Board has the primary responsibility for determining compensation of our executives. Our Board has determined that each member of our Compensation Committee is "independent" as that term is defined by applicable Nasdaq rules, is an "outside director" as defined in Section 162(m) of the Internal Revenue Code, or the Code, and a "non-employee" director as defined under Section 16 of the Exchange Act. Our Compensation Committee determines all compensation matters for our named executive officers, including base salary, bonuses, and equity compensation. Our Board of Directors, after considering the recommendations of the Compensation Committee, makes the final determination with respect to the compensation of our Chief Executive Officer. Utilizing input from our Chief Executive Officer, the Compensation Committee makes an independent decision on compensation for each other executive officer, although our Compensation Committee has, on occasion, submitted its compensation determinations for executive officers to our full Board of Directors for our Board's approval. Our Chief Executive Officer makes compensation determinations of our non-executive staff.

Because this company was a smaller reporting company in 2014 and 2015, and due to the relatively uncomplicated nature of our executive compensation program and cost considerations, the Compensation Committee heretofore had not employed an outside compensation consultant. However, in December 2015 the Compensation Committee hired Radford, an independent compensation consulting firm, as the compensation consultant to the Compensation Committee for the compensation cycle ending December 2016.

Although the Compensation Committee did not employ a compensation consultant in 2014 or 2015 when establishing executive compensation for 2015, at the direction of the Compensation Committee our management gathered market data from publicly available sources to provide the Compensation Committee with a framework and reference points for evaluating the compensation of our executive officers against the corresponding executive officer compensation of the companies surveyed. The market data included information as to base salaries, targeted cash bonuses and stock option awards.

The Compensation Committee had no policy regarding the use of benchmarks when establishing executive compensation for 2015, and we have no established policy or target for the allocation between cash and non-cash incentive compensation. Although the Compensation Committee and our Board of Directors did not tie, or benchmark, the compensation of our executives to the average compensation, or any particular percentile of compensation, of executives of the companies surveyed, our Board and Compensation Committee did use the market data as reference points in making their executive compensation determinations. Now that the Compensation Committee has hired Radford as its compensation consultant for the year ending December 2016, the Compensation Committee intends to give additional consideration to peer company comparative framework and benchmarks when establishing executive salaries, bonuses and other compensation for 2016.

Use of Compensation Consultants

The Compensation Committee is authorized to retain its own independent advisors to assist in carrying out its responsibilities. However, neither the Compensation Committee nor our Board of Directors utilized compensation consultants in establishing executive compensation for 2015 or any prior years. Now that the Compensation Committee has retained Radford, the committee intends to include the executive compensation data prepared by Radford in February 2016 in establishing 2016 compensation levels, including salaries, target bonuses and stock option grant levels for our company's executive officers.

Elements of Executive Compensation

We have designed and implemented compensation policies that have historically allowed us to recruit both in the geographic areas where we operate and where our executives reside, as the case may be (*i.e.*, New York, Florida and California). For 2015, the principal components of compensation for our named executive officers consisted of:

- a base salary;
- an annual year-end cash bonus; and
- an annual year-end stock option award.

Base Salary

We provide our executive officers with base salary to compensate them for services rendered during the year. Generally, the base salaries reflect the experience, skills, knowledge and responsibilities required of each executive officer, and reflect our executive officers' overall performance and contributions to our business.

During its review of base salaries for executives, the Compensation Committee primarily considers:

- the negotiated terms of each executive's employment agreement, if any;
- each executive's individual performance;
- an internal review of the executive's compensation, both individually and relative to other named executive officers; and
- base salaries paid by comparable companies in the biopharmaceutical industry that have a similar business and financial profile.

Salary levels are considered annually as part of the company's performance review process. Merit-based increases to salaries are based on management's assessment of the individual's performance, the recommendations made by the Chief Executive Officer to the Compensation Committee, and the comparative compensation at peer companies. As described below, except for the increase in Dr. Hawkins' salary in connection with her promotion to Chief Executive Officer effective January 1, 2015, and an automatic 3% salary increase received by Dr. Bender, no salary increases were implemented for any officer for the year ended December 2015.

Annual Cash Bonuses

We provide an opportunity for each of our named executive officers to receive an annual cash incentive bonus based on the satisfaction of individual and company objectives established by our Board of Directors. For any given year, these objectives may include individualized goals or company-wide goals that relate to operational, strategic or financial factors such as progress in developing or commercializing our product candidates, establishing and maintaining of key business relationships, raising or maintaining certain levels of capital, or improving our results of operations.

Historically at its annual year-end meeting to consider executive compensation, the Compensation Committee, in consultation with management, has established corporate goals for the upcoming fiscal year for purposes of, among other things, making its recommendations regarding its discretionary annual bonus awards (and stock option grants) for the upcoming year to our named executive officers.

The employment agreements of the named executive officers and our other executives entitle the officers to an annual end-of-year cash bonus. For 2015, such year-end bonuses ranged from 25% to 40% of each of our executive officer's annual base salary conditioned on the satisfaction of the individual and company objectives that were established by the Compensation Committee. Based on the satisfaction of most of the 2015 goals and the compensation report of Radford, we increased the annual year-end target incentive cash bonus for the current fiscal year ending December 31, 2016 to a range of 35% to 50% of the executive's base salary, conditioned on the satisfaction of individual and company objectives.

The Compensation Committee evaluates the achievement level of individual and corporate objectives as it relates to annual cash bonuses for executive officers and makes it views known to the full Board as part of its final compensation deliberations. The Compensation Committee also considers the bonuses paid by comparable companies. The Compensation Committee, or where appropriate,our Board may approve bonuses based on the foregoing determinations or, after considering market conditions, our financial position or other factors, may, in its sole discretion, determine not to award any bonuses or to award larger or to award smaller bonuses.

See the discussion below of the cash bonuses to the named executive officers for 2015.

Equity Incentive Compensation

We believe that successful long-term corporate performance is more likely to be achieved with a corporate culture that encourages a long-term focus by our officers and other employees through the use of equity awards, the value of which depends on our stock performance. We established our 2014 Equity Incentive Plan to provide all of our employees, including our executive officers, with incentives to help align our employees' interests with the interests of our stockholders and to enable them to participate in the long-term appreciation of our stockholder value. Additionally, equity awards provide an important retention tool for executives, as the awards generally are subject to vesting over an extended period of time based on continued service with us.

Typically, equity awards are granted annually at, or soon after, the end of each year. In addition, we generally grant equity awards upon an employee's hire.

The determination of whether to grant stock options, as well as the size of such grants, to our executive officers involves subjective assessments by the Compensation Committee and our Board of Directors and, with respect to executive officers other than herself, our Chief Executive Officer. Generally, annual equity awards are driven by our desire to retain and motivate our executives, and we consider individual performance and contributions during the preceding year to the extent the Compensation Committee and our Board of Directors believe such factors are relevant. As with base salary and cash bonuses, in evaluating and determining stock option grants to our executive officers for 2015, the Compensation Committee and our Board of Directors also considered publicly available data prepared by management at the request of the Compensation Committee from other clinical stage oncology companies identified by the Compensation Committee.

We normally grant stock options to new executive officers when they join our company based upon their position with us and their relevant prior experience. The options granted by the Compensation Committee generally vest over the first three years of the ten-year option term. Vesting and exercise rights generally cease upon termination of employment (unless such termination is without “cause” or is for “good reason”), except in the case of death (subject to a one-year limitation), disability or retirement. Prior to the exercise of an option, the holder has no rights as a stockholder with respect to the shares subject to such option, including voting rights or the right to receive dividends or dividend equivalents. In addition to the initial option grants, our Compensation Committee may grant additional options to retain our executives and reward, or provide incentive for, the achievement of corporate goals and strong individual performance.

Our Board of Directors may grant our Chief Executive Officer the discretion to grant options to non-executive employees upon joining our company, and to make grants from an additional “discretionary pool” during each annual non-executive employee review cycle. Options are granted based on a combination of individual contributions to our company and on general corporate achievements, which may include the attainment of product development milestones (such as commencement and completion of clinical trials) and attaining other annual corporate goals and objectives. In December 2015, the Compensation Committee granted our Chief Executive Officer the discretion to grant options to our non-executive employees for up to a total of 72,000 shares of our common stock.

On an annual basis, the Compensation Committee assesses the appropriate individual and corporate goals for our executives and provides additional option grants based upon the achievement by the new executives of both individual and corporate goals. We expect that we will continue to provide new employees with initial option grants in the future to provide long-term compensation incentives and will continue to rely on performance-based and retention grants to provide additional incentives for current employees. Additionally, in the future, the Compensation Committee may consider awarding additional or alternative forms of equity incentives, such as grants of bonus stock, restricted stock and restricted stock units, although the Compensation Committee does not currently plan to do so in the near future.

It is our policy to award stock options at an exercise price equal to the closing price on The NASDAQ Global Market of our common stock on the date of the grant. For purposes of determining the exercise price of stock options, the grant date is deemed to be the later of the first day of employment for newly hired employees, or the date on which the Compensation Committee or our Chief Executive Officer, as applicable, approves the stock option grant to existing employees.

We have no program, practice or plan to grant stock options to our executive officers, including new executive officers, in coordination with the release of material nonpublic information. We also have not timed the release of material nonpublic information for the purpose of affecting the value of stock options or other compensation to our executive officers, and we have no plan to do so. We have no policy regarding the adjustment or recovery of stock option awards in connection with the restatement of our financial statements, as our stock option awards have not been tied to the achievement of specific financial statement goals.

In addition to granting our executive officers stock options, we occasionally grant shares of restricted stock or restricted stock units that vest over a period of three years. No restricted stock or restricted stock units were granted in 2015.

We do not take into consideration any amounts realized by our named executive officers from prior stock option or stock awards in determining whether to grant new stock options or stock awards.

Other Aspects of Our Compensation Philosophy

Retirement Plans, Perquisites and Other Personal Benefits

Our executive officers are eligible to participate in the same group insurance and employee benefit plans as our other salaried employees. These benefits include medical, dental, vision, and disability benefits and life insurance.

We have adopted a tax-qualified employee savings and retirement plan, our 401(k) Plan, for eligible U.S. employees, including our named executive officers. Eligible employees may elect to defer a percentage of their eligible compensation in our 401(k) Plan, subject to the statutorily prescribed annual limit. We may make matching contributions on behalf of all participants in our 401(k) Plan in an amount determined by our Board of Directors. We made matching contributions of up to 3% of the annual salaries to our 401(k) Plan for 2015. Matching contributions, if any, and employee contributions are at all times fully vested. We intend our 401(k) Plan, and the accompanying trust, to qualify under Sections 401(k) and 501 of the Internal Revenue Code of 1986, as amended (the "Code"), so that contributions by employees to our 401(k) Plan, and income earned (if any) on plan contributions, are not taxable to employees until withdrawn from our 401(k) Plan, and so that we will be able to deduct our contributions, if any, when made. The trustee under our 401(k) Plan, at the direction of each participant, may invest the assets of our 401(k) Plan in any of a number of investment options.

Stock Ownership Guidelines

Although stock option grants encourage equity ownership, we currently do not require our directors or executive officers to own a particular number of shares of our common stock. We believe that stock and option holdings among our directors and executive officers are adequate at this time to appropriately align their interests with those of our stockholders.

Perquisites

Our executive officers participate in the same group insurance and employee benefit plans as our other salaried employees, and we do not provide other special benefits or other perquisites to our executive officers.

2015 Named Executive Officer Compensation

Salary

Elma Hawkins, Ph.D. became our President and Chief Operating Officer in August 2014. In December 2014, Dr. Hawkins was appointed as our President and Chief Executive Officer, effective January 1, 2015. In connection with her promotion to Chief Executive Officer, we increased Dr. Hawkins' 2015 annual salary from $325,000 to $400,000. The salary increase was based on the increase in Dr. Hawkins' duties as Chief Executive Officer, as well as a review and analysis of the salaries of executives of other public, clinical stage oncology companies as indicated in the informal market data assembled for our Compensation Committee by management from publicly available sources. As of June 1, 2016, Dr. Hawkins no longer is our President or Chief Executive Officer.

Molly Henderson was appointed as our new Chief Financial Officer and Corporate Secretary in June 2015. In connection with her appointment as Chief Financial Officer, we agreed to pay Ms. Henderson an annual salary of $275,000. In establishing Ms. Henderson's base salary for 2015, the Compensation Committee took into account her finance and accounting background and level of experience and the salary level of other public, clinical stage, oncology companies. On June 1, 2016, we increased Ms. Henderson's annual base salary to $350,000.

The salaries of James Bender, Ph.D., our current Vice President-Manufacturing, Laszlo Radvanyi, Ph.D., our former Chief Scientific Officer, and Michael Handelman, our former Chief Financial Officer, were not changed from 2014 to 2015. Dr. Bender did, however, receive an automatic 3% cost of living salary increase in 2015.

In March 2016, we increased the base salaries payable to each of our executive officers for 2016. The increases in the 2016 base salaries over the 2015 base salaries were made in consideration of the attainment, or substantial progress in attaining, of our principal corporate goals for 2015 and the subjective assessment of each executive officer's performance of his or her primary responsibilities. In addition, salary levels for our executive officers also were adjusted to be more in line with our peer group and to be more competitive. Accordingly, the 2016 salaries of Dr. Hawkins, Ms. Henderson and Dr. Bender were increased to $500,000, $300,000 and $225,000, respectively. Despite the increases, we believe that these salary levels are below the 50th percentile of comparable companies in Radford's survey group and market studies.

Annual and Special Cash Bonuses

Under the employment agreements we entered into with our former President and Chief Executive Officer, Elma Hawkins, Ph.D., Molly Henderson, our Chief Financial Officer, and James Bender, Ph.D., our Vice President-Manufacturing, Dr. Hawkins, Ms. Henderson and Dr. Bender were entitled to annual cash bonuses for fiscal 2015 in an amount equal to 40%, 25% and 25%, respectively, of their annual base salaries conditioned on the satisfaction of the individual and company objectives that are established annually by the Compensation Committee/Board of Directors. Since Dr. Radvanyi and Mr. Handelman were no longer employed by us at the end of 2015, they were not entitled to receive year-end cash bonuses. Early in 2015 our Compensation Committee recommended, and our Board of Directors approved, corporate goals that, in their judgment, represented matters over which the named executive officers have significant operational control and on which our Board of Directors believed they should focus to move our strategic plan forward and enhance stockholder value. For 2015, the Compensation Committee and our Board of Directors established certain performance goals, including the following:

- Raise more than $35 million of equity;
- Arrange for the company's common stock to be listed on NASDAQ;
- Obtain exclusive and ancillary licenses covered by the CRADA;
- Obtain orphan designation for LN-144 in melanoma;
- File an IND for one non-melanoma indication;
- Build out various organizational functions; and
- Formulate U.S. and EU regulatory plans for LN-144 registration.

For 2015, the Compensation Committee determined that each of the corporate goals had either been fully or substantially met, and that all persons eligible for a discretionary bonus would be paid their full target cash bonuses. As a result, Dr. Hawkins, Ms. Henderson and Dr. Bender received $160,000, $41,100, and $54,000, respectively. Ms. Henderson's annual cash bonus was pro-rated to reflect the fact that she joined the company in mid-year. On June 1, 2016, we increased Ms. Henderson's target potential annual incentive compensation to 40% of her base annual salary.

Stock Option Awards

As part of its year-end option grant program, for 2015 the Compensation Committee granted to Dr. Hawkins an incentive stock option to purchase up to 58,939 shares of our common stock. On that same date, the Compensation Committee also granted an incentive stock option to Ms. Henderson to purchase up to 21,116 shares of common stock, and options to Dr. Bender for 27,622 shares. All options had an exercise price equal to the market price of our common stock ($7.58) on the date of grant (December 28, 2015). The option agreements provide that one-third of the shares underlying these options will vest on December 28, 2016, and the remaining shares underlying the options will vest in eight equal quarterly (three month) installments over the two years after December 28, 2016.

In connection with Dr. Hawkins' separation from our company on June 1, 2016, in order to avoid confusion regarding those grants, we and Dr. Hawkins agreed to cancel certain option grants made to her in 2014 to purchase a total of 225,000 shares of our common stock at exercise prices of $5.60 and $6.70 per share. Following those grants, we granted her two-year options to purchase 125,000 shares of our common stock at an exercise price of $6.70 (the exercise price of previously granted options) and an option to purchase 91,061 shares of our common stock at an exercise price of $5.87 a share (the closing trading price of our common stock on the date of grant). Dr. Hawkins also agreed to cancel options to purchase 8,939 shares of common stock in exchange for $38,000.

In connection with hiring Molly Henderson as our new Chief Financial Officer, in June 2015 the Compensation Committee granted Ms. Henderson stock options to purchase an aggregate of 200,000 shares of the company's common stock. The stock options have an exercise price of $10.69 per share, which price was the closing trading price of our common stock on June 8, 2015. Options for the purchase of 66,672 shares of common stock vested on June 8, 2016 and, provided that Ms. Henderson is still employed with us on the following dates, the remaining portion of the foregoing stock options will vest as to 16,666 shares at the end of each quarter over the following two years.

On June 1, 2016, we granted Ms. Henderson an additional stock option for the purchase of up to 150,000 shares of common stock. These stock options have an exercise price of $5.87 per share, the fair market value of the common stock on June 1, 2016. Provided that Ms. Henderson is still employed with us on the following dates, the foregoing additional stock options will vest as follows: options for the purchase of 50,000 shares will vest on June 1, 2017; and thereafter the remaining options will vest in equal quarterly installments over the next two years.

On June 10, 2016, we granted Ms. Henderson an additional stock option for the purchase of up to 50,000 shares of common stock. These stock options have an exercise price of $7.61 per share, the fair market value of the common stock on June 10, 2016. Provided that Ms. Henderson is still employed with us on the following dates, the foregoing additional stock options will vest as follows: options for the purchase of one-third of the shares will vest on June 10, 2017; and thereafter the remaining options will vest in equal quarterly installments over the next two years.

Other Policies and Considerations

Relationship Between Compensation Elements

Each element of executive officer compensation in 2015 considered the same element paid to executive officers holding the similar position at comparable companies, but no fixed benchmark or other objective formula was utilized when determining the relative proportion of salary, cash incentive or equity awards relative to each other or to total compensation.

Employment Agreements and Termination Benefits

We have entered into substantially similar written employment agreements, except for differences in the amounts of compensation payments and equity grants, with each of our current and former named executive officers. The main purpose of these agreements is to protect the company from business risks such as competition for the executives' service, loss of confidentiality or trade secrets, and solicitation of our other employees, and to define our right to terminate the employment relationship. Each of these employment agreements can be terminated by either party at any time. Each employment agreement was individually negotiated, so there are some variations in the terms among executive officers. Generally speaking, however, the employment agreements provide for termination and severance benefits that the Compensation Committee believes are consistent with industry practices for similarly situated executives. The Compensation Committee believes that the termination and severance benefits help the company retain the named executive officers by providing them with a competitive employment arrangement and compensation for termination of their employment by us without "cause."

In the event of termination of an executive's employment without "cause," the named executive officers were, or will be, entitled to a lump-sum payment equal to six months of base salary (12 months in the case of Dr. Hawkins and Ms. Henderson). The named executive officers' agreements also provide for our continuation of medical benefits during the severance period. If a named executive officer's employment is terminated by us without "cause" or by the executive for "good reason" within six months before, or one year following a change of control of our company, the named executive officers will be entitled to a lump-sum payment equal to six months of base salary (12 months in the case of Dr. Hawkins and Ms. Henderson, in each case including the amount of their respective minimum bonuses for those periods). In addition, if a named executive officer's employment is terminated by us without "cause" or by them for "good reason," his or her unvested stock options vest immediately.

The specific terms of the termination and change of control arrangements, as well as an estimate of the compensation that would have been payable had they been triggered as of the end of 2015, are described in detail in the section below entitled "Executive Compensation – Potential Payments Upon Termination/Change of Control."

2015 Stockholder Advisory Vote

Each year, we hold a non-binding advisory stockholder vote on the compensation program for our named executive officers. At our annual stockholder meetings held in November 2014 and June 2015, our stockholders approved, on an advisory basis, the compensation of our named executive officers. In evaluating our compensation arrangements in early 2015 (and most recently for 2015 year-end bonuses), we considered the support of our stockholders of our compensation arrangements and objectives. As a result, our Compensation Committee retains our general approach to executive compensation, and continues to apply the same general principles and philosophy as in the prior fiscal year in determining executive compensation. Our Compensation Committee values the opinions of our stockholders and will take our stockholders' opinions into account when making compensation decisions for the members of our executive team, including the named executive officers.

Tax and Accounting Implications

Deductibility of Executive Compensation

The Compensation Committee takes into consideration the tax consequences of compensation to the named executive officers, but tax considerations are not a significant part of the company's compensation policy.

As part of its role, the Compensation Committee reviews and considers the deductibility of executive compensation under Section 162(m) of the Code, which provides that corporations may not deduct compensation of more than $1,000,000 that is paid to certain individuals. However, compensation that is "performance-based compensation" within the meaning of the Code does not count toward the $1 million deduction limit, if awarded by a Compensation Committee comprised entirely of "outside directors."

Accounting for Share-Based Compensation

We account for share-based compensation in accordance with the requirements of FASB Accounting Standards Codification (ASC) Topic 718. This accounting treatment has not significantly affected our executive compensation decisions.

“Clawbacks”

We have not established any policy regarding recoupment, or “clawback,” of any performance-based compensation in the event our company’s historical financial results are subsequently revised or restated in a way that would have produced a lower compensation amount.

The foregoing policies remained in place through 2015, and, unless otherwise noted above, we expect to continue to follow them for the foreseeable future.

SUMMARY COMPENSATION TABLE

The following table shows the compensation paid or accrued during the last three fiscal years ended December 31, 2015 to (i) Elma Hawkins, Ph.D., our former President and Chief Executive Officer and the only individual who served as our principal executive officer during the year ended December 31, 2015, (ii) Molly Henderson and Michael Handelman, each of whom served as our acting principal financial officer during the year ended December 31, 2015, (iii) the executive officers who served on December 31, 2015 and were compensated more than $100,000 in 2015, and (iv) the other persons who served as executive officers in 2015, but were no longer employed by us on December 31, 2015. The following executives are referred to throughout this prospectus as our "named executive officers."

Name and Principal Position	Year	Salary	Bonus	Stock Awards (6)	Option Awards (6)	All other Compensation	Total
Elma Hawkins, Ph.D.	2015	$ 400,000	$ 160,000	-	$ 441,453	-	$ 1,001,453
Former President and Chief Executive Officer(1)	2014	$ 277,292	$ 59,583	$ 1,120,000	$ 3,637,924	-	$ 5,094,799
Molly Henderson, current Chief Financial Officer (2)	2015	$ 154,247	$ 40,104	-	$ 2,294,159	-	$ 2,488,510
James Bender, Ph.D.	2015	$ 216,300	$ 55,697	-	$ 206,889	-	$ 478,886
Vice President-Manufacturing(3)	2014	$ 207,712	$ 82,500	$ 959,840	$ 1,249,716	-	$ 2,499,768
Laszlo Radvanyi, Ph.D.(4)	2015	$ 217,508	-	-	-	-	$ 217,508
Former Chief Scientific Officer	2014	$ 130,769	$ 56,458	$ 1,171,800	$ 1,369,068	-	$ 2,728,095
Michael Handelman(5)	2015	$ 116,077	-	-	-	-	$ 116,077
Former Chief Financial Officer	2014	$ 180,000	$ 45,000	$ 641,250	$ 887,507	-	$ 1,753,757
	2013	$ 180,000	-	-	-	-	$ 180,000

(1) Dr. Hawkins became our President and Chief Operating Officer on August 21, 2014 and our President and Chief Executive Officer effective January 1, 2015. Prior thereto, from February 2014 through August 21, 2014 she provided consulting services as our Head of Clinical Development. Compensation shown for 2014 in this table includes compensation paid to Dr. Hawkins both as a consultant and as our President and Chief Operating Officer. The compensation she received as an officer in 2014 consisted of $137,222 of salary and options to purchase 400,000 shares of our common stock (having a grant date fair value of $2,516,973). As consultant, her compensation consisted of $159,693 of fees, options to purchase 200,000 shares (having a grant date fair value of $1,120,951), and 200,000 shares of restricted stock (having a grant date fair value of $1,120,000). As of June 1, 2016, Dr. Hawkins no longer is our President or Chief Executive Officer.

(2) Ms. Henderson became our Chief Financial Officer on June 8, 2015. She has notified us that her last day of employment with us will be August 16, 2016.

(3) Dr. Bender became our Vice President—Manufacturing on January 6, 2014.

(4) Dr. Radvanyi became our Chief Scientific Officer in June 2014 and resigned in October 2015.

(5) Mr. Handelman resigned effective June 8, 2015.

(6) The amounts shown reflect the grant date fair value computed in accordance with FASB ASC 718 for the indicated year, adjusted to disregard the effects of any estimate of forfeitures related to service-based vesting. The assumptions we used in valuing options and restricted stock are described more fully in the footnotes to our financial statements included elsewhere in this prospectus.

2015 Grants of Plan-Based Awards

In 2015, we granted stock options to our named executive officers under our 2014 Equity Incentive Plan, as amended (as so amended, the "2014 Plan") as follows:

Name	Grant Date	All Other Option Awards: Number of Securities Underlying Options(1)	Exercise Price of Option Awards ($/Share)	Grant Date Fair Value of Stock and Option Awards ($)(2)
Elma Hawkins, Ph.D. Former President and Chief Executive Officer	12/28/15	58,939	$ 7.58	$ 441,453
Molly Henderson	6/8/15	200,000	$ 10.69	$ 2,136,000
Chief Financial Officer	12/28/15	21,116	$ 7.58	$ 158,159
James Bender, Ph.D. Vice President—Manufacturing	12/28/15	27,622	$ 7.58	$ 206,889
Laszlo Radvanyi, Ph.D. Former Chief Scientific Officer	-0-	-0-	-0-	-0-
Michael Handelman Former Chief Financial Officer	-0-	-0-	-0-	-0-

(1) Represents shares of our common stock underlying options awarded, each of which vest over time.

(2) Represents the fair value of each equity award on the date of grant, as computed in accordance with FASB ASC 718.

Outstanding Equity Awards

The following table sets forth outstanding equity awards held by our named executive officers as of December 31, 2015 under our 2010 Equity Compensation Plan (the "2010 Plan"), 2011 Equity Incentive Plan (the "2011 Plan") and 2014 Plan:

Outstanding Equity Awards At Year Ended December 30, 2015

	Option Awards						Stock Awards			
Name	Grant Date	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#)	Option Exercise Price ($)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested ($)	Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested (#)	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested ($)
Elma Hawkins,	2/21/14	116,666	83,334	-0-	5.60	2/21/19	160,000	1,235,000	-0-	-0-
former President	8/21/14	52,083	72,917	-0-	6.70	8/21/24	-0-	-0-	-0-	-0-
and Chief Executive	12/12/14	91,667	183,333	-0-	6.15	12/12/24	-0-	-0-	-0-	-0-
Officer(1)	12/28/15	-0-	58,939	-0-	7.58	12/28/25	-0-	-0-	-0-	-0-
	Total	**260,416**	**398,523**	**-0-**			**160,000**	**1,235,000**	**-0-**	**-0-**
Molly Henderson	6/8/15	-0-	200,000	-0-	10.69	6/8/25	-0-	-0-	-0-	-0-
Chief Financial Officer(2)	12/28/15	-0-	21,116	-0-	7.58	12/28/25	-0-	-0-	-0-	-0-
	Total	**-0-**	**221,116**							
James Bender, Vice	1/6/14	58,332	41,668	-0-	9.60	1/16/24	50,000	386,000	-0-	-0-
President-Manufacturing(3)	12/5/14	15,555	31,113	-0-	6.25	12/5/24	-0-	-0-	-0-	-0-
	12/28/15	-0-	27,622	-0-	7.58	12/28/25	-0-	-0-	-0-	-0-
	Total	**73,887**	**100,403**	**-0-**			**50,000**	**386,000**	**-0-**	**-0-**
Laszlo Radvanyi, Former	6/23/14	-0-	180,000	-0-	6.51	6/23/24	-0-	-0-	-0-	-0-
Chief Scientific Officer(4)	12/5/14	-0-	32,407	-0-	6.25	12/5/24	-0-	-0-		
	Total	**-0-**	**212,407**	**-0-**			**-0-**	**-0-**	**-0-**	**-0-**
Michael Handelman,										
Former Chief Financial Officer(5)	-0-	**-0-**	-0-	**-0-**	-0-	-0-	-0-	-0-	-0-	-0-
	Total	**-0-**	**-0-**	**-0-**	**-0-**	**-0-**	**-0-**	**-0-**	**-0-**	**-0-**

(1) (i) The stock option to purchase 200,000 shares that has an exercise price of $5.60 was originally scheduled to vest in installments as follows: The option to the purchase of 66,666 shares was to vest on February 21, 2015; and the remaining shares under the option were to vest in eight equal quarterly (three month) installments over the next two years after February 21, 2015. (ii) The stock option to purchase 125,000 shares at an exercise price of $6.70 was to vest in three installments as follows: The right to purchase 41,667 shares was to vest on August 21, 2015; and the remaining shares were to vest quarterly over the next two years after August 21, 2015. (iii) The stock option grant for 275,000 shares with an exercise price of $6.15 was to vest as to 91,667 shares on January 1, 2016; the remaining options were to vest quarterly over the next two years after January 1, 2016. (iv) The stock option grant for 58,939 shares with an exercise price of $7.58 was to vest as to 19,646 shares on December 28, 2016, and the remaining options were to vest in eight quarterly installments thereafter. On June 1, 2016 Dr. Hawkins and our company agreed to terminate her employment. In accordance with Dr. Hawkins' employment agreement, all of her unvested stock options and shares of restricted stock vested on the date of her termination. In addition, on June 1, 2016 we cancelled 225,000 of the options that were granted to Dr. Hawkins in 2014 and, on that same day, we granted Dr. Hawkins new stock options for the purchase of 216,061 shares of common stock. The options for the 216,061 shares have an exercise price equal to the higher of the exercise price of the cancelled options or the fair market value of the shares on the date of grant.

(2) (i) The stock option grant for 200,000 shares with an exercise price of $10.69 vests as to 66,672 shares on June 8, 2016, and the remaining shares shall vest as to 16,666 shares at the end of each quarter over the following two years after June 8, 2016. (ii) The stock option grant for 21,116 shares with an exercise price of $7.58 vests as to 7,039 shares on December 28, 2016, and the remaining options vest in eight quarterly installments thereafter. Ms. Henderson has notified us that her last day of employment with us will be August 16, 2016. These options will become fully vested upon Ms. Henderson's termination of employment for good reason.

(3) (i) The stock option grant for 100,000 shares at an exercise price of $9.60 vests in three installments as follows: Options for the purchase of 33,333 shares vested on January 6, 2015, and the remaining shares vest quarterly over the next two years thereafter. (ii) The stock options for 46,667 shares with an exercise price of $6.25 vested as to 33.33% of the shares on December 15, 2015, and the balance vest over two years in eight equal quarterly installments thereafter. (ii) The stock option grant for 27,622116 shares with an exercise price of $7.58 vests as to 9,207 shares on December 28, 2016, and the remaining options vest in eight quarterly installments thereafter.

(4) Dr. Radvanyi resigned on October 2, 2015. Accordingly, these stock options expired on January 2, 2016.

(5) Mr. Handelman resigned in June 2015. All options that he owned were either exercise or forfeited within 90 days after his resignation. Accordingly, Mr. Handelman held no equity awards as of December 31, 2015.

Option Exercises in 2015

No named executive officer exercised stock options in 2015.

Employment Agreements

Current Executive Officers: The following is a summary of the employment agreements we have entered into with our current executive officers.

Maria Fardis, Ph.D. On June 1, 2016, we entered into an employment agreement with Maria Fardis, Ph.D., under which Dr. Fardis agreed to serve as our President and Chief Executive Officer. Dr. Fardis succeeded Elma Hawkins, Ph.D., our prior President and Chief Executive Officer. In her employment agreement, we have agreed to pay Dr. Fardis an annual base salary of $500,000 and a signing bonus of $150,000. In addition, on June 1, 2016, we granted to Dr. Fardis under our 2014 Plan stock options to purchase an aggregate of 500,000 shares of our common stock. On June 1, 2016, we also entered into a restricted stock unit agreement with Dr. Fardis pursuant to which we granted her 550,000 non-transferrable restricted stock units as an inducement of employment pursuant to the exception to The NASDAQ Global Market rules that generally require stockholder approval of equity incentive plans. Dr. Fardis' stock options have an exercise price per share of $5.87, the fair market value of our common stock at the close of trading on June 1, 2016, and will vest as to 125,000 shares on June 1, 2017, with the remaining options vesting in 36 equal monthly installments thereafter. The 550,000 restricted stock units will vest in installments as follows: (i) 137,500 restricted stock units will vest upon the first anniversary of the effective date of her employment agreement; (ii) 275,000 restricted stock units will vest upon the satisfaction of certain clinical trial milestones; and (iii) 137,500 restricted stock units will vest in equal monthly installments over the 36-month period following the first anniversary of the effective date of her employment, in each case, provided that Dr. Fardis has been continuously employed with us as of such vesting dates. Dr. Fardis will also be eligible to participate in our annual incentive compensation program as approved by our Board of Directors, with target potential annual incentive compensation of 50% of her base annual salary.

If we terminate Dr. Fardis' employment agreement without "cause" (as defined in her employment agreement) during the first six months of her employment, Dr. Fardis will be entitled to receive her base salary through the date of termination, and any incentive compensation that was earned to the date of termination, plus two months' base salary for each full month between the effective date and the date of termination of her employment. If we terminate Dr. Fardis' employment without "cause," or she terminates her employment for "good reason" after the initial six months of her employment, in addition to the aforementioned payments, there will be a twelve-month acceleration of her unvested stock options and unvested time-based restricted stock units, and she will have twelve months from the date of termination within which to exercise her vested options. In that event, Dr. Fardis also will be entitled to receive a severance payment equal to twelve months' base annual salary and a full year's incentive compensation.

In the event of a "change of control" (as defined in her employment agreement) of the company, all of Dr. Fardis' unvested time-based stock options and all unvested restricted stock units will vest immediately, whether or not her employment is terminated. If, either before or after a change in control, Dr. Fardis' employment is terminated by us for any reason other than "cause" or she were to terminate her employment for "good reason," Dr. Fardis will be entitled to receive all of the cash payments she would be entitled to receive in the event we were to terminate her employment without "cause."

Molly Henderson. On June 8, 2015 we entered into a new employment agreement with Molly Henderson pursuant to which Ms. Henderson agreed to continue to serve as our Chief Financial Officer. Under her employment agreement, Ms. Henderson was entitled to receive an annual salary of $275,000. In December 2015, we increased Ms. Henderson's annual salary to $300,000. Effective as of June 8, 2015, we granted Ms. Henderson a five-year stock option to purchase an aggregate of 200,000 shares of the Company's common stock. The stock options have an exercise price of $10.69 per share, the fair market value of the common stock on June 8, 2015. Options for the purchase of 66,672 of such shares vested on June 8, 2016; and, subject to her continuing employment, the remaining options will vest in equal quarterly installments of 16,666 shares over the two-year period commencing as of June 8, 2016.

Either party can terminate the employment agreement and Ms. Henderson's employment without cause at any time. Upon termination of the employment agreement, except as otherwise provided in the employment agreement, the unvested options will be forfeited and returned to the Company. However, if we terminate Ms. Henderson's employment without cause or if Ms. Henderson terminates her employment for good reason (as defined in the agreement), any of Ms. Henderson's unvested stock options will become fully vested, and she will have twenty-four months from the date of termination within which to exercise her vested options. Furthermore, if we terminate the employment agreement without cause, Ms. Henderson will be eligible to receive a severance payment equivalent to twelve months of her then base salary. Had the employment agreement been terminated by us without "cause" or following a change in control on December 31, 2015, Ms. Henderson would have been entitled to receive a severance payment of $300,000 and health insurance benefits of approximately $15,000 (representing the family health benefit payments for a twelve-month period). Ms. Henderson has notified us that her last day of employment with us will be August 16, 2016.

On June 1, 2016, we agreed to amend Ms. Henderson's employment to (i) increase her annual base salary to $350,000, (ii) grant her an additional stock option for the purchase of up to 150,000 shares of common stock, and (iii) increase her target potential annual incentive compensation to 40% of her base annual salary. The stock options have an exercise price of $5.87 per share, the fair market value of the common stock on June 1, 2016. Provided that Ms. Henderson is still employed with us on the following dates, the foregoing stock options will vest as follows: Options for the purchase of 50,000 shares will vest on June 1, 2017; and thereafter the remaining shares will vest in equal quarterly installments over the next two years. All of the options will vest upon Ms. Henderson's termination of employment for good reason.

On June 10, 2016, we granted Ms. Henderson an additional stock option for the purchase of up to 50,000 shares of common stock. These stock options have an exercise price of $7.61 per share, the fair market value of the common stock on June 10, 2016. Provided that Ms. Henderson is still employed with us on the following dates, the foregoing additional stock options will vest as follows: options for the purchase of one-third of the shares will vest on June 10, 2017; and thereafter the remaining options will vest in equal quarterly installments over the next two years. All of the options will vest upon Ms. Henderson's termination of employment for good reason.

Ms. Henderson has notified us that her last day of employment with us will be August 16, 2016, at which time she will be deemed to have terminated her employment for good reason.

Michael T. Lotze MD. Dr. Lozte entered into an employment agreement with us to serve as our Chief Scientific Officer and our Vice President of Research and Development commencing on March 28, 2016. Under his employment agreement, Dr. Lotze is entitled to receive an annual salary of $400,000. He also is entitled to a year-end incentive bonus of up to 37.5% of his base salary. Effective as of March 28, 2015, we granted Dr. Lotze stock options to purchase an aggregate of 225,000 shares of our common stock, which options have an exercise price of $4.54, the fair market value of our common stock on March 28, 2016. Provided that he is still employed with us on the following dates, the foregoing stock options will vest as follows: (i) 112,500 of the foregoing stock options will vest in three installments as follows: (i) options for the purchase of 22,500 shares shall vest on March 28, 2017; (ii) options for the purchase of 33,750 shares shall vest on March 28, 2018; and (iii) options for the purchase of 56,250 shares shall vest on March 28, 2019. Of the remaining shares, 56,250 shares will vest upon the successful enrollment of our first patient in a registration trial, and the remaining 56,250 shares will vest upon the successful submission of a BLA to the FDA. Either party can terminate the employment at any time.

Steven A. Fischkoff MD. Dr. Fischkoff entered into an employment agreement with us to serve as our Chief Medical Officer on February 4, 2016. Under his employment agreement, Dr. Fischkoff is entitled to receive an annual salary of $400,000. He also is entitled to a year-end incentive bonus of up to 35% of his base salary. Effective as of February 4, 2016, we granted Dr. Fischkoff stock options to purchase an aggregate of 225,000 shares of our common stock, which options have an exercise price of $5.43, the fair market value of our common stock on February 4, 2016. Provided that he is still employed with us on the following dates, the foregoing stock options will vest as follows: (i) Options for the purchase of 75,000 shares shall vest on February 4, 2017; and (ii) the remaining stock options shall vest as to 18,750 shares at the end of each quarter over the next two years ending February 4, 2019.

Either party can terminate the employment agreement and Dr. Fischkoff's employment without cause at any time. Upon termination of the employment agreement, except as otherwise provided in the agreement, the unvested options and the unvested shares of restricted stock will be forfeited and returned to the Company. However, if we terminate Dr. Fischkoff's employment without cause (as defined in the agreement) any of Dr. Fischkoff's unvested stock options will become fully vested, and he shall have six months from the date of termination within which to exercise his vested options. Furthermore, if we terminate the employment agreement without cause, Dr. Fischkoff will be eligible to receive a severance payment equivalent to six months of his then base salary.

Former President and Chief Executive Officer. From January 1, 2015 until June 1, 2016, Elma Hawkins, Ph.D was our President and Chief Executive Officer. The following is a summary of Dr. Hawkins' employment agreement and the agreement we entered into in connection with the termination of her services:

Dr. Hawkins entered into an employment agreement with us on August 21, 2014 pursuant to which she agreed to serve as our President and Chief Operating Officer. On December 12, 2014, Dr. Hawkins was appointed as our Chief Executive Officer, effective January 1, 2015. In connection with her appointment as Chief Executive Officer, we agreed to pay Dr. Hawkins an annual salary of $350,000, which amount would automatically increase to $400,000 when we raised more than $25 million in a public offering. We completed the public offering later in December 2014, so Dr. Hawkins' salary in 2015 was $400,000. As the Company's President and Chief Executive Officer, in 2016 Dr. Hawkins was also entitled to a year-end incentive bonus of up to 40% of her base salary. Under her amended employment agreement, Dr. Hawkins was granted a stock option to purchase 275,000 shares of common stock at an exercise price equal $6.15 per share (the closing price of the common stock on December 12, 2014). The option for these 275,000 shares were scheduled to vest over three years as follows: (i) 91,667 shares vested on January 1, 2016; and (ii) the remaining shares were scheduled to vest quarterly over the next two years after January 1, 2016. In December 2015, we increased Dr. Hawkins' 2016 annual salary to $500,000 and increased Dr. Hawkins' target incentive bonus for 2016 to 50% of her 2016 annual salary.

Dr. Hawkins' employment agreement provided that it could be terminated by either party at any time; provided, however, that if we were to terminate Dr. Hawkins' employment agreement without cause (as defined in the employment agreement), all of her unvested stock options and unvested shares of restricted stock would have become fully vested, and she would have had twelve months from the date of termination within which to exercise her vested options. In addition, the agreement provided that Dr. Hawkins would be eligible to receive a severance payment equal to twelve months of her then base salary. The agreement also provided that if, within six months immediately preceding a Change in Control (as defined in his employment agreement) or within 12 months immediately following a Change of Control, Dr. Hawkins' employment were terminated by us for any reason other than cause, then Dr. Hawkins' unvested stock options and shares of restricted stock would immediately vest and she would be entitled to receive a severance payment equal to twelve months of her then base salary.

In connection with Dr. Hawkins' amicable separation from the company, on June 1, 2016 we agreed to pay Dr. Hawkins (i) $188,462, representing all salary, accrued and unused and unpaid vacation, a prorated portion of her annual incentive compensation and other amounts owed to her, and (ii) as required by her employment agreement, $500,000 as a severance payment. Dr. Hawkins will continue to provide advisory services to our board of directors for at least three months. Dr. Hawkins will be paid $10,000 per month for her advisory services.

In connection with Dr. Hawkins' separation, we and Dr. Hawkins also agreed to cancel option grants made to her in 2014 to purchase 225,000 shares of our common stock at exercise prices of $5.60 and $6.70 per share, and to grant her two-year options to purchase 125,000 shares of our common stock at an exercise price of $6.70 per share and an option to purchase 91,061 shares of the Company's stock at an exercise price of $5.87 per share. Dr. Hawkins also agreed to cancel options to purchase 8,939 shares in exchange for $38,000.

Retention Plan

On June 1, 2016, our Board of Directors authorized and approved a form of retention bonus agreement to be entered into between us and selected officers and employees. Each retention bonus agreement provides for the payment of cash bonuses in two installments if the officer or employee remains employed with us through December 31, 2016 and June 30, 2017, respectively. Further, a participating officer or employee whose employment is terminated by us without cause prior to the specified retention dates will be entitled to such retention bonus as if he or she remained employed with us through such dates. Additionally, in the event of a "change in control" (as defined in the bonus agreement) of the company, the officer or employee will be entitled to receive his or her full retention bonuses less any portion previously paid. The following named executive officers will participate in the retention bonus arrangement and are eligible to receive the following payments:

Named Executive Officer	Bonus Payable as of December 31, 2016	Bonus Payable as of June 30, 2017
Molly Henderson	$ 100,000	$ 100,000
Michael Lotze	$ 100,000	$ 100,000
Steven Fischkoff	$ 100,000	$ 100,000

2010 Equity Compensation Plan

On March 29, 2010, our Board adopted the Genesis Biopharma, Inc. 2010 Equity Compensation Plan (the "2010 Plan") pursuant to which the Board reserved an aggregate of 35,000 shares of common stock for future issuance. The 2010 Plan provided for awards of incentive stock options, non-qualified stock options, rights to acquire restricted stock, rights to acquire unrestricted stock, and stock appreciation rights, or SARs, but since we did not obtain stockholder approval of the 2010 Plan within twelve months after the date our Board adopted the 2010 Plan, incentive stock options could not be granted thereunder. As of October 2011, options for the issuance of all 35,000 shares had been granted, and no shares were available for additional grants under the 2010 Plan.

2011 Equity Incentive Plan

As of October 14, 2011, we adopted our 2011 Equity Incentive Plan (the "2011 Plan"). Employees, directors, consultants and advisors of the Company are eligible to participate in the 2011 Plan. The 2011 Plan initially had 180,000 shares of common stock reserved for issuance in the form of incentive stock options, non-qualified options, common stock, and grant appreciation rights. The 2011 Plan was not approved by our stockholders within the required one-year period following its adoption and, accordingly, no incentive stock options can be granted under that plan. In August 2013 our Board of Directors and a majority of our stockholders approved an amendment to increase the number of shares available under the 2011 Plan from 180,000 shares to 1,700,000 shares, and an amendment to increase the number options or other awards that can be granted to any one person during a twelve month period from 50,000 shares to 300,000 shares. The foregoing amendment to the 2011 Plan became effective in September 2013. As of June 17, 2016, as a result of certain forfeitures by former employees, 878,000 shares were available for future grant under the 2011 Plan.

2014 Equity Incentive Plan

On September 19, 2014, our Board adopted the Lion Biotechnologies, Inc. 2014 Equity Incentive Plan. The 2014 Plan was approved by our stockholders at the annual meeting of stockholders held in November 2014.

As originally adopted by the Board and our stockholders, the 2014 Plan authorized the issuance of up to an aggregate of 2,350,000 shares of our common stock. In 2015, the Board and our stockholders approved an amendment to increase the total number of shares that could be issued under the 2014 Plan by 1,650,000 shares, to 4,000,000 shares. On June 1, 2016, the Board amended the 2014 Plan to increase the maximum number of options or other awards that can be granted to an eligible person during any twelve-month period from 500,000 shares to 550,000 shares. On June 10, 2016, the Board adopted an amendment to the 2014 Plan to increase the total number of shares that can be issued under the 2014 Plan from 4,000,000 shares to 9,000,000 shares, subject to stockholder approval of the amendment.

As of June 17, 2016, under the 2014 Plan:

- A total of 13,909 shares of common stock had been issued upon exercise of stock options.
- No shares of restricted stock have been issued or were outstanding.
- There were 2,804,731 shares subject to issuance upon exercise of outstanding options at a weighted average share price of $6.64 per share and a weighted average remaining life of 9.0 years.
- There were 281,360 shares of common stock available for future issuance under the 2014 Plan.

Since the 2014 Plan was adopted, we have granted options for the purchase of an aggregate of 1,857,538 shares of common stock to current executive officers and directors with grant date fair values ranging from $4.00 to $11.00 per share, and have granted to all our employees (excluding current executive officers) as a group options to purchase an aggregate of 2,006,056 shares. The stock options granted to such employees have exercise prices ranging from $5.00 to $11.00 per share.

Terms and Conditions of the Amended 2014 Plan.

General. The 2014 Plan provides for awards of incentive stock options, non-statutory stock options, rights to acquire restricted stock, and stock appreciation rights, or SARs. Incentive stock options (“ISOs”) granted under the 2014 Plan are intended to qualify as “incentive stock options” within the meaning of Section 422 of the Code. Non-statutory stock options (NQSOs) granted under the 2014 Plan are not intended to qualify as incentive stock options under the Code. See “Certain Federal Income Tax Consequences” below for a discussion of the principal federal income tax consequences of awards under the 2014 Plan.

Purpose. Our Board adopted the 2014 Plan to provide a means by which our employees, directors and consultants may be given an opportunity to benefit from increases in the value of our common stock, to assist in attracting and retaining the services of such persons, to bind the interests of eligible recipients more closely to our company’s interests by offering them opportunities to acquire shares of our common stock and to afford such persons stock-based compensation opportunities that are competitive with those afforded by similar businesses.

Administration. Our Board of Directors has authorized our Compensation Committee to administer the 2014 Plan, although the Board also, from time to time, participates in the administration of the 2014 Plan and the grant of options. Subject to the provisions of the 2014 Plan, our Compensation Committee has the power to determine in its discretion: (a) to grant options and SARs and grant or sell restricted stock; (b) to determine the fair market value of the shares of common stock subject to options or other awards; (c) to determine the exercise price of options granted, which shall be no less than the fair market value of any common stock on the date of grant, the economic terms of SARs granted, which shall provide for a benefit of the appreciation on common stock over not less than the value of our common stock on the date of grant, or the offering price of restricted stock; (d) to determine the persons to whom, and the time or times at which, options or SARs shall be granted or restricted stock granted or sold, and the number of shares subject to each option or SAR or the number of shares of restricted stock granted or sold; (e) to construe and interpret the terms and provisions of the 2014 Plan, of any applicable agreement and all options and SARs granted under the 2014 Plan, and of any restricted stock award under the 2014 Plan; (f) to prescribe, amend, and rescind rules and regulations relating to the 2014 Plan; (g) to determine the terms and provisions of each option and SAR granted and award of restricted stock (which need not be identical), including but not limited to, the time or times at which options and SARs shall be exercisable or the time at which the restrictions on restricted stock shall lapse; (h) with the consent of the grantee, to rescind any award or exercise of an option or SAR; (ix) to modify or amend the terms of any option, SAR or restricted stock (with the consent of the grantee or holder of the restricted stock if the modification or amendment is adverse to the grantee or holder); (i) to accelerate or defer (with the consent of the grantee) the exercise date of any option or SAR or the date on which the restrictions on restricted stock lapse; (j) to issue shares of restricted stock to an optionee in connection with the accelerated exercise of an option by such optionee; (k) to authorize any person to execute on behalf of our company any instrument evidencing the grant of an option, SAR or award of restricted stock; (l) to determine the duration and purposes of leaves of absence which may be granted to participants without constituting a termination of their employment for the purpose of the 2014 Plan; and (m) to make all other determinations deemed necessary or advisable for the administration of the 2014 Plan, any applicable agreement, option, SAR or award of restricted stock.

Eligibility. Incentive stock options may be granted under the 2014 Plan only to employees of our company and its affiliates. Employees, directors and consultants of our company and its affiliates are eligible to receive all other types of awards under the 2014 Plan.

Terms of Options and SARs. The exercise price of incentive stock options may not be less than the fair market value of our common stock subject to the option on the date of the grant and, in some cases, may not be less than 110% of such fair market value. The exercise price of nonstatutory options also may not be less than the fair market value of our common stock on the date of grant.

Options granted under the 2014 Plan may be exercisable in increments, or “vest,” as determined by our Board. Our Board has the power to accelerate the time as of which an option may vest or be exercised, with the consent of the optionee. The maximum term of options and SARs under the 2014 Plan is ten years, except that in certain cases the maximum term is five years. Options and SARs awarded under the 2014 Plan generally will terminate 90 days after termination of the participant’s service, subject to certain exceptions.

A recipient may not transfer an incentive stock option otherwise than by will or by the laws of descent and distribution. During the lifetime of the recipient, only the recipient may exercise an option or SAR. Our Board may grant nonstatutory stock options and SARs that are transferable to the extent provided in the applicable written agreement.

Terms of Restricted Stock Awards. Our Board or the Compensation Committee may issue shares of restricted stock under the 2014 Plan as a grant or for such consideration, including services, and, subject to the Sarbanes-Oxley Act of 2002, promissory notes, as determined in its sole discretion.

Shares of restricted stock acquired under a restricted stock purchase or grant agreement may, but need not, be subject to forfeiture to us or other restrictions that will lapse in accordance with a vesting schedule to be determined by our Board/Compensation Committee. In the event a recipient’s employment or service with our company terminates, any or all of the shares of common stock held by such recipient that have not vested as of the date of termination under the terms of the restricted stock agreement may be forfeited to our company in accordance with such restricted stock agreement.

Rights to acquire shares of our common stock under the restricted stock purchase or grant agreement shall be transferable by the recipient only upon such terms and conditions as are set forth in the restricted stock agreement, as our Board shall determine in its discretion, so long as shares of common stock awarded under the restricted stock agreement remain subject to the terms of such agreement

Adjustment Provisions. If our common stock is changed by reason of a stock split, reverse stock split, stock dividend, recapitalization, combination or reclassification, then the number and class of shares of stock subject to each option and SAR outstanding under the 2014 Plan, and the exercise price of each outstanding option and the base value of SAR, will be automatically and proportionately adjusted, except that our company will not be required to issue fractional shares as a result of any such adjustments. Such adjustment in any outstanding option or SAR will be made without change in the total price applicable to the unexercised portion of the option or SAR, but with a corresponding adjustment in the price for each share covered by the unexercised portion of the option or SAR.

Effect of Certain Corporate Events. Except as otherwise provided in the applicable agreement, in the event of (i) a liquidation or dissolution of our company, (ii) a merger or consolidation of our company with or into another corporation or entity (other than a merger with a wholly-owned subsidiary), or (iii) a sale of all or substantially all of the assets of our company in a single transaction or a series of related transactions, all options and SARs will terminate upon consummation of the transaction unless our Board determines that they will survive. If our Board determines that outstanding options and SARs will survive, and if our company will not be the surviving entity in the transaction, our Board may provide that the outstanding options and SARs will be assumed or an equivalent option or SAR substituted by an applicable successor entity or any affiliate of the successor entity. If outstanding options and SARs are to terminate upon consummation of the corporate transaction, any options or SARs outstanding immediately prior to the consummation of the corporate transaction will be deemed fully vested and exercisable immediately prior to the consummation of the corporate transaction (provided that the option or SAR has not expired by its terms and that the grantee takes all steps necessary to exercise the option or SAR prior to the corporate transaction as required by the agreement evidencing the option or SAR).

Duration, Amendment and Termination. Our Board may suspend or terminate the 2014 Plan without stockholder approval or ratification, subject to certain restrictions, at any time or from time to time. Unless sooner terminated, the 2014 Plan will terminate ten years from the date of its adoption by our Board, or on September 19, 2024.

Our Board may also amend the 2014 Plan at any time, and from time to time. However, except as relates to adjustments upon changes in common stock, no amendment will be effective unless approved by our stockholders to the extent stockholder approval is necessary to preserve incentive stock option treatment for federal income tax purposes. Our Board may submit any other amendment to the 2014 Plan for stockholder approval in its discretion.

Certain Federal Income Tax Consequences

Section 162m. For the purposes of complying with the requirements under Section 162(m) of the Code relating to the deductibility for federal income tax purposes of employee expense associated with awards under the 2014 Plan of more than $1,000,000 to “covered employees” within the meaning of Section 162(m), the 2014 Plan as originally approved by our board of directors and our stockholders provided that no eligible person shall be granted options or other awards during any twelve-month period covering more than 500,000 shares. This so-called Section 162(m) limitation was increased to 550,000 by the amendment to the 2014 Plan adopted by our board of directors on June 1, 2016. The amended Section 162(m) limitation has not been submitted to, or approve by the stockholders. The amended limitation will not satisfy the requirements to Section 162(m) unless and until the limitation is approved by our stockholders.

Non-qualified Stock Options. There will be no federal income tax consequences to either the Company or the participant upon the grant of a non-discounted NQSO. However, the participant will realize ordinary income on the exercise of the NQSO in an amount equal to the excess of the fair market value of the common stock acquired upon the exercise of such option over the exercise price, and the Company will receive a corresponding deduction. The gain, if any, realized upon the subsequent disposition by the participant of the common stock will constitute short-term or long-term capital gain, depending on the participant’s holding period.

Incentive Stock Options. There will be no regular federal income tax consequences to either the Company or the participant upon the grant or exercise of an ISO. If the participant does not dispose of the shares of common stock for two years after the date the option was granted and one year after the acquisition of such shares of common stock, the difference between the aggregate option price and the amount realized upon disposition of the shares of common stock will constitute long-term capital gain or loss, and the Company will not be entitled to a federal income tax deduction. If the shares of common stock are disposed of in a sale, exchange or other "disqualifying disposition" during those periods, the participant will realize taxable ordinary income in an amount equal to the excess of the fair market value of the common stock purchased at the time of exercise over the aggregate option price (adjusted for any loss of value at the time of disposition), and the Company will be entitled to a federal income tax deduction equal to such amount, subject to the limitations under Code Section 162(m).

While the exercise of an incentive stock option does not result in current taxable income, the excess of (1) the fair market value of the option shares at the time of exercise over (2) the exercise price, will be an item of adjustment for purposes of determining the participant's alternative minimum tax income.

SARs. A participant receiving an SAR will not recognize income, and the Company will not be allowed a tax deduction, at the time the award is granted. When a participant exercises the SAR, the amount of cash and the fair market value of any shares of common stock received will be ordinary income to the participant and will be allowed as a deduction for federal income tax purposes to the Company, subject to limitations under Code Section 162(m). In addition, the Board (or Committee), may at any time, in its discretion, declare any or all awards to be fully or partially exercisable and may discriminate among participants or among awards in exercising such discretion.

Restricted Stock. Unless a participant makes an election to accelerate recognition of the income to the date of grant, a participant receiving a restricted stock award will not recognize income, and the Company will not be allowed a tax deduction, at the time the award is granted. When the restrictions lapse, the participant will recognize ordinary income equal to the fair market value of the common stock, and the Company will be entitled to a corresponding tax deduction at that time, subject to the limitations under Code Section 162(m).

Equity Compensation Plan Information

The following table summarizes, as of December 31, 2015, (i) the number of shares of our common stock that are issuable under our equity compensation plans upon the exercise of outstanding options, warrants and other rights, (ii) the weighted-average exercise price of such options, warrants and rights, and (iii) the number of securities remaining available for future issuance under our equity compensation plans.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
	(a)	(b)	(c)
Equity compensation plans approved by stockholders			
2014 Equity Incentive Plan	2,286,388	$ 8.12	1,713,612
Equity compensation plans not approved by stockholders (1)			
2010 Equity Compensation Plan	21,750	$ 109.00	-
2011 Equity Incentive Plan	2,022,000	$ 6.58	878,000
Total	4,330,138		2,591,612

(1) The Board of Directors adopted our 2010 Equity Compensation Plan and our 2011 Equity Incentive Plan. However, we did not submit either of those plans to our stockholders for their approval. Accordingly, while we have adopted these equity compensation plans, these plans are not stockholder approved plans.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Certain Relationships and Related Transactions

Other than employment agreements with our executive officers and other payments made to our executive officers, all as described above under the section entitled "Executive Compensation—Compensation of Executive Officers," and compensation paid to directors as described above in the section titled "Executive Compensation—Director Compensation," the following is a description of all transactions since January 1, 2015 to which we have been a party, and in which (i) the amounts involved exceeded or will exceed $120,000, and (ii) our directors and executive officers or holders of more than 5% of our common stock, or any member of the immediate family of the foregoing persons or entities affiliated with them, had or will have a direct or indirect material interest.

In April 2015, we filed a registration statement on Form S-3 to register the public sale by Ayer Capital Partners Master Fund, L.P., Ayer Capital Partners Kestrel Fund, LP, and Epworth-Ayer Capital (collectively, "Ayer"), LP, Bristol Investment Fund Ltd., and Sanford J. Hillsberg of a total of 9,471,879 shares of our common stock owned by the foregoing selling stockholders. At the time of the filing Bristol Investment Fund Ltd. owned 8.64% of our outstanding shares, Jay Venkatesan, one of the directors of our company, was the manager of the Ayer funds, and Mr. Hillsberg is a director of our company. In May 2015 the foregoing selling stockholders sold the registered shares in an underwritten public offering. We paid for all legal and accounting fees incurred by our law firms and accounting firm, as well as the filing fees and other costs incurred by our company in connection with the filing of the Form S-3 registration statement and the subsequent public offering. In May 2015 the selling stockholders paid us approximately $166,280 as reimbursement for the fees and expenses that we incurred in connection with the filing of the registration statement and the subsequent public offering.

Sanford J. Hillsberg, one of our directors, is an attorney at TroyGould PC. TroyGould PC rendered legal services to our company in 2015 and has rendered legal services in 2016. We paid TroyGould PC $602,922 in fees in 2015 and, through June 30, 2016, $167,650 in fees in 2016. Our Board of Directors, including all members of our Audit Committee, pre-approved all material, special services provided by TroyGould in 2015. Mr. Hillsberg did not provide any legal services to our company during 2015 or 2016.

In connection with our June 7, 2016 Private Placement, we entered into a purchase agreement and a registration rights agreement with Quogue Capital LLC (an affiliate of Wayne Rothbaum, a member of our Board of Directors) and other institutional and accredited investors in that offering. The purchase agreement included certain provisions requiring that the number of directors constituting the full Board of Directors of our company be increased from five to seven directors and that Mr. Rothbaum be appointed to serve on our Board of Directors as our Interim Chairman. On June 1, 2016, our Board was increased to seven directors, and on June 7, 2016 Mr. Rothbaum joined our board and became the Interim Chairman of the Board. In the purchase agreement, we also agreed that, until the earlier of (i) the date Quogue owns less than 5% of our outstanding common stock, and (ii) June 30, 2017, which we refer to as the "effective period," we will take no other action to (x) change the size of our Board, (y) amend, in any respect, our articles of incorporation or bylaws, or (z) enter into any agreement to do any of the foregoing, in each case, without the prior written consent of Quogue. Quogue purchased 1,646,280 shares of our common stock and 1,932,667 shares of our Series B Preferred in the Private Placement for a purchase price of $17,000,000.

Director Compensation

The following table sets forth information concerning the compensation paid to all persons during 2015 who served as non-employee directors of this Company during 2015, for their services rendered as directors. Executive officers who serve on our Board of Directors are not compensated for their services as directors. Under our director compensation plan adopted on December 5, 2014, each director who is not an employee received an option to purchase up to 50,000 shares of our common stock at an exercise price of $6.25 (the closing price of our common stock on the date of grant). In addition, in December 2014 our Board also agreed to pay each director (i) an annual retainer fee of $25,000, payable quarterly, (ii) an annual retainer fee of $10,000 for the chairperson of each Committee of our Board of Directors, payable quarterly, (iii) a fee of $2,500 per board meeting attended by the director in person, (iv) pay a fee of $1,500 per board meeting attended by the director telephonically, and (v) a fee of $1,000 per committee meeting attended by the director. As discussed below, our Board of Directors no longer pays fees for attending or participating in meetings.

Director Compensation Table

Name	Fees Earned or Paid in Cash ($)	Stock Awards ($)	Option Awards ($)(1)	All Other Compensation ($)	Total ($)
Merrill A. McPeak	$ 57,625	—	$ 386,400	—	$ 444,025
Sanford J. Hillsberg	$ 56,625	—	$ 386,400	—	$ 443,025
Jay Venkatesan	$ 60,250	—	$ 386,400	—	$ 446,650
Ryan Maynard	$ 53,375	—	$ 755,651	—	$ 809,026

(1) Represents the grant date value computed in accordance with FASB ASC Topic 718.

At our Board of Directors meeting held in June 2015, our Board decided to henceforth grant stock options at the Board meeting immediately following the annual meeting of stockholders to the directors elected at that meeting, rather than at a Board meeting held at the end of each calendar year. Accordingly, on June 12, 2015, for services to be rendered by the newly elected directors during the following year, each director who was not an employee received an option to purchase up to 35,000 shares of our common stock at an exercise price of $11.05 (the closing price of our common stock on the date of grant). These options vest in four equal quarterly installments, have a ten-year term, and will be exercisable for two years following termination of service as a member of our Board of Directors, unless the Director is terminated for cause, in which case the options would be terminated. Our Board also decided to dispense with per meeting fees and, instead, to pay each director a higher fixed retainer.

Accordingly, for the period ending June 2016, our directors will receive the following cash compensation for serving on our Board of Directors and on committees of our Board of Directors:

- an annual retainer fee of $35,000 for each director, payable quarterly,
- an annual retainer fee of $15,000 for the lead director and the chairperson of each Committee of our Board of Directors, payable quarterly, and

an annual retainer of $7,500 for serving on any committee in a non-chair capacity

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information regarding the beneficial ownership of our common stock as of June 17, 2016 by (i) each person who is known by us to own more than 5% of the outstanding common stock; (ii) each of our directors and director nominees; (iii) each of our named executive officers; and (iv) all of our current executive officers and directors as a group. The table also sets forth certain information regarding the beneficial ownership of each of our Series A Preferred and Series B Preferred as of June 17, 2016 by (i) each of our directors and director nominees; (ii) each of our named executive officers; and (iii) each of our current executive officers and directors as a group. As of June 17, 2016, a total of 58,351,478 shares of common stock were outstanding, a total of 1,694 shares of Series A Preferred were outstanding, and a total of 11,368,633 shares of Series B Preferred were outstanding.

	Common Stock		Series A Preferred Stock		Series B Preferred Stock	
Name and Address of Beneficial Owner(1)	Number of Shares	Percent of Class(2)	Number of Shares	Percent of Class	Number of Shares	Percent of Class
BlackRock Inc. 55 East 52nd Street New York, NY 10055 (3)	4,028,802	6.9%				
Broadfin Healthcare Master Fund, Ltd. 20 Genesis Close Ansbacher House, Second Floor P.O. Box 1344 Grand Cayman KY1-1108 Cayman Islands (4)	4,670,759	8.0%				
FMR LLC 245 Summer Street Boston, MA 02210 (5)	5,715,828	9.8%				
Quogue Capital LLC 1171 S. Ocean Blvd. Delray Beach, FL 33483 (6)	3,846,280	6.6%				
Perceptive Advisors LLC Perceptive Life Sciences Master Fund Ltd. Titan Perc, Ltd. 499 Park Avenue, 25th Floor New York, NY 10022 (7)	4,150,776	7.1%				
venBio Select Advisor LLC 1700 Owens Street, Suite 595, San Francisco, CA 94158 (8)	3,817,067	6.5%				
Jay Venkatesan	2,948,333(9)	*	-0-	-0-	-0-	-0-
Merrill A. McPeak	576,583(10)	*	-0-	-0-	-0-	-0-
Sanford J. Hillsberg	279,000(11)	*	-0-	-0-	-0-	-0-
Ryan D. Maynard	85,000(12)	*	-0-	-0-	-0-	-0-
Maria Fardis, Ph.D.	-0-	-0-	-0-	-0-	-0-	-0-
Molly Henderson	66,666(12)	*	-0-	-0-	-0-	-0-
Michael Lotze	-0-	-0-	-0-	-0-	-0-	-0-
Steven A. Fischkoff	-0-	-0-	-0-	-0-	-0-	-0-
Wayne Rothbaum	3,846,280(13)	6.6%	-0-	-0-	1,932,667(14)	17.0%
Dr. Iain Dukes	-0-	-0-	-0-	-0-	-0-	-0-
Elma Hawkins(15)	1,026,799	1.7%	-0-	-0-	-0-	-0-
All directors, director nominees and executive officers as a group (10 persons)	7,801,862(16)	11.8%	-0-	-0-	1,932,667(14)	17.0%

* Less than 1%.

(1) Unless otherwise indicated, the address of each of the persons shown is c/o Lion Biotechnologies, Inc., 112 West 34th Street, 18th Floor, New York, New York 10120.

(2) Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Shares of common stock subject to options, warrants and convertible securities currently exercisable or convertible, or exercisable or convertible within 60 days, are deemed outstanding, including for purposes of computing the percentage ownership of the person holding such option, warrant or convertible security, but not for purposes of computing the percentage of any other holder.

(3) Consists of securities described in a Schedule 13G filed with the SEC on January 28, 2016, plus the shares of common stock purchased by certain investment funds of Blackrock, Inc. in the Private Placement.

(4) Consists of securities described in a Schedule 13G jointly filed with the SEC on February 11, 2016 by Broadfin Capital, LLC, Broadfin Healthcare Master Fund, Ltd., and Kevin Kotler, plus the shares of common stock purchased in the Private Placement. Mr. Kotler and Broadfin Capital, LLC disclaim beneficial ownership of the foregoing shares except to the extent of their pecuniary interest therein.

(5) Consists of securities described in a Schedule 13G/A filed with the SEC on February 12, 2016 by FMR LLC. Edward C. Johnson 3d is a Director and the Chairman of FMR LLC and Abigail P. Johnson is a Director, the Vice Chairman and the President of FMR LLC. Members of the family of Edward C. Johnson 3d, including Abigail P. Johnson, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other FMR LLC Series B stockholders have entered into a stockholders' voting agreement under which all FMR LLC Series B voting common shares will be voted in accordance with the majority vote of such FMR LLC Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the stockholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC.

(6) Represents 3,846,280 shares of common stock owned by Quogue Capital LLC. Does not include up to 2,000,000 shares of our common stock issuable upon the exercise of warrants (which warrants cannot be exercised if such exercise would result in the holder beneficially owning more than 4.99% of our shares of common stock owned by Quogue Capital LLC). Mr. Rothbaum is the sole managing member of Quogue Capital LLC and may be deemed to beneficially own the shares owned by Quogue Capital LLC.

(7) Represents 3,062,618 shares owned by Perceptive Advisors LLC, plus 774,720 shares of common stock purchased by Perceptive Life Sciences Master Fund Ltd. in the Private Placement, 255,353 shares owned by Titan Perc, Ltd. and warrants to purchase up to 58,085 shares of common stock owned by Titan Perc, Ltd. that are exercisable currently. Perceptive Life Sciences Master Fund Ltd. and Titan Perc, Ltd are investment funds which Perceptive Advisors LLC serves as the investment manager. Mr. Edelman is the managing member of Perceptive Advisors LLC. Mr. Edelman and Perceptive Advisors LLC are deemed to beneficially own the shares of Perceptive Life Sciences Master Fund Ltd and Titan Perc, Ltd.

(8) Consists of securities described in a Schedule 13G filed with the SEC on February 12, 2016 by venBio Select Advisor LLC, a Delaware limited liability company, plus shares of common stock purchased in the Private Placement. venBio provides investment advisory and management services and has acquired the foregoing securities solely for investment purposes on behalf of venBio Select Fund LLC, a Delaware limited liability company, venBio Select Fund Ltd., a Cayman Islands exempted company, and certain managed accounts.

(9) Represents 2,823,333 shares owned by Ayer Capital Management LP, plus options to purchase 125,000 shares of common stock that are exercisable currently or within 60 days of June 17, 2016. Jay Venkatesan is the manager of Ayer Capital Partners Master Fund, L.P. and is deemed to beneficially own the shares of the fund.

(10) Represents 446,583 shares of common stock and options to purchase 130,000 shares of common stock that are exercisable currently or within 60 days of June 17, 2016.

(11) Represents 154,000 shares of common stock owned by The Hillsberg Trust is a revocable family trust of which Sanford J. Hillsberg is a trustee, and options to purchase 125,000 shares of common stock that are exercisable currently or within 60 days of June 17, 2016.

(12) Represents options to purchase shares of common stock that are exercisable currently or within 60 days of June 17, 2016.

(13) Represents 3,846,280 shares of common stock owned by Quogue Capital LLC. Does not include up to 2,000,000 shares of our common stock issuable upon the exercise of warrants (which warrants cannot be exercised if such exercise would result in the holder beneficially owning more than 4.99% of our shares of common stock owned by Quogue Capital LLC). Mr. Rothbaum is the sole managing member of Quogue Capital LLC and may be deemed to beneficially own the shares owned by Quogue Capital LLC.

(14) Represents shares of Series B Preferred Stock owned by Quogue Capital LLC. Mr. Rothbaum is the sole managing member of Quogue Capital LLC and may be deemed to beneficially own the shares owned by Quogue Capital LLC.

(15) Represents 101,799 shares of restricted common stock and options to purchase 925,000 shares of common stock that are exercisable currently or within 60 days of June 17, 2016.

(16) Includes options to purchase 531,666 shares of common stock that are exercisable currently or within 60 days of June 17, 2016.

SELLING STOCKHOLDERS

Selling Stockholders Table

This prospectus covers an aggregate of 9,684,000 shares of our common stock. The foregoing outstanding shares of common stock were issued under the Securities Purchase Agreement in the Private Placement.

We are registering the shares of common stock in accordance with the terms of a Registration Rights Agreement we entered into with the selling stockholders as part of the Private Placement in order to permit the selling stockholders to offer the shares of common stock for resale from time to time. The selling stockholders may from time to time offer and sell pursuant to this prospectus any or all of the below listed shares of common stock owned by them. The registration of these shares does not require that any of the shares be offered or sold by the selling stockholders. The selling stockholders may from time to time offer and sell all or a portion of their shares on the open market, in negotiated transactions, or otherwise, at prices then prevailing or related to the then current market price or at negotiated prices.

The registered shares may be sold directly or through brokers or dealers, or in a distribution by one or more underwriters on a firm commitment or best efforts basis. To the extent required, the names of any agent or broker-dealer and applicable commissions or discounts and any other required information with respect to any particular offer will be set forth in a prospectus supplement. Please see “Plan of Distribution.” The selling stockholders and any agents or broker-dealers that participate with the selling stockholders in the distribution of registered shares may be deemed to be “underwriters” within the meaning of the Securities Act, and any commissions received by them and any profit on the resale of the registered shares may be deemed to be underwriting commissions or discounts under the Securities Act.

No estimate can be given as to the amount or percentage of common stock that will be held by the selling stockholders after any sales made pursuant to this prospectus because the selling stockholders are not required to sell any of the shares being registered under this prospectus. The following table assumes that the selling stockholders will sell all of the shares listed in this prospectus.

Additional selling security holders not named in this prospectus will not be able to use this prospectus for resales until they are named in the table below by prospectus supplement or post-effective amendment. Transferees, successors and donees of identified selling stockholders will not be able to use this prospectus for resales until they are named in the table below by prospectus supplement or post-effective amendment. If required, we will add transferees, successors and donees by prospectus supplement in instances where the transferee, successor or donee has acquired its shares from holders named in this prospectus after the effective date of this prospectus.

The following table sets forth the beneficial ownership of the selling stockholders. The term “selling stockholder” or “selling stockholders” includes the stockholders listed below and their respective transferees, assignees, pledges, donees or other successors. Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Shares of common stock subject to options, warrants and convertible securities currently exercisable or convertible, or exercisable or convertible within 60 days are deemed outstanding, including for purposes of computing the percentage ownership of the person holding the option, warrant or convertible security, but not for purposes of computing the percentage of any other holder.

	Beneficial Ownership Before Offering			Beneficial Ownership After Offering[1]	
	Number of Shares	Percent	Number of Shares Being Offered	Number of Shares	Percent
OrbiMed Partners Master Fund Limited	1,059,100(2)	1.82%	1,059,100	0	0
OrbiMed Partners II, LP	877,700(2)	1.50%	877,700	0	0
Quogue Capital LLC	3,846,280(3)	6.59%	1,646,280	2,949,000	4.99%
Franklin Templeton Investment Funds - Franklin Biotechnology Discovery Fund	1,768,100(4)	3.03%	420,800	1,347,300	2.31%
Franklin Strategic Series - Franklin Biotechnology Discovery Fund	1,082,500(4)	1.86%	251,800	830,700	1.42%
Franklin Strategic Series - Franklin Small Cap Growth Fund	537,900(4)	*	537,900	0	0
Broadfin Healthcare Master Fund, Ltd.	3,170,759(5)	5.43%	1,065,240	2,954,081	4.99%
BlackRock Health Sciences Master Unit Trust	10,510(6)	*	10,510	0	0
BGF World Healthscience Fund	310,534(6)	*	310,534	0	0
BlackRock Health Sciences Trust	25,954(6)	*	25,954	0	0
BlackRock Health Sciences Opportunities Portfolio	524,562(6)	*	524,562	0	0
BlackRock Health Sciences Master Unit Trust	10,510(6)	*	10,510	0	0
Perceptive Life Sciences Master Fund Ltd.	3,837,338(7)	6.56%	774,720	3,062,618	5.23%
Frazier Life Sciences VIII, LP	774,720(8)	1.33%	774,720	0	0
venBio Select Fund LLC	4,057,166(9)	6.95%	619,776	3,437,390	5.89%
QVT Fund V LP	1,541,982(10)	2.65%	361,537	1,180,445	2.03%
QVT Fund IV LP	343,282(10)	*	81,325	261,957	*
Quintessence Fund L.P.	197,245(10)	*	41,338	155,907	*
Acuta Capital Fund, LP	3,064,326(11)(12)	(14)	151,070	2,913,256	(14)
Acuta Opportunity Fund, LP	931,572(11)(13)	(14)	46,483	885,089	(14)
2B LLC (as managed by Acuta Capital Partners, LLC)	659,315(11)(15)	(14)	34,863	624,452	(14)
2B LLC (as managed by venBio Select Advisor LLC)	281,391(9)(15)	*	9,684	271,707	*
Michael Weiser	74,210(16)	*	24,210	50,000	*
Jason Stein	124,210(17)	*	24,210	100,000	*
Mark Van Hoof	9,684	*	9,684	0	0

* Less than 1%

(1) Assumes the selling stockholder sells all of the shares of common stock included in this prospectus.

(2) OrbiMed Advisors LLC and OrbiMed Capital LLC share the investment advisory responsibility on behalf of the OrbiMed entities identified in this table. OrbiMed Advisors LLC ("OALLC") serves as the general partner to OrbiMed Partners II, L.P. OrbiMed Capital LLC ("OCLLC") serves as the investment adviser to OrbiMed Partners Master Fund Limited. Samuel D. Isaly is the managing member of both OALLC and OCLLC, and is deemed to have investment and voting control of OALLC and OCLLC. OALLC, OCLLC and Mr. Isaly disclaim beneficial ownership of the securities owned other than through their pecuniary interest in the underlying entities.

(3) The number of shares beneficially owned before the offering consists of 3,846,280 shares of our common stock owned by Quogue Capital LLC and does not include up to 2,000,000 shares of our common stock issuable upon the exercise of warrants (which warrants cannot be exercised if such exercise would result in the holder beneficially owning more than 4.99% of our shares of common stock owned by Quogue Capital LLC). Under the terms of this warrant, the holder does not have the right to exercise the warrant to the extent that after giving effect to such exercise, the holder (together with its affiliates) would beneficially own in excess of 4.99% (the "Maximum Percentage") of the shares of our common stock outstanding immediately after giving effect to such exercise. By written notice to us, however, the holder may from time to time increase or decrease the Maximum Percentage to any other percentage not in excess of 9.99%. We have not received any such notice from this holder and accordingly, the holder may not exercise the warrants if the holder's beneficial ownership would exceed 4.99% following such exercise. The number of shares beneficially owned after the offering consists of 2,200,000 shares of our common stock owned by Quogue Capital LLC and 749,000 shares of our common stock issuable upon exercise of warrants. Wayne Rothbaum, a member of our board of directors, is the sole managing member of Quogue Capital LLC and may be deemed to beneficially own the shares owned by Quogue Capital LLC.

(4) The common stock owned by the Funds may be deemed to be beneficially owned by Franklin Advisers, Inc. ('FAV") for purposes of Rule 13d-3 under the Securities Exchange Act of 1934 (the "Act") in its capacity as the investment adviser to the Funds pursuant to investment management contracts that grant investment and/or voting power to FAV. When an investment management contract (including a sub-advisory agreement) delegates to FAV investment discretion or voting power over the securities held in the investment advisory accounts that are subject to that agreement, Franklin Resources, Inc. ("FRI") treats FAV as having sole investment discretion or voting authority, as the case may be, unless the agreement specifies otherwise. According, FAV reports on Schedule 13D that it has sole investment discretion and voting authority over the securities covered by any such investment management agreement. As a result for purposes of Rule 12d-3 under the Act, FAV may be deemed to be the beneficial owner of the securities reporting in this Schedule 13D. Beneficial ownership by FRI, FAV and their affiliates is being reported in conformity with the guidelines articulated by the SEC staff in Release No, 34-39538 (January 12, 1998) relating to organizations, such as FRI, where related entities exercise voting and investment powers over the securities being reported independently from each other. The voting and investment powers held by Franklin Mutual Advisors, LLC ("FMA"), and indirect wholly-owned investment manager subsidy of FRI, are exercised independently from FRI and from all other investment management subsidiaries of FRI (FRI, its affiliates and the investment management subsidiaries other than FMA are, collectively, "FRI affiliates"). Furthermore, internal policies and procedures of FMA and FRI establish information barriers that prevent the flow between FMA and the FRI affiliates of information that relates to the voting and investment powers over the securities owned by their respective investment management clients. Consequently, FMA and the FRI affiliates report the securities over which they hold investment and voting power separately from each other for purposes of Section 13 of the Act.

(5) The number of shares beneficially owned before the offering consists of 3,170,759 shares of our common stock and does not include 750,000 shares of our common stock issuable upon the conversion of our Series A Preferred or 750,000 shares of our common stock issuable upon exercise of a warrant. Under the terms of this warrant, the holder does not have the right to exercise the warrant to the extent that after giving effect to such exercise, the holder (together with its affiliates) would beneficially own in excess of the Maximum Percentage of the shares of our common stock outstanding immediately after giving effect to such exercise. Similarly, under the terms of the Series A Preferred, the holder does not have the right to convert the Series A Preferred to the extent that after giving effect to such conversion, the holder (together with its affiliates) would beneficially own in excess of the Maximum Percentage of the shares of our common stock outstanding immediately after giving effect to such conversion. By written notice to us, however, the holder may from time to time increase or decrease the Maximum Percentage with respect to either or both of the warrant and the Series A Preferred to any other percentage not in excess of 9.99%. We have not received any such notice from this holder and accordingly, such holder may not exercise the warrants or convert the shares of Series A Preferred if the holder's beneficial ownership would exceed 4.99% following such exercise or conversion. The number of shares beneficially owned after the offering consists of 2,105,519 shares of our common stock owned by Broadfin Healthcare Master Fund, Ltd and a total of 848,562 shares of our common stock issuable upon exercise of warrants and/or upon conversion of Series A Preferred. Kevin Kotler in his capacity as investment manager of Broadfin Health Master Fund, Ltd., may also be deemed to have investment discretion and voting power over the shares held by that selling stockholder. Mr. Kotler disclaims any beneficial ownership of these shares.

(6) The registered holders of the referenced shares are funds and accounts under management by investment adviser subsidiaries of BlackRock, Inc. BlackRock, Inc. is the ultimate parent holding company of such investment adviser entities. On behalf of such investment adviser entities, Thomas Callan, as a managing director of such entities, has voting and investment power over the shares held by the funds and accounts which are the registered holders of the referenced shares. Thomas Callan expressly disclaims beneficial ownership of all shares held by such funds and accounts. The address of such funds and accounts, such investment adviser subsidiaries and Thomas Callan is 2929 Arch Street, 16th Floor, Philadelphia, PA 19104. Shares being registered for resale may not incorporate all shares deemed to be beneficially held by BlackRock, Inc.

(7) Includes 194,000 shares of our common stock issuable upon the conversion of Series A Preferred shares, and 33,215 shares of our common stock issuable upon exercise of a warrant. Under the terms of this warrant, the holder does not have the right to exercise the warrant to the extent that after giving effect to such exercise, the holder (together with its affiliates) would beneficially own in excess of the Maximum Percentage. Similarly, under the terms of the Series A Preferred, the holder does not have the right to convert the Series A Preferred to the extent that after giving effect to such conversion, the holder (together with its affiliates) would beneficially own in excess of the Maximum Percentage. By written notice to us, however, the holder may from time to time increase or decrease the Maximum Percentage with respect to either or both of the warrant and the Series A Preferred to any other percentage not in excess of 9.99%. We have received such a notice from this holder and accordingly, this holder may exercise any portion of the warrant or convert any shares of Series A Preferred up until the point that the holder's beneficial ownership equals 9.99%. Perceptive Advisors LLC is the advisor of Perceptive Life Sciences Master Fund Ltd. Perceptive Advisors LLC and Joseph Edelman claim shared voting power and shared dispositive power over shares held by Perceptive Life Sciences Master Fund Ltd. Mr. Edelman is the managing member of Perceptive Advisors LLC.

(8) The general partner of Frazier Life Sciences VIII, LP, is FHM Life Sciences VIII, LP, a Delaware limited partnership (“FHM VIII LP”). The general partner of FHM VIII LP is FHM Life Sciences VIII, LLC (“FHM VIII LLC”). Patrick Heron and James Topper are the sole members of FHM VIII, LLC and in that capacity share voting and dispositive power over all shares held by Frazier Life Sciences VIII, LP. Mr. Heron and Mr. Topper disclaim beneficial ownership of these securities other than to the extent of their pecuniary interest in FHM VIII LP.

(9) The numbers of shares beneficially owned before the offering does not include 525,000 shares of our common stock issuable upon exercise of a warrant. Under the terms of this warrant, the holder does not have the right to exercise the warrant to the extent that after giving effect to such exercise, the holder (together with its affiliates) would beneficially own in excess of the Maximum Percentage of the shares of our common stock outstanding immediately after giving effect to such exercise. By written notice to us, however, the holder may from time to time increase or decrease the Maximum Percentage to any other percentage not in excess of 9.99%. We have not received any such notice from this holder and accordingly, such holder may not exercise the warrant if the holder’s beneficial ownership would exceed 4.99% following such exercise. venBio Select Fund LLC also manages an investment account on behalf of 2B LLC and may also be deemed to have investment discretion and voting power over the 281,391 shares held by 2B LLC but does not have voting or investment power over the shares held by 2B LLC managed by Acuta Capital described in footnote 11 below. Behzad Aghazadeh, in his capacity as portfolio manager of venBio Select Fund LLC may also be deemed to have investment discretion and voting power over securities held by venBio Select Fund LLC and the 2B LLC managed account. Mr. Aghazadeh disclaims any beneficial ownership of the reported securities

(10) QVT Associates GP LLC is the general partner of QVT Fund IV LP, QVT Fund V LP and Quintessence Fund L.P. (together with QVT Fund IV LP, and QVT Fund V LP, the "Funds"). QVT Financial LP is the investment manager for the Funds and therefore may be deemed the beneficial owner of the common stock held by the Funds. QVT Financial GP LLC is the general partner of QVT Financial LP and therefore may be deemed the beneficial owner of common stock beneficially owned by QVT Financial LP. The reporting person disclaims beneficial ownership of the reported securities except to the extent of its pecuniary interest therein.

(11) Richard Lin is the Managing Member of Acuta Capital Partners, LLC, the general partner of Acuta Capital Fund, LP and Acuta Opportunity Fund, LP and an investment manager for 2B LLC and has voting and investment power over all of the shares held by Acuta Capital Fund, LP and Acuta Opportunity Fund, LP and 659,315 shares held by 2B LLC but does not have voting or investment power over the shares held by 2B LLC managed by VenBio described in footnote 9 above. Mr. Lin disclaims beneficial ownership over all of the shares held by Acuta Capital Fund, LP, Acuta Opportunity Fund, LP and 2B LLC, except to the extent of his pecuniary interest therein.

(12) Includes 1,099,038 shares of our common stock issuable upon exercise of a warrant. Under the terms of this warrant, the holder does not have the right to exercise the warrant to the extent that after giving effect to such exercise, the holder (together with its affiliates) would beneficially own in excess of the Maximum Percentage of the shares of our common stock outstanding immediately after giving effect to such exercise. By written notice to us, however, the holder may from time to time increase or decrease the Maximum Percentage to any other percentage not in excess of 9.99%. We have not received any such notice from this holder and accordingly, the warrant cannot be exercised to the extent that after giving effect to such exercise such holder's beneficial ownership (together with its affiliates) would exceed 4.99%.

(13) Includes 333,759 shares of our common stock issuable upon exercise of a warrant. Under the terms of this warrant, the holder does not have the right to exercise the warrant to the extent that after giving effect to such exercise, the holder (together with its affiliates) would beneficially own in excess of the Maximum Percentage of the shares of our common stock outstanding immediately after giving effect to such exercise. By written notice to us, however, the holder may from time to time increase or decrease the Maximum Percentage to any other percentage not in excess of 9.99%. We have not received any such notice from this holder and accordingly, the warrant cannot be exercised to the extent that after giving effect to such exercise such holder's beneficial ownership would exceed 4.99%.

(14) The combined total beneficial ownership of Acuta Capital Fund, LP, Acuta Opportunity Fund, LP and 2B LLC (as managed by Acuta Capital Partners, LLC), excluding the warrants described in footnotes (12) and (13) above, is 5.6%. before the offering and, assuming all shares offered hereby by such holders are sold, will be 5.1% after the offerings. In accordance with the provisions of such warrants, the warrants currently cannot be exercised as the ownership of a warrant holder (together with its affiliates), after giving effect to any exercise, cannot exceed its Maximum Percentage.

(15) J. Darius Bikoff, a Member of 2B LLC, has voting and investment control over all the shares held by 2B LLC. Mr. Bikoff disclaims beneficial ownership over all the shares held by 2B LLC, except to the extent of his pecuniary interest therein

(16) Represents 49,210 shares of our common stock and 25,000 shares of our common stock issuable upon exercise of a Warrant.

(17) Represents 74,210 shares of our common stock and 50,000 shares of our common stock issuable upon exercise of a Warrant.

The information in the above table is as of the date of this prospectus. Information concerning the selling stockholders may change from time to time and any such changed information will be described in supplements to this prospectus if and when necessary.

Relationships with Selling Stockholders

On November 5, 2013, we completed a private placement in which we issued (i) 3,145,300 shares of our common stock, (ii) 17,000 shares of our Series A Preferred, and (iii) warrants to purchase a total of 11,645,300 shares of common stock (the "2013 Private Placement"). The purchase price of each common stock/warrant unit was $2.50, and the purchase price of each Series A Preferred/warrants unit was $1,000. Quogue Capital LLC, Broadfin Healthcare Master Fund, Ltd., Perceptive Life Sciences Master Fund Ltd., venBio Select Fund LLC, Acuta Opportunity Fund, LP (formerly Three Arch Opportunity Fund), Michael Weiser and Jason Stein, and some of their affiliates, who were investors in the 2013 Private Placement, also purchased shares in the Private Placement.

In connection with our June 7, 2016 Private Placement, we entered into the purchase agreement and a registration rights agreement with institutional and other accredited investors in that offering. The purchase agreement included certain provisions requiring that the number of directors constituting the full Board of Directors of our company be increased from five to seven directors and that Mr. Wayne P. Rothbaum be appointed to serve on our Board of Directors as our Interim Chairman. On June 1, 2016, our Board was increased to seven directors, and on June 7, 2016 Mr. Rothbaum joined our Board and became the Interim Chairman of the Board. In the purchase agreement, we also agreed to appoint Dr. Iain Dukes to the Board of Directors effective as of a future date, and that, until the earlier of (i) the date Quogue Capital LLC, or Quogue, an affiliate of Mr. Rothbaum, beneficially owns less than 5% of our outstanding common stock, and (ii) June 30, 2017, which we refer to as the "effective period," we will take no other action to (x) change the size of our Board, (y) amend, in any respect, our articles of incorporation or bylaws, or (z) enter into any agreement to do any of the foregoing, in each case, without the prior written consent of Quogue. During the effective period, we also have agreed that either Mr. Rothbaum or Dr. Dukes will be appointed to the Compensation Committee, Audit Committee and Nominating and Governance Committee of our Board of Directors. We anticipate that Dr. Dukes will be appointed to our Board prior to our Annual Meeting scheduled to be held on August 16, 2016, and that either Mr. Rothbaum and/or Dr. Dukes will be appointed to each of our Compensation Committee, Audit Committee and Nominating and Governance Committee.

Quogue purchased shares in the 2016 Private Placement and is a selling stockholder. Mr. Rothbaum is the sole manager of Quogue.

PLAN OF DISTRIBUTION

The selling stockholders, which, as used herein, includes donees, pledgees, transferees or other successors-in-interest selling shares of common stock or interests in shares of common stock received after the date of this prospectus from a selling stockholder as a gift, pledge, partnership distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The selling stockholders may use any one or more of the following methods when disposing of shares or interests therein:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales effected after the date the registration statement of which this prospectus is a part is declared effective by the SEC;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted by applicable law.

The selling stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock, from time to time, under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of our common stock or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of our common stock short and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the selling stockholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the selling stockholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from this offering. Upon any exercise of the warrants by payment of cash, however, we will receive the exercise price of the warrants.

The selling stockholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act of 1933, provided that they meet the criteria and conform to the requirements of that rule.

The selling stockholders and any underwriters, broker-dealers or agents that participate in the sale of the common stock or interests therein may be "underwriters" within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of the shares may be underwriting discounts and commissions under the Securities Act. Selling stockholders who are "underwriters" within the meaning of Section 2(11) of the Securities Act will be subject to the prospectus delivery requirements of the Securities Act.

To the extent required, the shares of our common stock to be sold, the names of the selling stockholders, the respective purchase prices and public offering prices, the names of any agents, dealer or underwriter, any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

In order to comply with the securities laws of some states, if applicable, the common stock may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the common stock may not be sold unless it has been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

We have advised the selling stockholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the selling stockholders and their affiliates. In addition, to the extent applicable we will make copies of this prospectus (as it may be supplemented or amended from time to time) available to the selling stockholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The selling stockholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

We have agreed to indemnify the selling stockholders against liabilities, including liabilities under the Securities Act and state securities laws, relating to the registration of the shares offered by this prospectus.

We have agreed with the selling stockholders to keep the registration statement of which this prospectus constitutes a part effective until the earlier of (1) such time as all of the shares covered by this prospectus have been disposed of pursuant to and in accordance with the registration statement or (2) the date on which all of the shares may be sold without restriction pursuant to Rule 144 of the Securities Act.

DESCRIPTION OF SECURITIES

The following is a summary of all material characteristics of our capital stock as set forth in our amended and restated articles of incorporation and bylaws, as amended. Copies of these documents are filed or incorporated by reference as exhibits to the registration statement of which this prospectus forms a part.

We are presently authorized to issue 150,000,000 shares of $0.000041666 par value common stock and 50,000,000 shares of $0.001 par value preferred stock. As of the date of this prospectus, we had 58,218,339 shares of common stock issued and outstanding, 1,694 shares of Series A Preferred issued and outstanding and 11,368,633 shares of Series B Preferred issued and outstanding. There are no other series of shares of our preferred stock currently issued or outstanding.

Common Stock

We have one class of common stock. Holders of our common stock are entitled to one vote per share on all matters to be voted upon by stockholders and do not have cumulative voting rights in the election of directors. Holders of shares of common stock are entitled to receive on a pro rata basis such dividends, if any, as may be declared from time to time by our board of directors in its discretion from funds legally available for that use, subject to any preferential dividend rights of outstanding preferred stock. They are also entitled to share on a pro rata basis in any distribution to our common stockholders upon our liquidation, dissolution or winding up, subject to the prior rights of any outstanding preferred stock. Common stockholders do not have preemptive rights to subscribe to any additional stock issuances by us, and they do not have the right to require the redemption of their shares or the conversion of their shares into any other class of our stock. The rights, preferences and privileges of holders of common stock are subject to, and may be adversely affected by, the rights of the holders of any series of preferred stock that we may designate and issue in the future.

Preferred Stock

Under our articles of incorporation, our board of directors has the authority, without further action by stockholders, to designate one or more series of preferred stock and to fix the voting powers, designations, preferences, limitations, restrictions and relative rights granted to or imposed upon the preferred stock, including dividend rights, conversion rights, voting rights, rights and terms of redemption, liquidation preference and sinking fund terms, any or all of which may be preferential to or greater than the rights of the common stock.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in our control and may adversely affect the market price of the common stock and the voting and other rights of the holders of common stock.

Series A Preferred

In October 2013, we created a new class of preferred stock designated as Series A Convertible Preferred Stock. The shares of Series A Preferred have a stated value of $1,000 per share and were initially convertible into shares of common stock at a price of $2.00 per share (subject to adjustment as described below). The rights of the Series A Preferred are set forth in the Certificate of Designation of Preferences And Rights of Series A Convertible Preferred Stock (the “Series A Certificate of Designation”), which gives the holders of the Series A Preferred the following rights, preferences and privileges:

The Series A Preferred may, at the option of the holder, be converted at any time or from time to time into fully paid and non-assessable shares of common stock at the conversion price in effect at the time of conversion; provided, that a holder of Series A Preferred may at any given time convert only up to that number of shares of Series A Preferred so that, upon conversion, the aggregate beneficial ownership of the common stock (calculated pursuant to Rule 13d-3 of the Securities Exchange Act of 1934, as amended) of such holder and all persons affiliated with such holder, is not more than 4.99% of the common stock then outstanding (subject to adjustment up to 9.99% solely at the holder’s discretion upon 60 days’ prior notice). The number of shares into which one share of Series A Preferred shall be convertible is determined by dividing the stated value of $1,000 per share by the initial Conversion Price. The “Conversion Price” per share for the Series A Preferred is $2.00 (subject to appropriate adjustment for certain events, including stock splits, stock dividends, combinations, recapitalizations or other recapitalizations affecting the Series A Preferred).

The Series A Preferred will automatically be converted into common stock at the then applicable Conversion Price (i) upon the written consent of the holders holding at least a majority of the outstanding shares of Series A Preferred or (ii) if required by us to be able to list our common stock on a national securities exchange; provided, any such conversions will continue to be limited by, and subject to the beneficial ownership conversion limitations set forth above.

Except as otherwise required by law, the holders of shares of Series A Preferred do not have the right to vote on matters that come before the stockholders; provided, that we may not, without the prior written consent of a majority of the outstanding Series A Preferred: (i) amend, alter, or repeal any provision of our Articles of Incorporation (including the Series A Certificate of Designation) or Bylaws in a manner adverse to the Series A Preferred; (ii) create or authorize the creation of or issue any other security convertible into or exercisable for any equity security, having rights, preferences or privileges senior to or on parity with the Series A Preferred, or increase the authorized number of shares of Series A Preferred; or (iii) enter into any agreement with respect to any of the foregoing.

In the event of any dissolution or winding up of our company, whether voluntary or involuntary, the proceeds would be paid pari passu among the holders of the shares of common stock and the Series A Preferred and Series B Preferred, pro rata based on the number of shares held by each such holder, treating for this purpose all such securities as if they had been converted to common stock.

We may not declare, pay or set aside any dividends on shares of any class or series of our capital stock (other than dividends on shares of common stock payable in shares of common stock) unless the holders of the Series A Preferred shall first receive, or simultaneously receive, an equal dividend on each outstanding share of Series A Preferred.

Series B Preferred

In June 2016 we created a new class of Preferred Stock designated as Series B Preferred Stock. The rights of the Series B Preferred are set forth in the Certificate of Designation of Preferences and Rights of Series B Preferred Stock (the “Series B Certificate of Designation”). A total of 11,500,000 shares of Series B Preferred are authorized for issuance under the Certificate of Designation. The shares of Series B Preferred have a stated value of $4.75 per share and, following stockholder approval of the conversion feature as described below, will be convertible into shares of our common stock at an initial conversion price of $4.75 per share.

Holders of the Series B Preferred are entitled to dividends on an as-if-converted basis in the same form as any dividends actually paid on shares of our Series A Preferred or other securities. So long as any Series B Preferred remains outstanding, we may not redeem, purchase or otherwise acquire any material amount of our Series A Preferred or other securities.

In connection with the Private Placement, we agreed with the investors to prepare and file a definitive proxy statement with the SEC as promptly as possible for a stockholders meeting scheduled to be held no later than 90 days after the closing of that offering. We agreed that the proxy statement would include a proposal to permit the Series B Preferred to become convertible into shares of our common stock as set forth in, and to the extent permitted by the, Series B Certificate of Designation, and to permit the issuance of the shares of common stock issuable upon such conversion, which issuance of shares, when aggregated with the shares of common stock issued in the Private Placement, could exceed 20% of our shares of common stock outstanding before the Private Placement. In this proposal, we are asking our stockholders to approve that conversion feature of the Series B Preferred, which will allow the holders of shares of Series B Preferred to convert their shares of Series B Preferred into common stock.

Our common stock is listed on The NASDAQ Global Market, and we are therefore subject to, among other rules, NASDAQ Listing Rule 5635(d) (the "NASDAQ Rule"). The NASDAQ Rule requires stockholder approval prior to the issuance of securities for less than the greater of book or market value of the stock in connection with a transaction, other than a public offering, involving the sale, issuance, or potential issuance by a company of common stock (or securities convertible into or exercisable for common stock) equal to 20% or more of the common stock or 20% or more of the voting power outstanding before the issuance. The number of shares of common stock sold on June 7, 2016 in the Private Placement constituted 19.9% of our outstanding shares of common stock immediately prior to the closing of that offering. Accordingly, the issuance of any additional shares of common stock (or securities convertible into or exercisable for common stock) in the offering would require stockholder approval. The Series B Preferred provides that it is convertible into shares of our common stock, but only if the conversion feature is approved by our stockholders in accordance with the NASDAQ Rule. We plan to file a definitive proxy statement with the SEC in July 2016 that includes a proposal to approve the conversion feature of the Series B Preferred, which would allow the holders of shares of Series B Preferred to convert their shares of Series B Preferred into common stock. We anticipate that the meeting will be scheduled to take place in August 2016. If our stockholders do not approve the conversion feature of the Series B Preferred, the shares of Series B Preferred will not become convertible, and will remain outstanding in accordance with the terms of the Series B Certificate of Designation.

If the proposal is approved by our stockholders, the shares of Series B Preferred will be convertible, at the option of each holder, at any time or from time to time into shares of our common stock at the conversion price in effect at the time of conversion, except that, subject to certain limited exceptions, no holder of Series B Preferred may convert the Series B Preferred if, after giving effect to the conversion, the holder and all affiliated persons would own beneficially more than 4.99% of our common stock (subject to adjustment up to 9.99% solely at the holder's discretion upon 61 days' prior notice to us). The initial conversion price of $4.75 is subject to appropriate adjustment in the event of a stock split, stock dividend, combination or other recapitalization affecting our common stock.

If our stockholders approve the conversion proposal, holders of a majority of the outstanding shares of Series B Preferred will be entitled to elect to convert all of the outstanding shares of the Series B Preferred into shares of common stock, subject to the beneficial ownership limitations of each holder set forth above.

Except as otherwise required by law, the holders of Series B Preferred have no right to vote on matters submitted to a vote of our stockholders. Without the prior written consent of a majority of the outstanding shares of Series B Preferred, however, we may not: (i) amend our articles of incorporation (including the Certificate of Designation) in a manner adverse to the Series B Preferred; (ii) create or authorize the creation of any other security convertible into or exercisable for any equity security ranking as to dividends, redemption or distribution of assets upon a liquidation senior to, the Series B Preferred, or increase the authorized number of shares of Series B Preferred; or (iii) enter into any agreement with respect to any of the foregoing.

In the event of the dissolution and winding up of our company, the proceeds available for distribution to our stockholders will be distributable *pari passu* among the holders of the shares of our common stock, Series A Preferred and Series B Preferred, pro rata based upon the number of shares held by each such holder, as if the outstanding shares of our Series A Preferred and Series B Preferred Stock were convertible, and were converted, into shares of our common stock.

Anti-Takeover Effects of Certain Provisions of Nevada Law and Charter and Bylaw Provisions

The following provisions of our articles of incorporation and bylaws could have the effect of delaying or discouraging another party from acquiring control of us and could encourage persons seeking to acquire control of us to first negotiate with our board of directors:

- our bylaws permit stockholders to call a special meeting of stockholders only if the holders of a majority of the voting power of our outstanding stock request such a meeting;
- our bylaws provide that our board of directors will establish the authorized number of directors from time to time;
- our articles of incorporation do not permit cumulative voting in the election of directors; and

- our articles of incorporation permit our board of directors to determine the rights, privileges and preferences of any new series of preferred stock, some of which could impede the ability of a person to acquire control of our company.

Registration Rights

In connection with the Private Placement, we entered into a Registration Rights Agreement in which we agreed to file with the SEC within 30 days of the closing of the Private Placement, a registration statement covering the resale by the purchasers of the shares of common stock purchased by them in that offering. We also agreed in the Registration Rights Agreement to file with the SEC within 30 days of the approval of the conversion feature of the Series B Preferred, a registration statement covering the resale of the shares of our common stock issuable upon conversion of such purchasers' shares of Series B Preferred by such holders. We have also agreed to use our best efforts to have the respective registration statements declared effective as soon as practicable upon filing, but in any event within 90 days after filing.

The Registration Rights Agreement provides, among other things, that in the event (i) we do not file either registration statement within the prescribed time period, (ii) the SEC does not declare effective either registration statement within the prescribed time period or (iii) either registration statement ceases to be effective under certain circumstances, we will pay to the holders on the occurrence of each such event and for each 30-day period thereafter until the applicable event is cured, an amount in cash equal to 1% of the aggregate amount invested (or outstanding, as specified in greater detail in the Registration Rights Agreement) by the holders in the Private Placement for each 30-day period (prorated for any period of less than 30 days) during which such registration statement was not effective.

Transfer Agent

Our transfer agent currently is
Continental Stock Transfer and Trust Company
7 Battery Place, 8th Floor
New York, New York 10004

DISCLOSURE OF SEC POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Our amended and restated articles of incorporation provide to the maximum extent permitted under applicable law, there shall be no personal liability of a director or an officer to this corporation or its stockholders for damages for breach of fiduciary duty as a director or an officer. Our bylaws and amended and restated articles of incorporation also provide that we shall indemnify and hold harmless each person who serves at any time as a director or officer of this company from and against any and all claims, judgments and liabilities to which such person shall become subject by reason of the fact that he is or was a director or officer, and shall reimburse such person for all legal and other expenses reasonably incurred by him or her in connection with any such claim or liability. We also have the power to defend such person from all suits or claims in accordance with the Nevada Revised Statutes. The rights accruing to any person under our bylaws and amended and restated articles of incorporation do not exclude any other right to which any such person may lawfully be entitled, and we may indemnify or reimburse such person in any proper case, even though not specifically provided for by the bylaws and amended and restated articles of incorporation.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling this company pursuant to the foregoing provisions, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event a claim for indemnification against such liabilities (other than payment by us for expenses incurred or paid by a director, officer or controlling person of our company in successful defense of any action, suit, or proceeding) is asserted by a director, officer or controlling person in connection with the securities being registered, we 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 of whether such indemnification by it is against public policy in the Securities Act and will be governed by the final adjudication of such issue.

LEGAL MATTERS

TroyGould PC, Los Angeles, California, has rendered an opinion with respect to the validity of the shares of common stock covered by this prospectus. Sanford J. Hillsberg, one of our directors, is an attorney with TroyGould PC. Some of the attorneys at TroyGould PC, including Mr. Hillsberg, own shares of our common stock constituting in the aggregate less than 1% of our outstanding shares of common stock.

EXPERTS

Our financial statements for the years ended December 31, 2015, December 31, 2014 and December 31, 2013 included in this prospectus and registration statement have been audited by Weinberg & Company, P.A., an independent registered public accounting firm, as stated in their reports appearing herein, and are included in reliance upon such reports given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 with respect to this offering of our common stock. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement, some items of which are contained in exhibits to the registration statement as permitted by the rules and regulations of the SEC. Statements contained in this prospectus as to the contents of any contract, agreement or other document are summaries of the material terms of that contract, agreement or other document. With respect to each of these contracts, agreements or other documents filed or incorporated by reference as an exhibit to the registration statement, reference is made to the exhibits for a more complete description of the matter involved. A copy of the registration statement, and the exhibits and schedules thereto, may be inspected without charge at the public reference facilities maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. Copies of these materials may be obtained by writing to the Public Reference Section of the SEC at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities. The SEC maintains a website that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC. The address of the SEC’s website is http://www.sec.gov.

We file periodic reports and other information with the SEC. Such periodic reports and other information are available for inspection and copying at the public reference room and website of the SEC referred to above. We maintain a website at http://www.lionbio.com. You may access our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The information and other content contained on our website are not part of the prospectus.

Lion Biotechnologies, Inc.

Index to Financial Statements

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of
Lion Biotechnologies, Inc.

We have audited the accompanying balance sheets of Lion Biotechnologies, Inc. as of December 31, 2015 and 2014, and the related statements of operations, comprehensive loss, stockholders' equity, and cash flows for each of the years in the three year period ended December 31, 2015. 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 Lion Biotechnologies, Inc. as of December 31, 2015 and 2014, and the results of its operations and its cash flows for each of the years in the three year period ended December 31, 2015, in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Lion Biotechnologies, Inc.'s internal control over financial reporting as of December 31, 2015, based on criteria established in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and our report dated March 11, 2016 expressed an unqualified opinion.

/s/Weinberg & Company, P.A.
Los Angeles, California
March 11, 2016

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The Board of Directors and Stockholders of
Lion Biotechnologies, Inc.

We have audited Lion Biotechnologies, Inc.'s internal control over financial reporting as of December 31, 2015, based on criteria established in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Lion Biotechnologies, Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit 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 effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Lion Biotechnologies, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015, based on the criteria established in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the balance sheets and the related statements of operations, comprehensive loss, stockholders' equity, and cash flows of Lion Biotechnologies, Inc., and our report dated March 11, 2016 expressed an unqualified opinion.

/s/Weinberg & Company, P.A.
Los Angeles, California
March 11, 2016

LION BIOTECHNOLOGIES, INC.
Balance Sheets
(In thousands, except share information)

	December 31, 2015	December 31, 2014
ASSETS		
Current Assets		
Cash and cash equivalents	$ 13,642	$ 44,909
Money market funds	19,945	-
Short-term investments available for sale	70,113	-
Prepaid expenses and other current assets	277	66
Total Current Assets	103,977	44,975
Property and equipment, net of accumulated depreciation of $1,103 and $104, respectively	1,676	1,532
Total Assets	$ 105,653	$ 46,507
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities		
Accounts payable	$ 958	$ 1,248
Accrued expenses	586	328
Accrued payable to officers and former directors	86	86
Total Current Liabilities	1,630	1,662
Commitments and contingencies		
Stockholders' Equity		
Preferred stock, $0.001 par value; 50,000,000 shares authorized, 1,694 and 5,694 shares issued and outstanding, respectively	-	-
Common stock, $0.000041666 par value; 150,000,000 shares authorized, 48,547,720 and 33,750,188 shares issued and outstanding, respectively	2	2
Common stock to be issued, 303,125 shares	245	245
Accumulated other comprehensive income	48	-
Additional paid-in capital	207,950	121,160
Accumulated deficit	(104,222)	(76,562)
Total Stockholders' Equity	104,023	44,845
Total Liabilities and Stockholders' Equity	$ 105,653	$ 46,507

See accompanying notes.

LION BIOTECHNOLOGIES, INC.
Statements of Operations
(In thousands, except per share information)

	For the Years Ended December 31,		
	2015	**2014**	**2013**
Revenues	**$ -**	**$ -**	**$ -**
Costs and expenses			
Research and development (including $2,248, $1,144 and $825 in share-based compensation costs)	15,470	3,849	2,154
General and administrative (including $6,275, $2,670 and $1,925 in share-based compensation costs)	12,390	8,192	3,831
Cost of Lion transaction	-	-	16,656
Total costs and expenses	27,860	12,041	22,641
Loss from operations	(27,860)	(12,041)	(22,641)
Other income (expense)			
Interest income (expense)	200	6	(445)
Cost to induce exchange transaction	-	-	(2,296)
Total other income (expense)	200	6	(2,741)
Net Loss	(27,660)	(12,035)	(25,382)
Deemed dividend related to beneficial conversion feature of convertible preferred stock	-	-	(8,462)
Net Loss Attributable to common Stockholders	$ (27,660)	$ (12,035)	$ (33,844)
Net Loss Per Share Attributable to common Stockholders, Basic and Diluted	$ (0.62)	$ (0.48)	$ (3.47)
Weighted-Average Common Shares Outstanding, Basic and Diluted	44,410,036	24,985,542	9,762,513

See accompanying notes.

LION BIOTECHNOLOGIES, INC.
Condensed Statements of Comprehensive Loss
(in thousands, except share information)

	For the Years Ended December 31,		
	2015	**2014**	**2013**
Net Loss	$ (27,660)	$ (12,035)	$ (25,382)
Other comprehensive income:			
Unrealized gain on short-term investments	48	-	-
Comprehensive Loss	$ (27,612)	$ (12,035)	$ (25,382)

See accompanying notes.

LION BIOTECHNOLOGIES, INC.
Statements of Stockholders' Equity
(In thousands, except share information)

	Preferred Stock		Common Stock		Common Stock to	Additional Paid-In	Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Shares	Amount	Be Issued	Capital	Income	Deficit	Equity
Balance - January 1, 2013	-	$ -	818,806	$ -	$ 245	$ 19,119	$ -	$ (30,683)	$ (11,319)
Common stock issued in settlement of notes payable and accrued interest and penalty			9,267,641	1		9,267			9,268
Common stock issued for cash under the restructuring, net of offering costs of $109			1,350,000			1,239			1,239
Common stock issued to induce exchange transaction			2,295,868			2,296			2,296
Fair value of vested stock options and warrants						747			747
Common stock Issued for Lion transactions			2,690,000			16,656			16,656
Common stock issued for services			50,000			274			274
Common stock issued to directors			400,596			2003			2,003
Common stock sold in private placement			3,145,300			5,887			5,887
Preferred stock sold in private placement	17,000					15,909			15,909
Common stock issued for settlement of payable			5,747			25			25
Deemed dividend on beneficial conversion feature of preferred stock						8,462		(8,462)	-
Net loss								(25,382)	(25,382)
Balance - December 31, 2013	17,000	-	20,023,958	1	245	81,884	-	(64,527)	17,603
Fair value of vested stock options						2,559			2,559
Common stock issued upon exercise of warrants			1,288,730			3,222			3,222
Common stock issued upon conversion of preferred shares	(11,306)		5,653,000						-
Common stock issued for services			784,500			1,255			1,255
Common stock sold in private placement			6,000,000	1		32,240			32,241
Net loss								(12,035)	(12,035)
Balance - December 31, 2014	5,694	-	33,750,188	2	245	121,160	-	(76,562)	44,845
Fair value of vested stock options						6,752			6,752
Common stock issued upon exercise of warrants, net of cancellation			3,880,210			9,705			9,705
Common stock issued upon exercise of options			42,387			255			255
Common stock issued upon conversion of preferred shares	(4,000)		2,000,000						-
Common stock sold in public offering, net of offering costs			9,200,000			68,307			68,307
Common stock issued for services			15,000			1,771			1,771
Forfeiture and cancellation of restricted shares issued for services			(340,065)						-
Unrealized gain on short- term investments							48		48
Net loss								(27,660)	(27,660)
Balance - December 31, 2015	1,694	$ -	48,547,720	$ 2	$ 245	$ 207,950	$ 48	$ (104,222)	$ 104,023

See accompanying notes.

LION BIOTECHNOLOGIES, INC.
Statements of Cash Flows
(In thousands)

	For the Years Ended December 31,		
	2015	**2014**	**2013**
Cash Flows From Operating Activities			
Net loss	$ (27,660)	$ (12,035)	$ (25,382)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	999	88	7
Fair value of vested stock options	6,752	2,559	747
Common stock issued for services	1,771	1,255	274
Common stock issued to induce exchange transaction	-	-	2,296
Common stock issued for Lion transaction	-	-	16,656
Common stock issued to directors	-	-	2,003
Changes in assets and liabilities:			
Prepaid expenses and other current assets	(211)	108	(164)
Accounts payable and accrued expenses	(32)	(608)	(98)
Net cash used in operating activities	(18,381)	(8,633)	(3,661)
Cash Flows From Investing Activities			
Increase in money market funds	(19,945)	-	-
Purchase of short- term investments	(140,665)	-	-
Maturities of short- term investments	70,600	-	-
Purchases of property and computer equipment	(1,143)	(1,592)	(13)
Net cash used in investing activities	(91,153)	(1,592)	(13)
Cash Flows From Financing Activities			
Proceeds from the issuance of common stock upon exercise of warrants	9,705	3,222	-
Proceeds from the issuance of common stock upon exercise of options	255	-	-
Proceeds from the issuance of common stock, net	68,307	32,240	7,126
Proceeds from the issuance of convertible notes, net	-	-	311
Proceeds from the issuance of preferred stock, net	-	-	15,909
Net cash provided by financing activities	78,267	35,462	23,346
Net (decrease) increase in cash and cash equivalents	(31,267)	25,237	19,672
Cash and cash equivalents, beginning of period	44,909	19,672	-
Cash and cash equivalents, end of period	$ 13,642	$ 44,909	$ 19,672
Supplemental Disclosures of Cash Flow Information:			
Unrealized gain on short-term investments	$ 48	$ -	$ -
Common stock issued upon conversion of convertible notes	$ -	$ -	$ 6,793
Common stock issued upon conversion of accrued interest and penalty	$ -	$ -	$ 2,475

See accompanying notes.

NOTE 1. GENERAL ORGANIZATION AND BUSINESS

Lion Biotechnologies, Inc. (the "Company," "we," "us" or "our") is a biotechnology company focused on developing and commercializing adoptive cell therapy (ACT) using autologous tumor infiltrating lymphocytes (TIL) for the treatment of metastatic melanoma and other solid cancers. ACT utilizes T-cells harvested from a patient to treat cancer in that patient. TIL, a kind of anti-tumor T-cells that are naturally present in a patient's tumors, are collected from individual patient tumor samples. The TIL are then activated and expanded ex vivo and then infused back into the patient to fight their tumor cells. The Company was originally incorporated under the laws of the state of Nevada on September 17, 2007. Until March 2010, we were an inactive company known as Freight Management Corp. On March 15, 2010, we changed our name to Genesis Biopharma, Inc., and in 2011 we commenced our current business. On September 26, 2013, we amended and restated our Articles of Incorporation to, among other things, change our name to Lion Biotechnologies, Inc., effect a 1-for-100 reverse stock split (pro-rata reduction of outstanding shares) of our common stock, increase (after the reverse stock split) the number of our authorized number of shares of common stock to 150,000 shares, and authorize the issuance of 50,000,000 shares of "blank check" preferred stock, $0.001 par value per share. All references herein to the number of shares issued or outstanding, and all per share and other similar data, reflect a 1-for-100 reverse stock split effected on September 26, 2013.

Liquidity

We are currently engaged in the development of therapeutics to fight cancer, we do not have any commercial products and have not yet generated any revenues from our biopharmaceutical business. We currently do not anticipate that we will generate any revenues during 2016 from the sale or licensing of any products. As shown in the accompanying financial statements, we have incurred a net loss of $27.7 million for the year ended December 31, 2015 and used $18.4 million of cash in our operating activities during the year ended December 31, 2015. As of December 31, 2015, we had $103.7 million of cash and cash equivalents, money market funds, and short-term investments on hand, stockholders' equity of $104.0 million and had working capital of $102.3 million.

During 2016, we expect to further ramp up our clinical operations which will increase the amount of cash we will use in our operations. Our budget for 2016 includes increased spending on Phase II clinical trials, research and development activities, higher payroll expenses as we increase our professional and scientific staff, as well as ongoing payments under our Cooperative Research and Development Agreement (CRADA) with the National Cancer Institute (NCI). Based on the funds we had available on December 31, 2015, we believe that we have sufficient capital to fund our anticipated operating expenses for at least 12 months.

In March 2015, the Company sold 9,200,000 shares of its common stock in an underwritten public offering at $8.00 per share for net proceeds of $68.3 million, after deducting expenses of the offering. In December 2014, the Company sold 6,000,000 shares of its common stock in an underwritten public offering at $5.75 per share for net proceeds of $32.2 million after deducting expenses of the offering. In November 2013, we completed a $23.3 million private placement of our securities to various institutional and individual accredited investors. Despite the amount of funds that we have raised, the estimated cost of completing the development of our TIL-based therapy, and of obtaining all required regulatory approvals to market those product candidates, may be substantially greater than the amount of funds we have available. Therefore, while we believe that our existing cash balances will be sufficient to fund our currently planned level of operations for at least 12 months, we will have to obtain additional funds in the future to complete our development plans. We intend to seek this additional funding through various financing sources, including possible sales of our securities, and in the longer term through strategic alliances with other pharmaceutical or biopharmaceutical companies.

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING PRACTICES

Cash and Cash Equivalents

The Company considers all highly liquid investments with an original maturity of 90 days or less when purchased to be cash equivalents. The carrying amounts reported in the Balance Sheets for cash and cash equivalents are valued at cost, which approximates their fair value.

Short-term Investments

The Company's short-term investments represent available for sale securities and are recorded at fair value and unrealized gains and losses are recorded within accumulated other comprehensive income (loss). The estimated fair value of the available for sale securities is determined based on quoted market prices or rates for similar instruments. In addition, the cost of debt securities in this category is adjusted for amortization of premium and accretion of discount to maturity. The Company evaluates securities with unrealized losses to determine whether such losses, if any, are other than temporary.

Property and Equipment

Property and equipment are stated at cost, net of accumulated depreciation and amortization. The cost of property and equipment is depreciated or amortized on the straight-line method over the following estimated useful lives:

Computer equipment	2 years
Office furniture and equipment	5 years
Lab equipment	2 years
Leasehold improvements	5 years

Leasehold improvements are amortized using the straight-line method over the shorter of the estimated useful life of the asset or the lease term. Expenditures for maintenance and repairs are charged to operations as incurred while renewals and betterments are capitalized. Gains and losses on disposals are included in the consolidated statements of operations.

Management assesses the carrying value of property and equipment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. If there is indication of impairment, management prepares an estimate of future cash flows expected to result from the use of the asset and its eventual disposition. If these cash flows are less than the carrying amount of the asset, an impairment loss is recognized to write down the asset to its estimated fair value. For the years ended December 31, 2015 2014 and 2013, the Company did not recognize any impairments for its property and equipment.

Loss per Share

Basic earnings (loss) per share is computed by dividing the net income (loss) applicable to common stockholders by the weighted average number of shares of common stock outstanding during the period. Shares of restricted stock are included in the basic weighted average number of common shares outstanding from the time they vest. Diluted earnings (loss) per share is computed by dividing the net income (loss) applicable to common stockholders by the weighted average number of common shares outstanding plus the number of additional common shares that would have been outstanding if all dilutive potential common shares had been issued. Shares of restricted stock are included in the diluted weighted average number of common shares outstanding from the date they are granted unless they are antidilutive. For the years ended December 31, 2015, 2014, and 2013, the calculations of basic and diluted loss per share are the same because inclusion of potential dilutive securities in the computation would have an anti-dilutive effect due to the net losses.

At December 31, 2015, 2014 and 2013, the dilutive impact of outstanding stock options for 2,693,237, 1,857,877, and 278,750 shares, respectively; outstanding warrants for 7,202,216, 11,084,426, and 12,373,156 shares, respectively; and preferred stock that can convert into 847,000, 2,847,000, and -0- shares of our common stock, respectively, have been excluded because their impact on the loss per share is anti-dilutive.

Fair Value Measurements

Under FASB ASC 820, *Fair Value Measurements and Disclosures*, fair value is defined as the price at which an asset could be exchanged or a liability transferred in a transaction between knowledgeable, willing parties in the principal or most advantageous market for the asset or liability. Where available, fair value is based on observable market prices or parameters or derived from such prices or parameters. Where observable prices or parameters are not available, valuation models are applied.

Assets and liabilities recorded at fair value in our financial statements are categorized based upon the level of judgment associated with the inputs used to measure their fair value. Hierarchical levels directly related to the amount of subjectivity associated with the inputs to fair valuation of these assets and liabilities, are as follows:

Level 1—Inputs are unadjusted, quoted prices in active markets for identical assets at the reporting date. Active markets are those in which transactions for the asset or liability occur in sufficient frequency and volume to provide pricing information on an ongoing basis.

The fair valued assets we hold that are generally included under this Level 1 are money market securities where fair value is based on publicly quoted prices.

Level 2—Are inputs, other than quoted prices included in Level 1, that are either directly or indirectly observable for the asset or liability through correlation with market data at the reporting date and for the duration of the instrument's anticipated life.

The fair valued assets we hold that are generally assessed under Level 2 are corporate bonds and commercial paper. We utilize third party pricing services in developing fair value measurements where fair value is based on valuation methodologies such as models using observable market inputs, including benchmark yields, reported trades, broker/dealer quotes, bids, offers and other reference data. We use quotes from external pricing service providers and other on-line quotation systems to verify the fair value of investments provided by our third party pricing service providers. We review independent auditor's reports from our third party pricing service providers particularly regarding the controls over pricing and valuation of financial instruments and ensure that our internal controls address certain control deficiencies, if any, and complementary user entity controls are in place.

Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities and which reflect management's best estimate of what market participants would use in pricing the asset or liability at the reporting date. Consideration is given to the risk inherent in the valuation technique and the risk inherent in the inputs to the model.

We do not have fair valued assets classified under Level 3.

The Company believes the carrying amount of its financial instruments (consisting of cash and cash equivalents, and accounts payable and accrued expenses) approximates fair value due to the short-term nature of such instruments.

Fair Value on a Recurring Basis

Financial assets measured at fair value on a recurring basis are categorized in the tables below based upon the lowest level of significant input to the valuations (in thousands):

	Assets at Fair Value as of December 31, 2015			
	Level 1	**Level 2**	**Level 3**	**Total**
Money market funds	$ 19,945	$	$ -	$ 19,945
Corporate debt securities		70,113	-	70,113
Total	$ 19,945	$ 70,113	$ -	$ 90,058

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 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 revenue and expenses during the reporting period. Actual results could differ from those estimates. Significant estimates include accounting for potential liabilities and the assumptions made in valuing stock instruments issued for services.

Stock-Based Compensation

The Company periodically grants stock options and warrants to employees and non-employees in non-capital raising transactions as compensation for services rendered. The Company accounts for stock option grants to employees based on the authoritative guidance provided by the Financial Accounting Standards Board where the value of the award is measured on the date of grant and recognized over the vesting period. The Company accounts for stock option grants to non-employees in accordance with the authoritative guidance of the Financial Accounting Standards Board where the value of the stock compensation is determined based upon the measurement date at either a) the date at which a performance commitment is reached, or b) at the date at which the necessary performance to earn the equity instruments is complete. Non-employee stock-based compensation charges generally are amortized over the vesting period on a straight-line basis. In certain circumstances where there are no future performance requirements by the non-employee, option grants are immediately vested and the total stock-based compensation charge is recorded in the period of the measurement date.

The fair value of the Company's common stock option grants is estimated using a Black-Scholes option pricing model, which uses certain assumptions related to risk-free interest rates, expected volatility, expected life of the common stock options, and future dividends. Compensation expense is recorded based upon the value derived from the Black-Scholes option pricing model, and based on actual experience. The assumptions used in the Black-Scholes option pricing model could materially affect compensation expense recorded in future periods.

The Company issues restricted shares of its common stock for share-based compensation programs. The Company measures the compensation cost with respect to restricted shares to employees based upon the estimated fair value of the equity instruments at the date of the grant, and is recognized as expense over the period which an employee is required to provide services in exchange for the award.

Total stock-based compensation expense related to all of our stock-based awards was as follows (in thousands):

	For the Years Ended December 31,		
	2015	**2014**	**2013**
Research and development	$ 2,248	$ 1,144	$ 825
General and administrative	6,275	2,670	1,925
Total stock-based compensation expense	$ 8,523	$ 3,814	$ 2,750

Research and Development

Research and development costs consist primarily of compensation paid to employees engaged in research and development activities, fees paid to consultants and outside service providers, patent fees and costs, and other expenses relating to the acquisition, design, development and testing of the Company's treatments and product candidates. Research and development costs are expensed as incurred, or if applicable, over the life of the underlying contracts on the straight-line basis, unless the achievement of milestones, the completion of contracted work, or other information indicates that a different expensing schedule is more appropriate. The Company reviews the status of its research and development contracts on a quarterly basis.

Income taxes

The Company accounts for income taxes using the asset and liability method whereby deferred tax assets are recognized for deductible temporary differences, and deferred tax liabilities are recognized for taxable temporary differences. Temporary differences are the differences between the reported amounts of assets and liabilities and their tax bases. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will be realized. Deferred tax assets and liabilities are adjusted for the effects of changes in tax laws and rates on the date of enactment.

Concentrations

Financial instruments, which potentially subject the Company to concentrations of credit risk, consist principally of cash.

The Company maintains cash balances at one bank. At times, the amount on deposit exceeds the federally insured limits. Management believes that the financial institution that holds the Company’s cash is financially sound and, accordingly, minimal credit risk exists. As of December 31, 2015 and 2014, the Company’s cash balances were in excess of insured limits maintained at the bank.

Recent Accounting Pronouncements

In February 2016, the FASB issued Accounting Standards Update (ASU) No. 2016-02, Leases. ASU 2016-02 requires a lessee to record a right of use asset and a corresponding lease liability on the balance sheet for all leases with terms longer than 12 months. ASU 2016-02 is effective for all interim and annual reporting periods beginning after December 15, 2018. Early adoption is permitted. A modified retrospective transition approach is required for lessees for capital and operating leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements, with certain practical expedients available. The Company is in the process of evaluating the impact of ASU 2016-02 on the Company’s financial statements and disclosures.

In January 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update (“ASU”) No. 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities*. The new guidance will impact the accounting for equity investments, financial liabilities under the fair value option, and the presentation and disclosure requirements for financial instruments. All equity investments in unconsolidated entities (other than those accounted for under the equity method of accounting) will generally be measured at fair value with changes in fair value recognized through earnings. There will no longer be an available-for-sale classification for equity securities with readily determinable fair values in which changes in fair value are currently reported in other comprehensive income. In addition, the FASB clarified the need for a valuation allowance on deferred tax assets resulting from unrealized losses on available-for-sale debt securities. In general, the new guidance will require modified retrospective application to all outstanding instruments, with a cumulative effect adjustment recorded to opening retained earnings. This guidance will be effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. We are currently evaluating the expected impact that the standard could have on our financial statements and related disclosures.

In November 2015, the FASB issued Accounting Standards Update No. 2015-17, *Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes*. The update simplifies the presentation of deferred income taxes by requiring that deferred tax liabilities and assets be classified as noncurrent in the balance sheet. The update is effective for public companies for annual reporting periods beginning after December 15, 2016, and interim periods within those fiscal years. The guidance may be adopted prospectively or retrospectively and early adoption is permitted. As of December 31, 2015, the Company has elected to early adopt this ASU on a prospective basis and therefore, prior years were not retrospectively adjusted.

In June 2014, the FASB issued Accounting Standards Update No. 2014-12, *Compensation – Stock Compensation (Topic 718).* The pronouncement was issued to clarify the accounting for share-based payments when the terms of an award provide that a performance target could be achieved after the requisite service period. The pronouncement is effective for reporting periods beginning after December 15, 2015. The adoption of ASU 2014-12 will not have a significant impact on the Company's financial position or results of operations.

In May 2014, the FASB issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers.* ASU 2014-09 is a comprehensive revenue recognition standard that will supersede nearly all existing revenue recognition guidance under current U.S. GAAP and replace it with a principle based approach for determining revenue recognition. ASU 2014-09 will require that companies recognize revenue based on the value of transferred goods or services as they occur in the contract. The ASU also will require additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. ASU 2014-09 is effective for interim and annual periods beginning after December 15, 2017. Early adoption is permitted in annual reporting periods beginning after December 15, 2016, and the interim periods within that year, and either full retrospective adoption or modified retrospective adoption is permitted. The Company is in the process of evaluating the impact of ASU 2014-09 on the Company's financial statements and disclosures.

Other recent accounting pronouncements issued by the FASB, including its Emerging Issues Task Force, the American Institute of Certified Public Accountants, and the Securities and Exchange Commission did not or are not believed by management to have a material impact on the Company's present or future consolidated financial statements.

Reclassifications

In presenting the Company's statement of operations for the years ended December 31, 2014 and 2013, the Company has reclassified $1.1 million and $0.8 million, respectively, of stock-based compensation that was previously reflected as general and administrative expenses to research and development expenses. The reclassification relates to stock-based compensation attributable to individuals working in the Company's research and development activities, and had no impact on total costs and expenses, or on net loss.

NOTE 3. CASH, MONEY MARKET FUNDS, AND SHORT-TERM INVESTMENTS

Cash, money market funds, and short-term investments consist of the following (in thousands):

	December 31,	
	2015	**2014**
Checking and savings accounts (reported as cash and cash equivalents)	$ 13,642	$ 44,909
Money market funds	19,945	-
Corporate debt securities (reported as short-term investments)	70,113	-
	$ 103,700	$ 44,909

Money market funds and short-term investments include the following securities with gross unrealized gains and losses (in thousands):

December 31, 2015	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Money market funds	$ 19,945	$ -	$ -	$ 19,945
Corporate debt securities	70,065	48	-	70,113
Total	$ 90,010	$ 48	$ -	$ 90,058

As of December 31, 2015, the contractual maturities of our money market funds and short-term investments were (in thousands):

	Within One Year
Money market funds	$ 19,945
Corporate debt securities	70,113
	$ 90,058

At December 31, 2015, the Company's short-term investments were invested in short-term fixed income debt securities and notes of domestic and foreign high credit issuers and in money market funds. The Company's investment policy limits investments to certain types of instruments such as certificates of deposit, money market instruments, obligations issued by the U.S. government and U.S. government agencies as well as corporate debt securities, and places restrictions on maturities and concentration by type and issuer. At December 31, 2015, the Company's short-term investments totaled $70.1 million, of which 43% were invested in notes of five companies, 37% were invested in notes of other domestic issuers, and 20% were invested in notes of foreign issuers. The average maturity of these notes was 66 days. At December 31, 2015 the Company's money-market funds totaled $19.9 million and were invested in a single, no-load money market fund.

NOTE 4. PROPERTY AND EQUIPMENT

Property and equipment consisted of the following (in thousands):

	December 31, 2015	December 31, 2014
Lab equipment	$ 1,703	$ 689
Computer equipment	85	72
Office furniture and equipment	138	113
Leasehold improvements	853	762
Total Property and equipment, cost	2,779	1,636
Less: Accumulated depreciation and amortization	(1,103)	(104)
Property and equipment, net	$ 1,676	$ 1,532

Depreciation expense for the years ended December 31, 2015, 2014 and 2013 was $999, $88 and $7, respectively.

NOTE 5. STOCKHOLDERS' EQUITY

On March 3, 2015, the Company completed an underwritten public offering of 9,200,000 shares of its common stock at a price of $8.00 per share of common stock. The net proceeds to the Company from the offering were $68.3 million, after deducting underwriting discounts and commissions and offering expenses. The offering was made pursuant to the Company's existing shelf registration statement on Form S-3, including a base prospectus, which was filed with the SEC on November 20, 2014 and declared effective on December 10, 2014, a preliminary prospectus supplement thereunder, and a registration statement on Form S-3 filed with the SEC on February 26, 2015.

On May 6, 2015, certain stockholders of the Company, including certain members of Board of Directors of the Company and their affiliates, sold 4,750,000 shares of the Company's common stock in an underwritten secondary offering at a price of $10.00 per share. The Company did not sell any shares in the offering and did not receive any of the proceeds from the offering.

On December 22, 2014 the Company completed an underwritten public offering of 6,000,000 shares of our common stock at a price of $5.75 per share. The net proceeds to us from the offering were $32.2 million, after deducting underwriting discounts and commissions and offering expenses payable by us. The offering was made pursuant to a shelf registration statement on Form S-3, which was filed with the SEC on November 20, 2014 and declared effective on December 10, 2014, and a prospectus supplement thereunder.

During 2015 and 2014, the Company granted 15,000 and 782,500 shares, respectively, of its restricted common stock to certain of its employees in accordance with the terms of their employment agreements. The total of 797,500 shares vest over a period of three years. As these shares were granted to employees, the Company calculated the aggregate fair value of the 797,500 shares to be $4.3 million based on the trading prices of the Company's stock at their grant dates. The allocable portion of the fair value of the stock that vested during the years ended December 31, 2015 and 2014 totaled $1.7 million and $1.3 million, respectively, and is recognized as expense in the accompanying statements of operations. As of December 31, 2015, the amount of unvested compensation related to the unvested outstanding shares of restricted common stock was $1.3 million, which will be recorded as expense in over a weighted average life of 2.25 years as the shares vest.

During 2015, certain employees authorized the Company to cancel 148,565 vested shares to satisfy withholding requirements related to such vesting. The cancellation is recorded as a reduction to shares outstanding. Additionally, shares of restricted stock granted above are subject to forfeiture to the Company or other restrictions that will lapse in accordance with a vesting schedule determined by our Board.

The following table summarizes restricted common stock activity:

	Number of Shares	Weighted Average Grant Date Fair Value
Non-vested shares, January 1, 2014	-	$ -
Granted	782,500	7.04
Vested	-	-
Forfeited	-	-
Non-vested shares, December 31, 2014	782,500	7.04
Granted	15,000	8.44
Vested	(284,748)	4.31
Forfeited	(191,500)	6.81
Non-vested shares, December 31, 2015	321,252	$ 6.96

In May 2013, the Company completed a transaction in which it cancelled certain debt and sold shares of common stock. As part of the transaction, certain investors purchasing common stock received as an inducement of 2,173,134 shares of common stock with a fair value of $2.1 million for no consideration. In addition, certain creditors received 122,734 shares of common stock valued at $0.1 million to cancel warrants to acquire 122,734 shares of common stock. The aggregate fair value of $2.2 million is reflected as cost to induce exchange transaction in the accompanying statement of operations for the year ended December 31, 2013.

In July 2013, the Company issued 1,340,000 shares of common stock with a fair value of $6.7 million to the two owners of Lion Biotechnologies, then a privately owned Delaware corporation, for all of their issued and outstanding shares of common stock. In the fourth quarter of 2013, the Company issued an additional 1,350,000 shares of common stock with a fair value of $9.9 million to the two owners. The aggregate fair value of all shares issued in the transaction was $16.6 million and is reflected as cost of Lion transaction in the accompanying statement of operations for the year ended December 31, 2013.

Series A Convertible Preferred Stock

A total of 17,000 shares of Series A Convertible Preferred Stock have been authorized for issuance under the Certificate of Designation of Preferences and Rights of Series A Convertible Preferred Stock. The shares of Series A Preferred Stock have a stated value of $1,000 per share and are initially convertible into shares of common stock at a price of $2.00 per share, subject to adjustment.

The Series A Preferred Stock may, at the option of the investor, be converted into fully paid and non-assessable shares of common stock. The holders of shares of Series A Preferred Stock shall not have the right to vote on matters that come before stockholders. In the event of any dissolution or winding up of the Company, proceeds shall be paid pari passu among the holders of the shares of common stock and preferred stock, pro rata based on the number of shares held by each holder. The Company may not declare, pay or set aside any dividends on shares of capital stock of the Company (other than dividends on shares of common stock payable in shares of common stock) unless the holders of the Series A Preferred Stock shall first receive an equal dividend on each outstanding share of Series A Preferred Stock.

During the years ended December 31, 2015 and 2014, 4,000 shares and 11,306 shares, respectively, of Series A Convertible Preferred Stock were converted into 2,000,000 and 5,653,000 shares of common stock, respectively. The common shares issued were determined on a formula basis of 500 common shares for each share of Series A Convertible Preferred Stock converted.

NOTE 6. STOCK OPTIONS AND WARRANTS

Stock Options

A summary of the status of stock options at December 31, 2015, and the changes during the year ended, is presented in the following table:

	Shares Under Option	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life	Aggregate Intrinsic Value (in thousands)
Outstanding at January 1, 2013	93,750	$ 109.00	8.5	$ 217
Granted	225,000	104.00		
Exercised	-			
Expired/Forfeited	(40,000)	92.00		
Outstanding at December 31, 2013	278,750	23.10	9.1	1,176
Granted	1,604,127	6.58		
Exercised	-	-		
Expired/Forfeited	(25,000)	125.00		
Outstanding at December 31, 2014	1,857,877	7.31	8.5	2,874
Granted	1,171,984	8.12		
Exercised	(42,387)	-		
Expired/Forfeited	(294,237)	2.88		
Outstanding at December 31, 2015	2,693,237	$ 8.12	8.02	$ 2,347
Exercisable at December 31, 2015	1,099,043	$ 8.38	6.93	$ 1,487

During the year ended December 31, 2015, the Company granted options to purchase 1,171,984 shares of common stock to employees and directors of the Company. The stock options generally vest between one and three years. The fair value of these options was determined to be $10.1 million using the Black-Scholes option pricing model based on the following assumptions: (i) volatility rate ranging from 207% to 218%, (ii) discount rate of 1.57%, (iii) zero expected dividend yield, and (iv)expected life of 6 years.

During the years ended December 31, 2015, 2014, and 2013, the Company recorded compensation costs of $6.7 million, $2.6 million, and $0.7 million, respectively, relating to the vesting of stock options. As of December 31, 2015, the aggregate value of unvested options was $11.1 million, which will continue to be amortized as compensation cost as the options vest over terms ranging from nine months to three years, as applicable.

On September 19, 2014, the Company's Board of Directors adopted the Lion Biotechnologies, Inc. 2014 Equity Incentive Plan (the "2014 Plan"). The 2014 Plan was approved by our stockholders at the annual meeting of stockholders held in November 2014. The 2014 Plan as approved by the stockholders authorized the issuance up to an aggregate of 2,350,000 shares of common stock. On April 10, 2015 the Board amended the 2014 Plan to increase the total number of shares that can be issued under the 2014 Plan by 1,650,000 from 2,350,000 shares to 4,000,000 shares. The increase in shares available for issuance under the 2014 Plan was approved by stockholders on June 12, 2015.

Warrants

A summary of the status of stock warrants at December 31, 2015, and the changes during the year then ended, is presented in the following table:

	Shares Under Warrants	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life	Aggregate Intrinsic Value (in thousands)
Outstanding at January 1, 2013	108,734	$ 123.00	3.5	$ -
Issued	12,387,156	2.50		
Exercised	-	-		
Expired	(122,734)			
Outstanding at December 31,2013	12,373,156	2.51	4.1	$ 31,056
Issued	-			
Exercised	(1,288,730)	2.50		
Expired	-			
Outstanding at December 31, 2014	11,084,426	2.51	3.9	59,518
Issued	-	-		
Exercised	(3,882,210)	2.50		
Expired	-	-		
Outstanding and exercisable at December 31, 2015	7,202,216	$ 2.51	3.3	$ 37,596

During the year ended December 31, 2015, the Company received $9.7 million in cash from the exercise of 3,882,210 warrants for the purchase of an equal number of shares of its common stock.

NOTE 7. INCOME TAXES

The Company has no tax provision for any period presented due to our history of operating losses. As of December 31, 2015, the Company had state and federal net operating loss carry forwards of approximately $45 million that may be available to reduce future years' taxable income through 2035. Future tax benefits which may arise as a result of these losses have not been recognized in these financial statements, as management has determined that their realization is not likely to occur and accordingly, the Company has recorded a valuation allowance for the deferred tax asset relating to these tax loss carry-forwards.

Significant components of the Company’s deferred income tax assets are as follows as of (in thousands):

	December 31, 2015	2014
Deferred income tax asset:		
Net operating loss carry forward	$ 15,300	$ 8,428
Valuation allowance	(15,300)	(8,428)
Net deferred income tax asset	$ -	$ -

Reconciliation of the effective income tax rate to the U.S. statutory rate is as follows:

	Year Ended December 31,		
	2015	2014	2013
Federal Statutory tax rate	(34)%	(34)%	(34)%
State tax, net of federal benefit	(5)%	(5)%	(5)%
	(39)%	(39)%	(39)%
Valuation allowance	39%	39%	39%
Effective tax rate	-%	-%	-%

The Company adopted accounting rules which address the determination of whether tax benefits claimed or expected to be claimed on a tax return should be recorded in the financial statements. Under these rules, the Company may recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than fifty percent likelihood of being realized upon ultimate settlement. These accounting rules also provide guidance on de-recognition, classification, interest and penalties on income taxes, accounting in interim periods and requires increased disclosures. As of December 31, 2015, no liability for unrecognized tax benefits was required to be recorded.

NOTE 8. LICENSES AND COMMITMENTS

National Institutes of Health and the National Cancer Institute

Cooperative Research and Development Agreement

Effective August 5, 2011, the Company signed a Cooperative Research and Development Agreement (CRADA) with the National Institutes of Health and the National Cancer Institute (NCI). Under the terms of the five-year cooperative research and development agreement, the Company will work with Dr. Steven A. Rosenberg, M.D., Ph.D., chief of NCI's Surgery Branch, to develop adoptive cell immunotherapies that are designed to destroy metastatic melanoma cells using a patient's tumor infiltrating lymphocytes.

On January 22, 2015, the Company executed an amendment (the "Amendment") to the CRADA to include four new indications. As amended, in addition to metastatic melanoma, the CRADA now also includes the development of TIL therapy for the treatment of patients with bladder, lung, triple-negative breast, and HPV-associated cancers. Under the Amendment, the NCI also has agreed to provide the Company with samples of all tumors covered by the Amendment for performing studies related to improving TIL selection and/or TIL scale-out production and process development. Although the CRADA has a five year term, either party to the CRADA has the right to terminate the CRADA upon 60 days' notice to the other party.

Development and Manufacture TIL

Effective October 5, 2011, the Company entered into a Patent License Agreement with the National Institutes of Health, an agency of the United States Public Health Service within the Department of Health and Human Services ("NIH"), which License Agreement was subsequently amended on February 9, 2015 and October 2, 2015. Pursuant to the License Agreement as amended, NIH granted to the Company an exclusive worldwide right and license to develop and manufacture certain proprietary autologous tumor infiltrating lymphocyte adoptive cell therapy products for the treatment of metastatic melanoma, ovarian cancer, breast cancer, and colorectal cancer. The License Agreement requires the Company to pay royalties based on a percentage of net sales (which percentage is in the mid-single digits and subject to certain annual minimum royalty payments), a percentage of revenues from sublicensing arrangements, and lump sum benchmark royalty payments on the achievement of certain clinical and regulatory milestones for each of the various indications and other direct costs incurred by NIH pursuant to the agreement.

Exclusive Patent License Agreement
On February 10, 2015, the Company entered into an exclusive Patent License Agreement with the NIH under which the Company received an exclusive, world-wide license to the NIH's rights in and to two patent-pending technologies related to methods for improving tumor-infiltrating lymphocytes for adoptive cell therapy. The licensed technologies relate to the more potent and efficient production of TIL from melanoma tumors by selecting for T-cell populations that express various inhibitory receptors. Unless terminated sooner, the license shall remain in effect until the last licensed patent right expires.

In consideration for the exclusive rights granted under the exclusive Patent License Agreement, the Company agreed to pay the NIH a non-refundable upfront licensing fee which was recognized as research and development expense during the year ended December 31, 2015. The Company also agreed to pay customary royalties based on a percentage of net sales (which percentage is in the mid-single digits), a percentage of revenues from sublicensing arrangements, and lump sum benchmark payments upon the successful completion of the Company's first Phase 2 clinical study, the successful completion of the Company's first Phase 3 clinical study, the receipt of the first FDA approval or foreign equivalent for a licensed product or process resulting from the licensed technologies, the first commercial sale of a licensed product or process in the United States, and the first commercial sale of a licensed product or process in any foreign country. The Company will also be responsible for all costs associated with the preparation, filing, maintenance and prosecution of the patent applications and patents covered by the License.

H. Lee Moffitt Cancer Center

Research Collaboration Agreement
In September 2014, the Company entered into a research collaboration agreement with the H. Lee Moffitt Cancer Center and Research Institute, Inc. to jointly engage in transitional research and development of adoptive tumor-infiltrating lymphocyte cell therapy with improved anti-tumor properties and process.

Exclusive License Agreement
The Company entered into an Exclusive License Agreement (the "Moffitt License Agreement"), effective as of June 28, 2014, with the H. Lee Moffitt Cancer Center and Research Institute, Inc. ("Moffitt") under which the Company received an exclusive, world-wide license to Moffitt's rights in and to two patent-pending technologies related to methods for improving tumor-infiltrating lymphocytes for adoptive cell therapy. Unless earlier terminated, the term of the license extends until the earlier of the expiration of the last patent related to the licensed technology or 20 years after the effective date of the license agreement.

Pursuant to the Moffitt License Agreement, the Company paid an upfront licensing fee which was recognized as research and development expense during 2014. A patent issuance fee will also be payable under the Moffitt License Agreement, upon the issuance of the first U.S. patent covering the subject technology. In addition, the Company agreed to pay milestone license fees upon completion of specified milestones, customary royalties based on a specified percentage of net sales (which percentage is in the low single digits) and sublicensing payments, as applicable, and annual minimum royalties beginning with the first sale of products based on the licensed technologies, which minimum royalties will be credited against the percentage royalty payments otherwise payable in that year. The Company will also be responsible for all costs associated with the preparation, filing, maintenance and prosecution of the patent applications and patents covered by the Moffitt License Agreement related to the treatment of any cancers in the United States, Europe and Japan and in other countries selected that the Company and Moffitt agreed to.

During the year ended December 31, 2015 and 2014, the Company recognized $3.8 million and $1.4 million respectively, of expenses related to its license agreements. The amounts were recorded as part of research and development expenses in the statement of operations. Additionally, during the years ended December 31, 2015, 2014 and 2013, there were no net sales subject to certain annual minimum royalty payments or sales that would require us to pay a percentage of revenues from sublicensing arrangements. In addition, there were no benchmarks or milestones achieved that would require payment under the lump sum benchmark royalty payments on the achievement of certain clinical regulatory milestones for each of the various indications.

Aggregate guaranteed commitments for 2016, under all of the Company's license and research agreements, are approximately $2.1 million.

Tampa Lease

In July 2014, the Company entered into a five-year non-cancellable operating lease with the University of South Florida Research Foundation for an approximately 5,200 square foot facility located in Tampa, Florida. The facility is part of the University of South Florida research park and is used as the Company's research and development facilities. The monthly base rent for this facility during the first year of the lease was $10,443 and will increase by 3% annually. The Company has the option to extend the lease term of this facility for an additional five-year period on the same terms and conditions, except that the base rent for the renewal term will be increased in accordance with the applicable consumer price index.

The minimum lease payments are as follows (in thousands):

Year	Amount
2016	$ 152
2017	157
2018	162
2019	167
	$ 638

NOTE 9. QUARTERLY UNAUDITED RESULTS

The results of operations by quarter for the years ended December 31, 2015 and 2014 are as follow:

	2015				2014			
	(in thousands, except per share information)							
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Revenue	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Net loss	$ (5,298)	$ (6,367)	$ (7,635)	$ (8,360)	$ (2,260)	$ (2,110)	$ (3,014)	$ (4,651)
Net loss per share, basic and diluted	$ (0.14)	$ (0.14)	$ (0.16)	$ (0.18)	$ (0.11)	$ (0.09)	$ (0.11)	$ (0.17)
Weighted average shares used in computing net loss per share, basic and diluted	37,679	45,082	47,272	47,912	20,798	24,138	26,633	28,271

NOTE 10. LEGAL PROCEEDINGS

On April 23, 2014, the Company received a subpoena from the Securities Exchange Commission (the "SEC") that stated that the staff of the SEC is conducting an investigation *In the Matter of Galena Biopharma, Inc. File No. HO 12356 (now known as "In the Matter of Certain Stock Promotions")* and that the subpoena was issued to the Company as part of the foregoing investigation. The SEC's subpoena and accompanying letter did not indicate whether the Company is, or is not, under investigation. We have cooperated with the SEC and have completed our production of documents in response to the subpoena. To date, the SEC has not requested any further information from us. Nevertheless, the SEC may in the future require us to produce additional documents or other materials.

The subpoena required us to give the SEC certain documents regarding, and communications between, anyone at this company and certain listed persons and entities (which include investor-relations firms and persons associated with the investor-relations firms), and articles regarding this company posted on certain equity research or other financial websites. We believe that the SEC is investigating improper conduct relative to the payment of bloggers and other authors for promotional articles written about public companies. A number of articles have been written about us that may be available on the internet and elsewhere. Investors considering an investment in our securities should review this Annual Report and the other documents that we filed with the SEC rather than relying on internet blogs or other similar articles and publications.

Although we are unaware of the exact scope or timing of the SEC's investigation, it is our understanding that the investigation is ongoing. We do not know when the investigation will be concluded or to what extent we will be further involved. If we receive additional subpoenas or other requests for documents from the SEC it is our intention to fully cooperate with the SEC. Complying with any such future requests could distract the time and attention of our officers and directors or divert our resources away from research and development programs. Furthermore, we, and our former officers and directors, may be the subject of the SEC's investigation. Any such investigation could result in significant legal expenses, the diversion of management's attention from our business, damage to our business and reputation, and could subject us to a wide range of remedies, including an SEC enforcement action and potential financial penalties required by the SEC.

There are no other pending legal proceedings to which the Company is a party or of which its property is the subject.

LION BIOTECHNOLOGIES, INC.
Condensed Balance Sheets
(in thousands, except share information)

	March 31, 2016	December 31, 2015
ASSETS	(unaudited)	
Current Assets		
Cash and cash equivalents	$ 8,943	$ 13,642
Money market funds	29,972	19,945
Short-term investments available for sale	60,251	70,113
Prepaid expenses and other current assets	193	277
Total Current Assets	99,359	103,977
Property and equipment, net of accumulated depreciation and amortization of $1,372 and $1,103, respectively	1,409	1,676
Total Assets	$ 100,768	$ 105,653
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities		
Accounts payable	$ 1,054	$ 958
Accrued expenses	690	586
Accrued payable to officers and former directors	86	86
Total Current Liabilities	1,830	1,630
Commitments and contingencies		
Stockholders' Equity		
Preferred stock, $0.001 par value; 50,000,000 shares authorized, 1,694 shares issued and outstanding	-	-
Common stock, $0.000041666 par value; 150,000,000 shares authorized, 48,516,528 and 48,547,720 shares issued and outstanding, respectively	2	2
Common stock to be issued, 303,125 shares	245	245
Accumulated other comprehensive income	68	48
Additional paid-in capital	209,729	207,950
Accumulated deficit	(111,106)	(104,222)
Total Stockholders' Equity	98,938	104,023
Total Liabilities and Stockholders' Equity	$ 100,768	$ 105,653

The accompanying notes are an integral part of these condensed financial statements.

LION BIOTECHNOLOGIES, INC.
Condensed Statements of Operations
(in thousands, except per share information)
(Unaudited)

	For the Three Months Ended March 31,	
	2016	**2015**
Revenues	**$ -**	**$ -**
Costs and expenses		
Research and development (including $585 and $387 in share-based compensation costs)	4,192	2,398
General and administrative (including $1,194 and $1,080 in share-based compensation costs)	2,818	2,900
Total costs and expenses	7,010	5,298
Loss from operations	(7,010)	(5,298)
Other income		
Interest income	126	-
Net Loss	$ (6,884)	$ (5,298)
Net Loss Per Share, Basic and Diluted	$ (0.14)	$ (0.14)
Weighted-Average Common Shares Outstanding, Basic and Diluted	48,547,534	37,678,662

The accompanying notes are an integral part of these condensed financial statements.

LION BIOTECHNOLOGIES, INC.
Condensed Statements of Comprehensive Loss
(in thousands, except share information)
(Unaudited)

	For the Three Months Ended March 31,	
	2016	**2015**
Net Loss	$ (6,884)	$ (5,298)
Other comprehensive income:		
Unrealized gain on short-term investments	20	-
Comprehensive Loss	$ (6,864)	$ (5,298)

The accompanying notes are an integral part of these condensed financial statements.

LION BIOTECHNOLOGIES, INC.
Statement of Stockholders' Equity
For the Three Months Ended March 31,2016
(In thousands, except share information)
(Unaudited)

	Preferred Stock		Common Stock		Common Stock to Be Issued	Additional Paid-In Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount					
Balance - January 1, 2016	1,694	$ -	48,547,720	$ 2	$ 245	$ 207,950	$ 48	$ (104,222)	$ 104,023
Fair value of vested stock options						1,483			1,483
Vesting of restricted shares issued for services						296			296
Cancellation of stock option and restricted shares issued for services			(31,192)			-			-
Unrealized gain on short- term investments							20		20
Net loss								(6,884)	(6,884)
Balance - March 31, 2016	1,694	$ -	48,516,528	$ 2	$ 245	$ 209,729	$ 68	$ (111,106)	$ 98,938

The accompanying notes are an integral part of these condensed financial statements.

LION BIOTECHNOLOGIES, INC.
Statements of Cash Flows
(In thousands)
(Unaudited)

	For the Three Months Ended March 31,	
	2016	**2015**
Cash Flows From Operating Activities		
Net loss	$ (6,884)	$ (5,298)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	269	185
Fair value of vested stock options	1,483	1,017
Common stock issued for services	296	450
Changes in assets and liabilities:		
Prepaid expenses and other current assets	84	(62)
Accounts payable and accrued expenses	200	249
Net Cash Used In Operating Activities	(4,552)	(3,459)
Cash Flows From Investing Activities		
Purchase of money market funds	(10,027)	-
Purchase of short- term investments	(29,273)	-
Maturities of short- term investments	39,155	-
Purchase of property and equipment	(2)	(782)
Net Cash Used In Investing Activities	(147)	(782)
Cash Flows From Financing Activities		
Proceeds from the issuance of common stock upon exercise of warrants	-	2,304
Proceeds from the issuance of common stock, net	-	68,308
Net Cash Provided By Financing Activities	-	70,612
Net (decrease) increase in cash and cash equivalents	(4,699)	66,371
Cash and Cash Equivalents, Beginning of Period	13,642	44,909
Cash and Cash Equivalents, End of Period	$ 8,943	$ 111,280
Supplemental Disclosures of Cash Flow Information:		
Unrealized gain on short-term investments	$ 20	$ -

The accompanying notes are an integral part of these condensed financial statements.

NOTE 1. GENERAL ORGANIZATION AND BUSINESS

Lion Biotechnologies, Inc. (the "Company," "we," "us" or "our") is a biotechnology company focused on developing and commercializing adoptive cell therapy (ACT) using autologous tumor infiltrating lymphocytes (TIL) for the treatment of metastatic melanoma and other solid cancers. ACT utilizes T-cells harvested from a patient to treat cancer in that patient. TIL, a kind of anti-tumor T-cells that are naturally present in a patient's tumors, are collected from individual patient tumor samples. The TIL are then activated and expanded ex vivo and then infused back into the patient to fight their tumor cells.

Basis of Presentation of Unaudited Condensed Financial Information

The unaudited condensed financial statements of the Company for the three months ended March 31, 2016 and 2015 have been prepared in accordance with accounting principles generally accepted in the United States of America for interim financial information and pursuant to the requirements for reporting on Form 10-Q and Regulation S-K. Accordingly, they do not include all the information and footnotes required by accounting principles generally accepted in the United States of America for complete financial statements. However, such information reflects all adjustments (consisting solely of normal recurring adjustments), which are, in the opinion of management, necessary for the fair presentation of the financial position and the results of operations. Results shown for interim periods are not necessarily indicative of the results to be obtained for a full fiscal year. The balance sheet information as of December 31, 2015 was derived from the audited financial statements included in the Company's financial statements as of and for the year ended December 31, 2015 included in the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission (the "SEC") on March 11, 2016. These financial statements should be read in conjunction with that report.

Liquidity

We are currently engaged in the development of therapeutics to fight cancer, we do not have any commercial products and have not yet generated any revenues from our biopharmaceutical business. We currently do not anticipate that we will generate any revenues during 2016 from the sale or licensing of any products. As shown in the accompanying condensed financial statements, we have incurred a net loss of $6.9 million for the three months ended March 31, 2016 and used $4.6 million of cash in our operating activities during the three months ended March 31, 2016. As of March 31, 2016, we had $99.2 million of cash, money market funds, and short-term investments on hand, stockholders' equity of $98.9 million and had working capital of $97.5 million.

During 2016, we expect to further ramp up our clinical operations and research activities, which will increase the amount of cash we will use. Specifically, our budget for 2016 includes increased spending on Phase II clinical trials, research and development activities, higher payroll expenses as we increase our professional and scientific staff, as well as ongoing payments under our Cooperative Research and Development Agreement (CRADA) with the National Cancer Institute (NCI). We estimate that we will spend between $30- $35 million in cash during 2016. Based on the funds we had available on March 31, 2016, we believe that we have sufficient capital to fund our anticipated operating expenses for at least 12 months.

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING PRACTICES

Short-term Investments

The Company's short-term investments represent available for sale securities and are recorded at fair value and unrealized gains and losses are recorded within accumulated other comprehensive income (loss). The estimated fair value of the available for sale securities is determined based on quoted market prices or rates for similar instruments. In addition, the cost of debt securities in this category is adjusted for amortization of premium and accretion of discount to maturity. The Company evaluates securities with unrealized losses to determine whether such losses, if any, are other than temporary.

Loss per Share

Basic earnings (loss) per share is computed by dividing the net income (loss) applicable to common stockholders by the weighted average number of shares of common stock outstanding during the period. Shares of restricted stock are included in the basic weighted average number of common shares outstanding from the time they vest. Diluted earnings (loss) per share is computed by dividing the net income (loss) applicable to common stockholders by the weighted average number of common shares outstanding plus the number of additional common shares that would have been outstanding if all dilutive potential common shares had been issued. Shares of restricted stock are included in the diluted weighted average number of common shares outstanding from the date they are granted until which time they vest, unless they are antidilutive. For the three month ended March 31, 2016, and 2015, the calculations of basic and diluted loss per share are the same because inclusion of potential dilutive securities in the computation would have an anti-dilutive effect due to the net losses.

At March 31, 2016 and 2015, the dilutive impact of outstanding stock options for 3,367,129 and 1,907,877 shares, respectively; outstanding warrants for 7,202,216 and 10,162,726 shares, respectively; and preferred stock that can convert into 847,000 and 1,847,000 shares, respectively of our common stock, have been excluded because their impact on the loss per share is anti-dilutive.

Fair Value Measurements

Under FASB ASC 820, Fair Value Measurements and Disclosures, fair value is defined as the price at which an asset could be exchanged or a liability transferred in a transaction between knowledgeable, willing parties in the principal or most advantageous market for the asset or liability. Where available, fair value is based on observable market prices or parameters or derived from such prices or parameters. Where observable prices or parameters are not available, valuation models are applied.

Assets and liabilities recorded at fair value in our financial statements are categorized based upon the level of judgment associated with the inputs used to measure their fair value. Hierarchical levels directly related to the amount of subjectivity associated with the inputs to fair valuation of these assets and liabilities, are as follows:

Level 1—Inputs are unadjusted, quoted prices in active markets for identical assets at the reporting date. Active markets are those in which transactions for the asset or liability occur in sufficient frequency and volume to provide pricing information on an ongoing basis.

The fair valued assets we hold that are generally included under this Level 1 are money market securities where fair value is based on publicly quoted prices.

Level 2—Are inputs, other than quoted prices included in Level 1, that are either directly or indirectly observable for the asset or liability through correlation with market data at the reporting date and for the duration of the instrument’s anticipated life.

The fair valued assets we hold that are generally assessed under Level 2 are corporate bonds and commercial paper. We utilize third party pricing services in developing fair value measurements where fair value is based on valuation methodologies such as models using observable market inputs, including benchmark yields, reported trades, broker/dealer quotes, bids, offers and other reference data. We use quotes from external pricing service providers and other on-line quotation systems to verify the fair value of investments provided by our third party pricing service providers. We review independent auditor’s reports from our third party pricing service providers particularly regarding the controls over pricing and valuation of financial instruments and ensure that our internal controls address certain control deficiencies, if any, and complementary user entity controls are in place.

Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities and which reflect management’s best estimate of what market participants would use in pricing the asset or liability at the reporting date. Consideration is given to the risk inherent in the valuation technique and the risk inherent in the inputs to the model.

We do not have fair valued assets classified under Level 3.

The Company believes the carrying amount of its financial instruments (consisting of cash and cash equivalents, and accounts payable and accrued expenses) approximates fair value due to the short-term nature of such instruments.

Fair Value on a Recurring Basis

Financial assets measured at fair value on a recurring basis are categorized in the tables below based upon the lowest level of significant input to the valuations (in thousands):

	Assets at Fair Value as of March 31, 2016			
	Level 1	**Level 2**	**Level 3**	**Total**
Corporate debt securities	$ -	$ 60,251	$ -	$ 60,251
Total	$ -	$ 60,251	$ -	$ 60,251

	Assets at Fair Value as of December 31, 2015			
	Level 1	**Level 2**	**Level 3**	**Total**
Money market funds	$ 19,945	$ -	$ -	$ 19,945
Corporate debt securities	-	70,113	-	70,113
Total	$ 19,945	$ 70,113	$ -	$ 90,058

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 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 revenue and expenses during the reporting period. Actual results could differ from those estimates. Significant estimates include valuation of available-for-sale investments, accounting for potential liabilities, the valuation allowance associated with the Company's deferred tax assets, and the assumptions made in valuing stock instruments issued for services.

Stock-Based Compensation

The Company periodically grants stock options and warrants to employees and non-employees in non-capital raising transactions as compensation for services rendered. The Company accounts for stock option grants to employees based on the authoritative guidance provided by the Financial Accounting Standards Board where the value of the award is measured on the date of grant and recognized over the vesting period. The Company accounts for stock option grants to non-employees in accordance with the authoritative guidance of the Financial Accounting Standards Board where the value of the stock compensation is determined based upon the measurement date at either a) the date at which a performance commitment is reached, or b) at the date at which the necessary performance to earn the equity instruments is complete. Non-employee stock-based compensation charges generally are amortized over the vesting period on a straight-line basis. In certain circumstances where there are no future performance requirements by the non-employee, option grants are immediately vested and the total stock-based compensation charge is recorded in the period of the measurement date.

The fair value of the Company's common stock option grants is estimated using a Black-Scholes option pricing model, which uses certain assumptions related to risk-free interest rates, expected volatility, expected life of the common stock options, and future dividends. Compensation expense is recorded based upon the value derived from the Black-Scholes option pricing model, and based on actual experience. The assumptions used in the Black-Scholes option pricing model could materially affect compensation expense recorded in future periods.

The Company issues restricted shares of its common stock for share-based compensation programs. The Company measures the compensation cost with respect to restricted shares to employees based upon the estimated fair value of the equity instruments at the date of the grant, and is recognized as expense over the period which an employee is required to provide services in exchange for the award.

Total stock-based compensation expense related to all of our stock-based awards was as follows (in thousands):

	For the Three Months Ended March 31,	
	2016	2015
Research and development	$ 585	$ 387
General and administrative	1,194	1,080
Total stock-based compensation expense	$ 1,779	$ 1,467

Concentrations

Financial instruments, which potentially subject the Company to concentrations of credit risk, consist principally of cash.

The Company maintains cash balances at one bank. At times, the amount on deposit exceeds the federally insured limits. Management believes that the financial institution that holds the Company’s cash is financially sound and, accordingly, minimal credit risk exists. As of March 31, 2016 and 2015, the Company’s cash balances were in excess of insured limits maintained at the bank.

Recent Accounting Pronouncements

In January 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update (“ASU”) No. 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities. The new guidance will impact the accounting for equity investments, financial liabilities under the fair value option, and the presentation and disclosure requirements for financial instruments. All equity investments in unconsolidated entities (other than those accounted for under the equity method of accounting) will generally be measured at fair value with changes in fair value recognized through earnings. There will no longer be an available-for-sale classification for equity securities with readily determinable fair values in which changes in fair value are currently reported in other comprehensive income. In addition, the FASB clarified the need for a valuation allowance on deferred tax assets resulting from unrealized losses on available-for-sale debt securities. In general, the new guidance will require modified retrospective application to all outstanding instruments, with a cumulative effect adjustment recorded to opening retained earnings. This guidance will be effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. Early adoption is permitted commencing January 1, 2017. We are currently evaluating the expected impact that the standard could have on our financial statements and related disclosures.

In February 2016, the FASB issued Accounting Standards Update (ASU) No. 2016-02, Leases. ASU 2016-02 requires a lessee to record a right of use asset and a corresponding lease liability on the balance sheet for all leases with terms longer than 12 months. ASU 2016-02 is effective for all interim and annual reporting periods beginning after December 15, 2018. Early adoption is permitted. A modified retrospective transition approach is required for lessees for capital and operating leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements, with certain practical expedients available. The Company is in the process of evaluating the impact of ASU 2016-02 on the Company’s financial statements and disclosures.

Other recent accounting pronouncements issued by the FASB, including its Emerging Issues Task Force, the American Institute of Certified Public Accountants, and the Securities and Exchange Commission did not or are not believed by management to have a material impact on the Company's present or future consolidated financial statements.

Reclassifications

In presenting the Company's statement of operations for the three months ended March 31, 2015, the Company has reclassified $0.3 million, of stock-based compensation that was previously reflected as general and administrative expenses to research and development expenses. The reclassification relates to stock-based compensation attributable to individuals working in the Company's research and development activities, and had no impact on total costs and expenses, or on net loss.

Subsequent Events

The Company evaluates events that have occurred after the balance sheet date but before the financial statements are issued. Based upon the evaluation, the Company did not identify any recognized or non-recognized subsequent events that would have required adjustment or disclosure in the condensed financial statements.

NOTE 3. CASH, MONEY MARKET FUNDS, AND SHORT-TERM INVESTMENTS

Cash, money market funds, and short-term investments consist of the following (in thousands):

	March 31, 2016	December 31, 2015
Checking and savings accounts (reported as cash and cash equivalents)	$ 8,943	$ 13,642
Money market funds	29,972	19,945
Corporate debt securities (reported as short-term investments)	60,251	70,113
	$ 99,166	$ 103,700

Money market funds and short-term investments include the following securities with gross unrealized gains and losses (in thousands):

March 31, 2016	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Money market funds	$ 29,972	$ -	$ -	$ 29,972
Corporate debt securities	60,183	68	-	60,251
Total	$ 90,155	$ 68	$ -	$ 90,223

December 31, 2015	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Money market funds	$ 19,945	$ -	$ -	$ 19,945
Corporate debt securities	70,065	48	-	70,113
Total	$ 90,010	$ 48	$ -	$ 90,058

As of March 31, 2016, the contractual maturities of our money market funds and short-term investments were (in thousands):

	Within One Year
Money market funds	$ 29,972
Corporate debt securities	60,251
	$ 90,223

At March 31, 2016, the Company's short-term investments were invested in short-term fixed income debt securities and notes of domestic and foreign high credit issuers and in money market funds. The Company's investment policy limits investments to certain types of instruments such as certificates of deposit, money market instruments, obligations issued by the U.S. government and U.S. government agencies as well as corporate debt securities, and places restrictions on maturities and concentration by type and issuer. At March 31, 2016, the Company's short-term investments totaled $60.3 million, of which 50% were invested in notes of five companies, 44% were invested in notes of other domestic issuers, and 6% were invested in notes of foreign issuers. The average maturity of these notes was 85 days. At March 31, 2016 the Company's money-market funds totaled approximately $30 million and were invested in a single, no-load money market fund.

NOTE 4. STOCKHOLDERS' EQUITY

During 2016, certain employees authorized the Company to cancel 41,193 vested shares to satisfy withholding requirements related to such vesting. The cancellation is recorded as a reduction to shares outstanding. Additionally, shares of restricted stock granted above are subject to forfeiture to the Company or other restrictions that will lapse in accordance with a vesting schedule determined by our Board.

The following table summarizes restricted common stock activity:

	Number of Shares	Weighted Average Grant Date Fair Value
Non-vested shares, January 1, 2016	321,252	$ 6.96
Granted		
Vested	(73,126)	6.40
Forfeited	-	-
Non-vested shares, March 31, 2016	248,126	$ 7.13

NOTE 5. STOCK OPTIONS

A summary of the status of stock options at March 31, 2016, and the changes during the three months then ended, is presented in the following table:

	Shares Under Option	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life	Aggregate Intrinsic Value (in thousands)
Outstanding at January 1, 2016	2,693,237	$ 8.12	8.02	$ 2,347
Granted	986,422	5.02	9.9	
Exercised	-	-	-	-
Expired/Forfeited	(312,530)	8.01	-	-
Outstanding at March 31, 2016	3,367,129	$ 7.15	8.87	$ 185
Exercisable at March 31, 2016	1,151,221	$ 8.26	7.82	$ 24

During the three months ended March 31, 2016, the Company granted options to purchase 986,422 shares of common stock to new employees and directors of the Company. The stock options generally vest between one and three years. The fair value of these options was determined to be $4.8 million using the Black-Scholes option pricing model based on the following assumptions: (i) volatility rate of 194%, (ii) discount rate of 1.78%, (iii) zero expected dividend yield, and (iv) expected life of 6 years.

During the period ended March 31, 2016 and 2015, the Company recorded compensation costs of $1.5 million and $1.0 million, respectively, relating to the vesting of stock options. As of March 31, 2016, the aggregate value of unvested options was $12.8 million, which will continue to be amortized as compensation cost as the options vest over terms ranging from nine months to three years, as applicable.

NOTE 6. LICENSE AND COMMITMENTS

National Institutes of Health and the National Cancer Institute

Cooperative Research and Development Agreement

Effective August 5, 2011, the Company signed a Cooperative Research and Development Agreement (CRADA) with the National Institutes of Health and the National Cancer Institute (NCI). Under the terms of the five-year cooperative research and development agreement, the Company will work with Dr. Steven A. Rosenberg, M.D., Ph.D., chief of NCI's Surgery Branch, to develop adoptive cell immunotherapies that are designed to destroy metastatic melanoma cells using a patient's tumor infiltrating lymphocytes.

On January 22, 2015, the Company executed an amendment (the "Amendment") to the CRADA to include four new indications. As amended, in addition to metastatic melanoma, the CRADA now also includes the development of TIL therapy for the treatment of patients with bladder, lung, triple-negative breast, and HPV-associated cancers. Under the Amendment, the NCI also has agreed to provide the Company with samples of all tumors covered by the Amendment for performing studies related to improving TIL selection and/or TIL scale-out production and process development. Although the CRADA has a five year term, either party to the CRADA has the right to terminate the CRADA upon 60 days' notice to the other party.

Development and Manufacture TIL
Effective October 5, 2011, the Company entered into a Patent License Agreement with the National Institutes of Health, an agency of the United States Public Health Service within the Department of Health and Human Services ("NIH"), which License Agreement was subsequently amended on February 9, 2015 and October 2, 2015. Pursuant to the License Agreement as amended, NIH granted to the Company an exclusive worldwide right and license to develop and manufacture certain proprietary autologous tumor infiltrating lymphocyte adoptive cell therapy products for the treatment of metastatic melanoma, ovarian cancer, breast cancer, and colorectal cancer. The License Agreement requires the Company to pay royalties based on a percentage of net sales (which percentage is in the mid-single digits and subject to certain annual minimum royalty payments), a percentage of revenues from sublicensing arrangements, and lump sum benchmark royalty payments on the achievement of certain clinical and regulatory milestones for each of the various indications and other direct costs incurred by NIH pursuant to the agreement.

Exclusive Patent License Agreement
On February 10, 2015, the Company entered into an exclusive Patent License Agreement with the NIH under which the Company received an exclusive, world-wide license to the NIH's rights in and to two patent-pending technologies related to methods for improving tumor-infiltrating lymphocytes for adoptive cell therapy. The licensed technologies relate to the more potent and efficient production of TIL from melanoma tumors by selecting for T-cell populations that express various inhibitory receptors. Unless terminated sooner, the license shall remain in effect until the last licensed patent right expires.

In consideration for the exclusive rights granted under the exclusive Patent License Agreement, the Company agreed to pay the NIH a non-refundable upfront licensing fee which was recognized as research and development expense during the year ended December 31, 2015. The Company also agreed to pay customary royalties based on a percentage of net sales (which percentage is in the mid-single digits), a percentage of revenues from sublicensing arrangements, and lump sum benchmark payments upon the successful completion of the Company's first Phase 2 clinical study, the successful completion of the Company's first Phase 3 clinical study, the receipt of the first FDA approval or foreign equivalent for a licensed product or process resulting from the licensed technologies, the first commercial sale of a licensed product or process in the United States, and the first commercial sale of a licensed product or process in any foreign country. The Company will also be responsible for all costs associated with the preparation, filing, maintenance and prosecution of the patent applications and patents covered by the License.

H. Lee Moffitt Cancer Center

Research Collaboration Agreement
In September, 2014, we entered into a research collaboration agreement with the H. Lee Moffitt Cancer Center and Research Institute, Inc. to jointly engage in transitional research and development of adoptive tumor-infiltrating lymphocyte cell therapy with improved anti-tumor properties and process.

Exclusive License Agreement
The Company entered into an Exclusive License Agreement (the "Moffitt License Agreement"), effective as of June 28, 2014, with the H. Lee Moffitt Cancer Center and Research Institute, Inc. ("Moffitt") under which the Company received an exclusive, world-wide license to Moffitt's rights in and to two patent-pending technologies related to methods for improving tumor-infiltrating lymphocytes for adoptive cell therapy. Unless earlier terminated, the term of the license extends until the earlier of the expiration of the last patent related to the licensed technology or 20 years after the effective date of the license agreement.

Pursuant to the Moffitt License Agreement, the Company paid an upfront licensing fee which was recognized as research and development expense during 2014. A patent issuance fee will also be payable under the Moffitt License Agreement, upon the issuance of the first U.S. patent covering the subject technology. In addition, the Company agreed to pay milestone license fees upon completion of specified milestones, customary royalties based on a specified percentage of net sales (which percentage is in the low single digits) and sublicensing payments, as applicable, and annual minimum royalties beginning with the first sale of products based on the licensed technologies, which minimum royalties will be credited against the percentage royalty payments otherwise payable in that year. The Company will also be responsible for all costs associated with the preparation, filing, maintenance and prosecution of the patent applications and patents covered by the Moffitt License Agreement related to the treatment of any cancers in the United States, Europe and Japan and in other countries selected that the Company and Moffitt agreed to.

During the three months ended March 31, 2016 and 2015, the Company recognized $0.8 million and $0.5 million respectively, of expenses related to its license agreements. The amounts were recorded as part of research and development expenses in the statements of operations. Additionally, during the three months ended March 31, 2016, there were no net sales subject to certain annual minimum royalty payments or sales that would require us to pay a percentage of revenues from sublicensing arrangements. In addition, there were no benchmarks or milestones achieved that would require payment under the lump sum benchmark royalty payments on the achievement of certain clinical regulatory milestones for each of the various indications.

Aggregate guaranteed commitments for 2016, under all of the Company's license and research agreements, are approximately $2.1 million.

Tampa Lease

In December 2014, the Company commenced a five-year non-cancellable operating lease with the University of South Florida Research Foundation for an approximately 5,200 square foot facility located in Tampa, Florida. The facility is part of the University of South Florida research park and is used as the Company's research and development facilities. The monthly base rent for this facility during the first year of the lease was $10,443 and will increase by 3% annually. The Company has the option to extend the lease term of this facility for an additional five-year period on the same terms and conditions, except that the base rent for the renewal term will be increased in accordance with the applicable consumer price index.

The minimum lease payments are as follows (in thousands):

Year	Amount
2016 (remaining)	$ 114
2017	157
2018	162
2019	167
	$ 600

NOTE 7. LEGAL PROCEEDINGS

SEC Settlement. As previously disclosed, on April 23, 2014 we received a subpoena from the SEC that stated that the staff of the SEC was conducting an investigation then designated as In the Matter of Galena Biopharma, Inc. File No. HO 12346 (now known as In the Matter of Certain Stock Promotions) and that the subpoena was issued to the Company as part of the foregoing investigation. The SEC's subpoena and accompanying letter did not indicate whether we were, or were not, under investigation. We produced documents in response to the subpoena and have since fully cooperated with the SEC's investigation.

We have recently been informed by the Staff of the SEC that the SEC's investigation, in part, involves the conduct of our former Chief Executive Officer, Manish singh, during the period between September 2013 and April 2014. We understand that, as it pertains to the Company's former Chief Executive Officer, the investigation has focused on the failure by authors of certain articles about the Company to disclose that they were compensated by one of our former investor relations firms. We understand that it is the position of the SEC Staff that the conduct of our former Chief Executive Officer with respect to these articles may be imputed to the Company.

In order to resolve this matter, we have agreed with the Staff of the SEC to a proposed settlement framework under which we would consent to the entry of an order requiring that we cease and desist from any future violations of certain provisions of the federal securities laws, without admitting or denying any allegations. We are currently discussing with the Staff of the SEC whether the proposed settlement will involve the payment of a financial penalty. Because we do not yet know whether a financial penalty will be part of the proposed settlement and, if so, the amount of the financial penalty, we have not accrued a liability related to this matter. The proposed settlement is contingent upon reaching agreement with the Staff of the SEC on a complete set of settlement terms and approval by the Commissioners of the SEC, neither of which can be assured.

Solomon Capital, LLC. On April 8, 2016, a lawsuit titled Solomon Capital, LLC, Solomon Capital 401(K) Trust, Solomon Sharbat and Shelhav Raff against Lion Biotechnologies, Inc. was filed by Solomon Capital, LLC, Solomon Capital 401(k) Trust, Solomon Sharbat and Shelhav Raff against the company in the Supreme Court of the State of New York County of New York (index no. 651881/2016). The plaintiffs allege that, between June and November 2012 they provided us with $52,850 and that they advanced and paid on our behalf an additional $170,000. The complaint further alleges that we agreed to (i) provide them with promissory notes totaling $222,850, plus interest, (ii) issue a total of 111,425 shares to the plaintiffs (before the 1-for-100 reverse stock effected in September 2013), and (iii) allow the plaintiffs to convert the foregoing funds into our securities in the next transaction. The plaintiffs allege that they should have been able to convert their advances and payments into shares of our common stock in the restructuring and reorganization that we effected in May 2013. Based on the foregoing, the plaintiffs allege causes for breach of contract and unjust enrichment and demand judgment against us in an unspecified amount exceeding $1,500,000, plus interest and attorneys' fees. We have begun our investigation of the allegations made by the plaintiffs and intend to vigorously defend this matter.

PART II – INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

We estimate that expenses in connection with the distribution described in this registration statement (other than brokerage commissions, discounts or other expenses relating to the sale of the shares by the selling stockholders) will be as set forth below. We will pay all of the expenses with respect to the distribution, and such amounts, with the exception of the Securities and Exchange Commission registration fee, are estimates.

SEC registration fee	7,470
Accounting fees and expenses	30,000
Legal fees and expenses	75,000
Printing and related expenses	10,000
Miscellaneous	2,530
Total	$ 125,000

ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Our Articles of Incorporation provides that no officer or director shall be personally liable to this corporation or our stockholders for monetary damages except as provided pursuant to Nevada law. Our Bylaws and Articles of Incorporation also provide that we shall indemnify and hold harmless each person who serves at any time as a director, officer, employee or agent of the company from and against any and all claims, judgments and liabilities to which such person shall become subject by reason of the fact that he is or was a director, officer, employee or agent of the company and shall reimburse such person for all legal and other expenses reasonably incurred by him or her in connection with any such claim or liability. We also have the power to defend such person from all suits or claims in accord with the Nevada law. In certain cases, we may advance expenses incurred in defending any such proceeding. The rights accruing to any person under our Bylaws and Articles of Incorporation do not exclude any other right to which any such person may lawfully be entitled, and we may indemnify or reimburse such person in any proper case, even though not specifically provided for by the Bylaws and Articles of Incorporation.

Insofar as indemnification for liabilities for damages arising under the Securities Act of 1933 may be permitted to our directors, officers, and controlling persons pursuant to the foregoing provision, or otherwise, we have been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES

The following describes all unregistered sales of securities effected from July 1, 2013 through the date of this Registration Statement (all per share and purchase prices have been adjusted to reflect the 1-for-100 reverse stock split effected on September 26, 2013):

On July 24, 2013, we acquired Lion Biotechnologies, Inc., a Delaware corporation, by means of a merger with our wholly-owned subsidiary. In the merger, Lion Biotechnologies, Inc.'s two stockholders received, in exchange for all of their issued and outstanding shares of common stock of that company, an aggregate of 1,340,000 shares of common stock, as well as the ability to receive an additional 1,350,000 shares of common stock upon the achievement of certain milestones related to our financial performance and position. The two stockholders of Lion Biotechnologies, Inc. who received the foregoing shares were Manish Singh, our new Chief Executive Officer, and Sanford J. Hillsberg, one of our new directors. The foregoing stock issuance was effected pursuant to an exemption available under Section 4(a)(2) of the Securities Act. No underwriters or placement agents were involved in the merger or the issuance of these securities.

On November 5, 2013, we completed a private placement in which we issued (i) 3,145,300 shares of our common stock, (ii) 17,000 shares of our new Series A Convertible Preferred Stock, and (iii) warrants to purchase a total of 11,645,300 shares of common stock. There were 115 investors in the offering, all of whom were either individual or institutional accredited investors. The purchase price of each common stock/warrant unit was $2.00, and the purchase price of each Series A Preferred/warrants unit was $1,000. The Series A Preferred is convertible into shares of common stock at any initial conversion price of $2.00 per share, and the initial exercise price of the warrants is $2.50. We received net proceeds of approximately $21.8 million from the private placement, after paying placement agent fees and estimated offering expenses. Roth Capital Partners, LLC acted as the lead placement agent, and Highline Research Advisors LLC a division of Agincourt, Ltd., and American Portfolio Financial Services, Inc. as the co-placement agents. The offering was effected pursuant to an exemption available under Section 4(a)(2) of the Securities Act of 1933, as amended and Rule 506 promulgated thereunder.

During the fiscal quarter ended June 30, 2014, 32 accredited investors who held warrants that the Company sold to them in the November 2013 Private Placement, exercised warrants to purchase 728,392 shares of common stock at an exercise price of $2.50 per share ($1,820,980 in the aggregate). These shares were issued pursuant to an exemption available under Section 4(a)(2) of the Securities Act of 1933, as amended. No commissions were paid with respect to these warrants exercises.

During the fiscal quarter ended June 30, 2014, the Company granted 255,000 shares of restricted stock to two of its executive officers. These shares were issued pursuant to an exemption available under Section 4(a)(2) of the Securities Act of 1933, as amended, and no commissions were paid with respect to these grants.

During the fiscal quarter ended September 30, 2014, five accredited investors who held warrants that we sold to them in the November 2013 Private Placement, exercised warrants to purchase 255,338 shares of common stock at an exercise price of $2.50 per share ($638,345 in the aggregate). These shares were issued pursuant to an exemption available under Section 4(a)(2) of the Securities Act of 1933, as amended. No commissions were paid with respect to these warrants exercises.

During the fiscal quarter ended September 30, 2014, the Company granted 105,000 shares of restricted stock to 5 of its executive officers. These shares were issued pursuant to an exemption available under Section 4(a)(2) of the Securities Act of 1933, as amended, and no commissions were paid with respect to these grants.

During the fiscal quarter ended March 31, 2015, 41 accredited investors who held warrants that we sold to them in the November 2013 in a private placement, exercised warrants to purchase 921,700 shares of common stock at an exercise price of $2.50 per share (for a total amount of $2,304,250). These shares were issued pursuant to an exemption available under Section 4(a)(2) of the Securities Act of 1933, as amended. No commissions were paid with respect to these warrants exercises.

During the three months ended March 31, 2015, we granted options to a new director to purchase an aggregate of 50,000 shares of common stock at an exercise price of $7.45 per share. The options are exercisable for a period of ten years from the grant date. The grant was exempt from registration in reliance on Section 4(a)(2) of the Securities Act of 1933, as amended as transactions not involving any public offering.

During the first six months ended June 30, 2015, 55 accredited investors who held warrants that we sold to them in the November 2013 in a private placement, exercised warrants to purchase 3,190,007 shares of common stock at an exercise price of $2.50 per share (for a total amount of $7,975,150). These shares were issued pursuant to an exemption available under Section 4(a)(2) of the Securities Act of 1933, as amended. No commissions were paid with respect to these warrants exercises.

During the nine months ended September 30, 2015, 60 accredited investors who held warrants that we sold to them in the November 2013 in a private placement, exercised warrants to purchase 3,847,210 shares of common stock at an exercise price of $2.50 per share (for a total amount of $9.6 million). These shares were issued pursuant to an exemption available under Section 4(a)(2) of the Securities Act of 1933, as amended. No commissions were paid with respect to these warrants exercises.

On June 7, 2016, we completed a private placement in which we issued 9,684,000 shares of our common stock and 11,368,633 of our new Series B Preferred Stock to a total of 26 investors, all of whom were either individual or institutional accredited investors. The purchase price of each share of common stock was $4.75, and the purchase price of each share of Series B Preferred was $4.75. Subject to stockholder approval, the Series B Preferred is convertible into shares of common stock at an initial conversion price of $4.75 per share. We received net proceeds of approximately $95.7 million from this private placement, after paying placement agent fees and estimated offering expenses. Jefferies, LLC and Jaffray & Co. acted as the joint lead placement agents. The offering was effected pursuant to an exemption available under Section 4(a)(2) of the Securities Act of 1933, as amended and Rule 506 promulgated thereunder.

ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

EXHIBIT INDEX

Exhibit	Description
2.1	Agreement and Plan of Merger between Freight Management Corp. (renamed Genesis Biopharma, Inc.) and Genesis Biopharma, Inc. dated March 15, 2010 (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on March 19, 2010).
2.2	Asset Purchase Agreement among Freight Management Corp. (renamed Genesis Biopharma, Inc.), Genesis Biopharma, Inc., Hamilton Atlantic and the other signatories thereto dated March 15, 2010 (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on March 19, 2010).
3.1	Articles of Incorporation filed with the Nevada Secretary of State on September 7, 2007 (incorporated herein by reference to the Registrant's Registration Statement on Form SB-2 filed with the Commission on January 29, 2008).
3.2	Articles of Merger filed with the Nevada Secretary of State on March 15, 2010 (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on March 19, 2010).
3.3	Certificate of Change to Articles of Incorporation filed with the Nevada Secretary of State on March 15, 2010 (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on March 19, 2010).
3.4	Agreement and Plan of Merger, dated July 24, 2013, by and among Genesis Biopharma, Inc., Lion Biotechnologies, Inc., Genesis Biopharma Sub, Inc., Manish Singh and Sanford J. Hillsberg (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on July 25, 2013).
3.5	Bylaws (incorporated herein by reference to the Registrant's Registration Statement on Form SB-2 filed with the Commission on January 29, 2008).
3.6	Agreement and Plan of Merger, dated July 24, 2013, by and among Genesis Biopharma, Inc., Lion Biotechnologies, Inc., Genesis Biopharma Sub, Inc., Manish Singh and Sanford J. Hillsberg (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on July 25, 2013).
3.7	Certificate of Designation of Rights, Preferences and Privileges of Series B Preferred Stock of Lion Biotechnologies, Inc. (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on June 3, 2016).
3.8	Bylaws (incorporated herein by reference to the Registrant's Registration Statement on Form SB-2 filed with the Commission on January 29, 2008).
3.9	Amendment to Bylaws (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on May 29, 2013).
4.1	Form of Warrant (incorporated herein by reference to Registrant's Form 8-K filed with the Commission on October 31, 2013).

Exhibit	Description
4.2	Form of Common Stock Certificate Lion Biotechnologies, Inc. (incorporated herein by reference to the Registrant's Registration Statement on Form S-3 filed with the Commission on November 20, 2014).
5.1	Opinion of TroyGould PC.†
10.1	Genesis Biopharma, Inc. 2010 Equity Compensation Plan (incorporated herein by reference to the Registrant's Annual Report on Form 10-K filed with the Commission on March 31, 2010).
10.2	Form of Stock Option Agreement for grants under the Genesis Biopharma Inc. 2010 Equity Incentive Plan (incorporated herein by reference to the Registrant's Annual Report on Form 10-K filed with the Commission on March 31, 2010).
10.3	Genesis Biopharma, Inc. 2011 Equity Compensation Plan (incorporated herein by reference to Registrant's Form 8-K filed with the Commission on October 20, 2011).
10.4	Form of ISO Stock Option Agreement for grants under the Genesis Biopharma Inc. 2011 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.4 of the Registrant's Form 8-K filed with the Commission on October 20, 2011).
10.5	Form of NQSO Stock Option Agreement for grants under the Genesis Biopharma Inc. 2011 Equity Incentive Plan (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on October 20, 2011).
10.6	Patent License Agreement between the Company and the National Institutes of Health effective October 5, 2011 (incorporated herein by reference to the Registrant's Form 8-K/A filed with the Commission on December 13, 2011).*
10.7	Cooperative Research and Development Agreement for Intramural-PHS Clinical Research, dated August 5, 2011, between the U.S. Department of Health and Human Services, as represented by the National Cancer Institute and the Company. (incorporated herein by reference to the Registrant's Form 8-K/A (No.2) filed with the Commission on November 29, 2011).
10.8	Employment Agreement dated as of May 1, 2011 between the Company and Michael Handelman (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on October 20, 2011).#
10.9	Lonza Walkersville Inc. Letter of Intent with Genesis Biopharma Inc. effective November 4, 2011 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q filed with the Commission on November 21, 2011).
10.10	Manufacturing Service Agreement, dated December 2011, by and between Lonza Walkersville and Genesis Biopharma, Inc. (incorporated herein by reference to the Registrant's Form 10-K filed with the Commission on March 30, 2012).
10.11	Form of Director Stock Award Agreement (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on July 25, 2013).
10.12	Executive Employment Agreement, dated July 24, 2013, between the Company and Manish Singh (incorporated herein by reference to the Registrant's Form 10-K filed with the Commission on March 28, 2014).#

Exhibit	Description
10.13	Form of Registration Rights Agreement to be entered into by and among Lion Biotechnologies, Inc. and the Investors under the Securities Purchase Agreement (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on October 31, 2013).
10.14	Securities Purchase Agreement, dated October 30, 2013, by and among Lion Biotechnologies, Inc. and the Investors thereunder (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on October 31, 2013).
10.15	Executive Employment Agreement, dated January 6, 2014, between the Company and James Bender (incorporated herein by reference to Amendment No. 2 to the Registrant's Registration Statement on Form S-1 filed with the Commission on January 21, 2014).#
1.016	Executive Employment Agreement, dated August 21, 2014, by and among Lion Biotechnologies, Inc. and Dr. Elma Hawkins (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on August 25, 2014).#
10.17	Cooperative Research and Development Agreement for the Development and Evaluation of the NCI Proprietary Adoptive Cell Transfer Immunotherapy Using Tumor Infiltrating Lymphocytes in Patients with Metastatic Melanoma, Bladder, Lung, Triple-negative Breast, and HPV-associated Cancers, Utilizing Lion Biotechnologies, Inc.'s Business Development Expertise in Adoptive Cell Transfer Immunotherapy, executed by Lion Biotechnologies, Inc. on January 22, 2015 (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on January 26, 2015).*
10.18	Patent License Agreement, dated February 9, 2015, by and between the Company and the National Institutes of Health. (incorporated herein by reference to the Registrant's Form 10-K filed with the Commission on March 16, 2015).*
10.19	Patent License Agreement, dated February 10, 2015, by and between the Company and the National Institutes of Health. (incorporated herein by reference to the Registrant's Form 10-K filed with the Commission on March 16, 2015).*
10.20	Underwriting agreement, dated as of February 26, 2015, between Lion Biotechnologies, Inc. and Jefferies LLC, Cowen and Company, LLC and Piper Jaffray & Co., as the representatives of the underwriters (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on March 3, 2015).
10.21	Amendment No. 1, dated April 14, 2015, to Executive Employment Agreement by and among Lion Biotechnologies, Inc. and Dr. Elma Hawkins (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on April 14, 2015).#
10.22	Employment Agreement, dated June 8, 2015, between Lion Biotechnologies, Inc. and Molly Henderson (incorporated herein by reference to the Registrant's Form 10-Q filed with the Commission on August 10, 2015).#
10.23	First Amendment to Patent License Agreement-Exclusive, effective October 2, 2015, between the Company and the National Institutes of Health (incorporated herein by reference to the Registrant's Form 10-Q filed with the Commission on November 6, 2015).*
10.24	Employment Agreement, dated January 22, 2016, between Lion Biotechnologies, Inc. and Steven A. Fischkoff, M.D. (incorporated herein by reference to the Registrant's Form 10-Q filed with the Commission on May 9, 2016).#

Exhibit	Description
10.25	Employment Agreement, dated March 28, 2016, between Lion Biotechnologies, Inc. and Michael T. Lotze, M.D. (incorporated herein by reference to the Registrant's Form 10-Q filed with the Commission on May 9, 2016).#
10.26	Form of Securities Purchase Agreement, dated June 2, 2016, among Lion Biotechnologies, Inc. and the Investors thereunder (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on June 3, 2016).
10.27	Form of Registration Rights Agreement, dated June 2, 2016, by and among Lion Biotechnologies, Inc. and the Investors thereunder (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on June 3, 2016).
10.28	Severance Agreement and General Release, dated June 1, 2016, between Lion Biotechnologies, Inc. and Dr. Elma Hawkins (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on June 3, 2016).#
10.29	Board Adviser Agreement, dated June 1, 2016, between Lion Biotechnologies, Inc. and Dr. Elma Hawkins (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on June 3, 2016).#
10.30	Form of Retention Bonus Agreement (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on June 3, 2016).#
10.31	Employment Agreement, dated June 1, 2016, between Lion Biotechnologies, Inc. and Maria Fardis.#*^
10.32	Amendment No. 1, dated June 1, 2016, to Executive Employment Agreement by and among Lion Biotechnologies, Inc. and Molly Henderson.#†
23.1	Consent of Weinberg & Company P.A.
23.3	Consent of TroyGould PC (included in Exhibit 5.1).†.
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† Previously filed.
* Certain portions of the Exhibit have been omitted based upon a request for confidential treatment filed by us with the Commission. The omitted portions of the Exhibit have been separately filed by us with the Commission.
# Indicates a management contract or compensatory plan or arrangement.
^ To be filed by amendment.

ITEM 17. UNDERTAKINGS

The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement to:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act.

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to securities offered therein, and the offering of the securities at that time shall be deemed to be the initial bona fide offering thereof;

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering;

(4) That, for the purpose of determining liability under the Securities Act to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

Insofar as indemnification for liabilities arising under the Securities Act 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 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant has duly caused this Amendment No. 1 to Registration Statement to be signed on its behalf by the undersigned, in Los Angeles, California, on August 1, 2016.

LION BIOTECHNOLOGIES, INC.

By: /s/ Maria Fardis
Maria Fardis
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons on behalf of the registrant and in the capacities and on the dates indicated:

Signature	Title	Date
/s/ Maria Fardis Maria Fardis	President, Chief Executive Officer (Principal Executive Officer)	August 1, 2016
*/s/ Molly Henderson Molly Henderson	Chief Financial Officer (Principal Financial and Accounting Officer)	August 1, 2016
*/s/ Merrill A. McPeak Merrill A. McPeak	Director	August 1, 2016
*/s/ Jay Venkatesan Jay Venkatesan	Director	August 1, 2016
*/s/Sanford J. Hillsberg Sanford J. Hillsberg	Director	August 1, 2016
*/s/Wayne Rothbaum Wayne Rothbaum	Director	August 1, 2016
*/s/Ryan Maynard Ryan Maynard	Director	August 1, 2016
*By: /s/ Maria Fardis Maria Fardis	Attorney-in-fact	August 1, 2016

EXHIBIT INDEX

Exhibit	Description
2.1	Agreement and Plan of Merger between Freight Management Corp. (renamed Genesis Biopharma, Inc.) and Genesis Biopharma, Inc. dated March 15, 2010 (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on March 19, 2010).
2.2	Asset Purchase Agreement among Freight Management Corp. (renamed Genesis Biopharma, Inc.), Genesis Biopharma, Inc., Hamilton Atlantic and the other signatories thereto dated March 15, 2010 (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on March 19, 2010).
3.1	Articles of Incorporation filed with the Nevada Secretary of State on September 7, 2007 (incorporated herein by reference to the Registrant's Registration Statement on Form SB-2 filed with the Commission on January 29, 2008).
3.2	Articles of Merger filed with the Nevada Secretary of State on March 15, 2010 (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on March 19, 2010).
3.3	Certificate of Change to Articles of Incorporation filed with the Nevada Secretary of State on March 15, 2010 (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on March 19, 2010).
3.4	Agreement and Plan of Merger, dated July 24, 2013, by and among Genesis Biopharma, Inc., Lion Biotechnologies, Inc., Genesis Biopharma Sub, Inc., Manish Singh and Sanford J. Hillsberg (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on July 25, 2013).
3.5	Bylaws (incorporated herein by reference to the Registrant's Registration Statement on Form SB-2 filed with the Commission on January 29, 2008).
3.6	Agreement and Plan of Merger, dated July 24, 2013, by and among Genesis Biopharma, Inc., Lion Biotechnologies, Inc., Genesis Biopharma Sub, Inc., Manish Singh and Sanford J. Hillsberg (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on July 25, 2013).
3.7	Certificate of Designation of Rights, Preferences and Privileges of Series B Preferred Stock of Lion Biotechnologies, Inc. (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on June 3, 2016).
3.8	Bylaws (incorporated herein by reference to the Registrant's Registration Statement on Form SB-2 filed with the Commission on January 29, 2008).
3.9	Amendment to Bylaws (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on May 29, 2013).
4.1	Form of Warrant (incorporated herein by reference to Registrant's Form 8-K filed with the Commission on October 31, 2013).

Exhibit	Description
4.2	Form of Common Stock Certificate Lion Biotechnologies, Inc. (incorporated herein by reference to the Registrant's Registration Statement on Form S-3 filed with the Commission on November 20, 2014).
5.1	Opinion of TroyGould PC.†
10.1	Genesis Biopharma, Inc. 2010 Equity Compensation Plan (incorporated herein by reference to the Registrant's Annual Report on Form 10-K filed with the Commission on March 31, 2010).
10.2	Form of Stock Option Agreement for grants under the Genesis Biopharma Inc. 2010 Equity Incentive Plan (incorporated herein by reference to the Registrant's Annual Report on Form 10-K filed with the Commission on March 31, 2010).
10.3	Genesis Biopharma, Inc. 2011 Equity Compensation Plan (incorporated herein by reference to Registrant's Form 8-K filed with the Commission on October 20, 2011).
10.4	Form of ISO Stock Option Agreement for grants under the Genesis Biopharma Inc. 2011 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.4 of the Registrant's Form 8-K filed with the Commission on October 20, 2011).
10.5	Form of NQSO Stock Option Agreement for grants under the Genesis Biopharma Inc. 2011 Equity Incentive Plan (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on October 20, 2011).
10.6	Patent License Agreement between the Company and the National Institutes of Health effective October 5, 2011 (incorporated herein by reference to the Registrant's Form 8-K/A filed with the Commission on December 13, 2011).*
10.7	Cooperative Research and Development Agreement for Intramural-PHS Clinical Research, dated August 5, 2011, between the U.S. Department of Health and Human Services, as represented by the National Cancer Institute and the Company. (incorporated herein by reference to the Registrant's Form 8-K/A (No.2) filed with the Commission on November 29, 2011).
10.8	Employment Agreement dated as of May 1, 2011 between the Company and Michael Handelman (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on October 20, 2011).#
10.9	Lonza Walkersville Inc. Letter of Intent with Genesis Biopharma Inc. effective November 4, 2011 (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q filed with the Commission on November 21, 2011).
10.10	Manufacturing Service Agreement, dated December 2011, by and between Lonza Walkersville and Genesis Biopharma, Inc. (incorporated herein by reference to the Registrant's Form 10-K filed with the Commission on March 30, 2012).
10.11	Form of Director Stock Award Agreement (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on July 25, 2013).

Exhibit	Description
10.12	Executive Employment Agreement, dated July 24, 2013, between the Company and Manish Singh (incorporated herein by reference to the Registrant's Form 10-K filed with the Commission on March 28, 2014).#
10.13	Form of Registration Rights Agreement to be entered into by and among Lion Biotechnologies, Inc. and the Investors under the Securities Purchase Agreement (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on October 31, 2013).
10.14	Securities Purchase Agreement, dated October 30, 2013, by and among Lion Biotechnologies, Inc. and the Investors thereunder (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on October 31, 2013).
10.15	Executive Employment Agreement, dated January 6, 2014, between the Company and James Bender (incorporated herein by reference to Amendment No. 2 to the Registrant's Registration Statement on Form S-1 filed with the Commission on January 21, 2014).#
1.016	Executive Employment Agreement, dated August 21, 2014, by and among Lion Biotechnologies, Inc. and Dr. Elma Hawkins (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on August 25, 2014).#
10.17	Cooperative Research and Development Agreement for the Development and Evaluation of the NCI Proprietary Adoptive Cell Transfer Immunotherapy Using Tumor Infiltrating Lymphocytes in Patients with Metastatic Melanoma, Bladder, Lung, Triple-negative Breast, and HPV-associated Cancers, Utilizing Lion Biotechnologies, Inc.'s Business Development Expertise in Adoptive Cell Transfer Immunotherapy, executed by Lion Biotechnologies, Inc. on January 22, 2015 (incorporated herein by reference to the Registrant's Form 8-K filed with the Commission on January 26, 2015).*
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23.3	Consent of TroyGould PC (included in Exhibit 5.1).†
24.1	Power of Attorney (included on page II-8).†
99.1	Consent of Director Nominee.†
101.INS	XBRL Instance Document.†
101.SCH	XBRL Taxonomy Extension Schema.†
101.CAL	XBRL Taxonomy Extension Calculation Linkbase.†

† Previously filed.
* Certain portions of the Exhibit have been omitted based upon a request for confidential treatment filed by us with the Commission. The omitted portions of the Exhibit have been separately filed by us with the Commission.
# Indicates a management contract or compensatory plan or arrangement.
^ To be filed by amendment.

Exhibit	Description
101.DEF	XBRL Taxonomy Extension Definition Linkbase. †
101.LAB	XBRL Taxonomy Extension Label Linkbase. †
101.PRE	XBRL Taxonomy Extension Presentation Linkbase. †

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# Indicates a management contract or compensatory plan or arrangement.

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the inclusion in this Amendment No. 1 to the Registration Statement on Form S-1 (File No. 333-212373) of our reports dated March 11, 2016, with respect to the financial statements of Lion Biotechnologies, Inc. and the effectiveness of internal control over financial reporting of Lion Biotechnologies, Inc. which appear in Lion Biotechnologies, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2015 filed with the Securities and Exchange Commission. We also consent to the reference to our firm under the heading "Experts.".

/s/ Weinberg & Company, P.A.
Los Angeles, California
August 1, 2016