AEOLUS PHARMACEUTICALS, INC.
Form POS AM
June 02, 2014

As filed with the Securities and Exchange Commission on June 2, 2014

Registration No. 333-181409

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

_____

POST-EFFECTIVE AMENDMENT NO. 2
TO
FORM S-1

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

AEOLUS PHARMACEUTICALS, INC.
(Exact Name of Issuer in Its Charter)

Delaware	2834	56-1953785
(State or Other Jurisdiction of Incorporation or Organization)	(Primary Standard Industrial Classification Number)	(I.R.S. Employer Identification No.)

Aeolus Pharmaceuticals, Inc.
26361 Crown Valley Parkway, Suite 150
Mission Viejo, California 92691
(949) 481-9825
(Address, including zip code, and telephone number,
including area code, of registrant's principal executive offices)

_____

John McManus
President and Chief Executive Officer
Aeolus Pharmaceuticals, Inc.
26361 Crown Valley Parkway, Suite 150
Mission Viejo, California 92691

(949) 481-9825
(Name, address, including zip code, and telephone number,
including area code, of agent for service)

_____

Copies of all communications to:
Brian J. Lynch
Drinker Biddle & Reath LLP
One Logan Square, Suite 2000
Philadelphia, Pennsylvania 19103-6996
(215) 988-1119

_____

Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement becomes effective

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

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.

Large accelerated filer	o	Accelerated filer	o
Non-accelerated filer	o (Do not check if a smaller reporting company)	Smaller reporting company	x

_____

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.

EXPLANATORY NOTE

This Post-Effective Amendment No. 2 to Form S-1 (this "Post-Effective Amendment") is being filed pursuant to Section 10(a)(3) of the Securities Act of 1933, as amended, and pursuant to the undertakings in Item 17 of the Registration Statement to update the Form S-1 Registration Statement (Registration No. 333-181409), which was previously declared effective by the Securities and Exchange Commission (the "SEC") on May 25, 2012, to (1) include the Registrant's audited consolidated financial statements and the notes thereto for the fiscal year ended September 30, 2013 and the Registrant's unaudited consolidated financial statements and the notes thereto for the six months ended March 31, 2014, (2) include an updated prospectus relating to the offering and sale of the securities that were registered on Form S-1 and (3) de-register 1,793,894 shares from the prior Registration Statement due to the

utilization of a cashless exercise of warrants subsequent to the last Registration Statement filing. All applicable registration fees were paid at the time of the original filing of such Registration Statement on May 14, 2012

The information in this prospectus is not complete and may be changed. We 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 the securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to completion, dated June 2, 2014

PRELIMINARY PROSPECTUS

86,920,683

Common Stock

This prospectus relates to the offer and sale from time to time of up to 86,920,683 shares of our common stock, par value $0.01 per share, including an aggregate of 1,650,126 shares of common stock issuable upon exercise of warrants, which are held by the selling stockholders identified in this prospectus. The shares of common stock and warrants were issued in three separate private placement transactions each of which private placements was made in reliance on Section 4(2) of the Securities Act of 1933, as amended, which we refer to as the Securities Act, and Rule 506 promulgated thereunder. For additional information regarding each of the private placements, please see "Description of Private Placements Concerning Securities Covered by This Prospectus" beginning on page 30 of this prospectus.

Pursuant to a registration rights agreement entered into in connection with our private placement which closed on March 30, 2012 and April 4, 2012, we agreed to register for resale the shares of common stock issued to the selling stockholders. Investors who participated in private placements that closed in August 2010 and October 2009 have also exercised their rights, pursuant to registration rights agreements entered into in connection with those private placements, to include their registrable securities within this registration statement. We are not selling any common stock under this prospectus and will not receive any of the proceeds from the sale of shares by the selling stockholders, however we will receive the proceeds of any cash exercise of the warrants.

The selling stockholders may sell the shares from time to time at the market price quoted on the OTC Bulletin Board at the time of offer and sale, or at prices related to such prevailing market prices, in negotiated transactions or in a combination of such methods of sale directly or through brokers. See "Plan of Distribution" beginning on page 102 for additional information on how the selling stockholders may conduct sales of their shares of common stock.

In addition to the shares that may be offered and sold under this prospectus, we also have registered shares for sale by certain other selling stockholders, who may offer and sell up to 30,591,501 shares under a separate prospectus. See "Risk Factors – Risks Related to Owning Our Stock; Future sales of common stock in the public market could create selling pressure on our common stock and lower our stock price."

Other than underwriting discounts and commissions, and transfer taxes, if any, we have agreed to bear all expenses incurred in connection with the registration and sale of the common stock offered by the selling stockholders.

Our common stock is quoted on the OTC Bulletin Board under the symbol "AOLS." On May 19, 2014, the closing price of our common stock was $0.26 per share.

Investing in our common stock involves a high degree of risk. See “Risk Factors” beginning on page 10 for certain risks you should consider before purchasing any shares.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved these securities, or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

_____

The date of this prospectus is June 2, 2014

TABLE OF CONTENTS

1

You should only rely on the information contained in this prospectus. We have not, and the selling stockholders have not, authorized anyone to provide you with additional information or information different from that contained in this prospectus. We are not making an offer to sell these securities in any jurisdiction where an offer or sale is not permitted. You should assume that the information appearing in this prospectus is accurate as of the date on the front cover of this prospectus only, regardless of the time of delivery of this prospectus or of any sale of our securities. Our business, prospects, financial condition and results of operations may have changed since that date.

This document may only be used where it is legal to sell these securities. Certain jurisdictions may restrict the distribution of these documents and the offering of these securities. We require persons receiving these documents to inform themselves about, and to observe any, such restrictions. We have not taken any action that would permit an offering of these securities or the distribution of these documents in any jurisdiction that requires such action.

We own or have rights to trademarks or trade names that we use in conjunction with the operation of our business. Each trademark, trade name or service mark of any other company appearing in this prospectus belongs to its holder. Use or display by us of other parties' trademarks, trade names or service marks is not intended to and does not imply a relationship with, or endorsement or sponsorship by us of, the trademark, trade name or service mark owner

---

Industry and Market Data

Unless otherwise indicated, the market data and certain other statistical information used throughout this prospectus are based on independent industry publications, government publications, reports by market research firms or other published independent sources. Although we believe these third-party sources are reliable, we have not independently verified the information. Except as otherwise noted, none of the sources cited in this prospectus has consented to the inclusion of any data from its reports, nor have we sought their consent. In addition, some data are based on our good faith estimates. Such estimates are derived from publicly available information released by independent industry analysts and third-party sources, as well as our own management's experience in the industry, and are based on assumptions made by us based on such data and our knowledge of such industry and markets, which we believe to be reasonable. However, except as otherwise noted, none of our estimates have been verified by any independent source. Our estimates and assumptions involve risks and uncertainties and are subject to change based on various factors, including those discussed in the "Risk Factors" section of this prospectus and the other information contained herein. These and other factors could cause our actual results to differ materially from those expressed in the estimates and assumptions.

PROSPECTUS SUMMARY

This summary highlights certain information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. You should carefully read the entire prospectus, including ‘‘Risk Factors’’ and our financial statements and related notes before you decide whether to invest in our common stock. Investing in our common stock involves risks. See ‘‘Risk Factors’’ beginning on page 10. All dollar amounts referred to in this prospectus are in U.S. dollars unless otherwise indicated. Any discrepancies in the tables included herein between the amounts listed and the totals thereof are due to rounding.

Unless otherwise indicated or unless the context otherwise requires, all references in this document to “we,” “us,” “our,” the “Company” and similar expressions are references to Aeolus Pharmaceuticals, Inc.

Our Company and Business

We are a Southern California-based biopharmaceutical company leveraging significant U.S. Government funding to develop a platform of novel compounds in biodefense and oncology. The platform consists of over 200 compounds licensed from the University of Colorado (“UC”) Duke University (“Duke”) and National Jewish Health (“NJH”).

Our lead compound, AEOL 10150 (“10150”), is being developed under contract with the Biomedical Advanced Research and Development Authority (“BARDA”), a division of the U.S. Department of Health and Human Services (“HHS”), as a medical countermeasure (“MCM”) against the pulmonary sub-syndrome of acute radiation syndrome (“Pulmonary Acute Radiation Syndrome” or “Lung-ARS”) and the delayed effects of acute radiation exposure (“DEARE”). 10150 is also being developed as a MCM for the gastrointestinal sub-syndrome of acute radiation syndrome (“GI-ARS”) with grant money from the National Institute for Allergy and Infectious Diseases (“NIAID”), one of the National Institutes of Health (“NIH”). Both syndromes are caused by acute exposure to high levels of radiation due to a nuclear detonation or radiological event.

We are also developing 10150 as a MCM for exposure to chemical vesicants (e.g., chlorine gas, sulfur mustard gas and phosgene gas) and nerve agents (e.g., sarin gas and soman gas) with grant money from the NIH Countermeasures Against Chemical Threats (“NIH-CounterACT”) program. 10150 previously demonstrated safety and efficacy in animal studies in each of these potential indications, and has previously been tested in two Phase I human clinical trials with no drug-related serious adverse events reported.

We are also developing 10150 for use in combination with radiation therapy for cancer as a treatment to reduce side effects caused by radiation toxicity and improve local tumor control. A significant portion of the development work funded by the BARDA contract is applicable to the development program for radiation oncology, including safety, toxicology, pharmacokinetics and Chemistry, Manufacturing and Controls (“CMC”). Once we complete our first study in healthy normal volunteer patients under the BARDA contract, we plan to initiate studies in cancer patients receiving radiation therapy consistent with our strategy outlined below to use non-dilutive capital sources.

A second and a third compound AEOL 10113 (“Ethyl”) and AEOL 10171 (“Hexyl”) have been the focus of an NIH NIAID center grant to study their potential as radiation mitigators.

Finally, we have a pipeline of approximately 180 additional compounds. Four of these compounds have demonstrated efficacy as treatments for epilepsy and Parkinson’s disease. These studies have been funded by Citizens United for Research in Epilepsy (“CURE”) and the Michael J. Fox Foundation, after initial research funded by Aeolus showed promise in these indications. Consistent with our strategy outlined below, the development of additional compounds

in our portfolio is dependent on our finding non-dilutive capital sources to fund the work.

We were incorporated in the State of Delaware in 1994. Our common stock trades on the OTCQB under the symbol "AOLS." Our principal executive offices are located at 26361 Crown Valley Parkway, Suite 150 Mission Viejo, California 92691, and our phone number at that address is (949) 481-9825. Our website address is www.aeoluspharma.com. However, the information on, or that can be accessed through our website is not part of this report. We also make available, free of charge through our website, our most recent annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports, as soon as reasonably practicable after such material is electronically filed with or furnished to the SEC.

Strategy

Our strategy is to use non-dilutive capital wherever possible to develop our promising platform of broad-spectrum, catalytic antioxidant compounds in important unmet medical indications of clinical and national strategic importance.

To date, we, and/or our research collaborators, have been awarded more than $150 million in non-dilutive U.S. government funding for three of our leading compounds, 10150, Ethyl and Hexyl. This includes grants and contracts from federal agencies, such as BARDA, NIH-NIAID and NIH-CounterACT. Additionally, research is currently being conducted on several other compounds with funding from private foundations, such as the Michael J. Fox Foundation and CURE.

The expected benefit of this strategy is threefold. First, a significant portion of the research to be completed under the government funding mechanisms, particularly the contract with BARDA, is applicable to our 10150 development program for radiation therapy in cancer patients. Specifically, safety, toxicology, pharmacokinetic and CMC data generated from the BARDA Lung-ARS program can be used to support a New Drug Application ("NDA") for cancer radiation therapy.

Second, cost-plus development contracts, like our contract with BARDA, include funds for overhead and profit. These overhead and profit streams have significantly reduced our cash burn rate, which reduces our need to raise capital and, therefore, dilution.

Third, the purpose of the BARDA development contract is to fund 10150 so that procurements can be made for the national stockpile. Procurements may be made if either the drug meets the requirements for approval by the U.S. Food and Drug Administration (the "FDA") under the "Animal Rule" or prior to Animal Rule approval through the Emergency Use Authorization ("EUA"). Most of BARDA's procurements to date have been under an EUA. Our contract with BARDA calls for us to provide the data necessary for an EUA filing for 10150 as a MCM for Lung-ARS in the second half of 2014. Procurements could generate significant cash and profit that could be re-invested to further develop 10150 for radiation oncology indications (and other compounds for additional indications). The amount of any potential procurement is undisclosed by BARDA at this time and is unknown to us. Based on publicly available information, as well as other procurements made by the agency under EUAs, we believe the agency may purchase sufficient courses of therapy to treat a minimum of one hundred thousand people, with options to purchase an additional two hundred thousand courses of treatment. If purchases of such volumes occurred, the revenue to the Company could provide funding to advance numerous clinical studies, including potentially large Phase III programs in radiation oncology. This funding could allow us to fund studies with less dependence on collaborative partnering arrangements and future equity offerings, which is consistent with our strategy to deploy non-dilutive capital wherever possible to develop our compounds for unmet medical indications and thereby generate value for our stockholders.

Business Overview

We are developing a new class of broad-spectrum, catalytic antioxidant compounds based on technology discovered and researched at Duke University, the University of Colorado and National Jewish Health, developed by Drs. Irwin Fridovich, Brian Day and others. Dr. Day is our Chief Scientific Officer.

These compounds, known as metalloporphyrins, scavenge reactive oxygen species ("ROS") at the cellular level, mimicking the effect of the body's own natural antioxidant enzyme, Superoxide Dismutase ("SOD"). While the benefits of antioxidants in reducing oxidative stress are well-known research with our compounds indicates that metalloporphyrins can be used to affect signaling via ROS at the cellular level. In addition, there is evidence that high-levels of ROS can affect gene expression and this may be modulated through the use of metalloporphyrins. We believe this could have a profound beneficial impact on people who have been exposed, or are about to be exposed, to

high-doses of radiation, whether from cancer therapy or a nuclear event.

Our lead compound, 10150, is a metalloporphyrin specifically designed to neutralize reactive oxygen and nitrogen species. The neutralization of these species reduces oxidative stress, inflammation, and subsequent tissue damage-signaling cascades resulting from radiation or chemical exposure. We are developing 10150 as a MCM for national defense and for use in oncology.

Our primary development program is the advanced development of 10150 for Lung-ARS and DEARE. On February 11, 2011, we signed a five-year, cost-plus contract with BARDA for the development of 10150 as a MCM against Lung-ARS (the "BARDA Contract"). BARDA is the government agency responsible for the advanced development and purchase of medical countermeasures for chemical, biological, radiological and nuclear threats. The contract fully funds the advanced development of 10150 through approval by the FDA under 21 CFR Part 314 Subpart I and Part 601 Subpart H (the "Animal Rule.") The Animal Rule allows for approval of drugs using only animal studies when human clinical trials cannot be conducted ethically.

Pursuant to the BARDA Contract we were awarded approximately $10.4 million for the base period of the contract (from February 2011 to April 2012). On April 16, 2012, we announced that BARDA had exercised two options under the BARDA Contract worth approximately $9.1 million. On September 17, 2013, we announced that BARDA had exercised $6.0 million in additional contract options, bringing the total exercised contract value to date to approximately $25.5 million. We may receive up to an additional $92.9 million in options exercisable over the remaining years of the BARDA Contract. Options are exercised based on the progress of the development program, including the completion of clinical trials or manufacturing tasks under previously exercised options. The final goal of the contract is to achieve FDA approval for 10150 and the development of commercial manufacturing capability. In order to achieve these goals, we believe it will be necessary to exercise the majority of the options in the contract. We also believe that BARDA is likely to continue to exercise options as long as 10150 continues to demonstrate efficacy and safety in animal testing for Lung-ARS. In the event we begin sales to the U.S. government under an EUA, we believe that BARDA is likely to exercise the majority of the remaining options under the contract. One of the requirements of an EUA is that the development program continue towards the goal of FDA approval. If all of the options are exercised by BARDA, the total value of the contract would be approximately $118.4 million.

There are no existing treatments for Lung-ARS or DEARE and we are not aware of any compounds in development that have shown efficacy when administered after exposure to radiation. 10150 has demonstrated efficacy in two animal models (mouse and non-human primate) when administered after exposure to radiation. The U.S. government's planning scenario for a radiation incident is a 10 kiloton detonation of a nuclear device in a major American city. It is estimated that several hundred thousand civilians would be exposed to high doses of radiation in this scenario.

The BARDA Contract is designed to complete the work necessary for 10150 to be purchased for the US Strategic National Stockpile (the "SNS"). BARDA currently acquires drugs for the SNS through a Special Reserve Fund (the "SRF") created under Project BioShield and reauthorized under the Pandemic All-Hazards Preparedness Reauthorization Act of 2013. Although the final goal of the contract is full FDA approval under the Animal Rule, BARDA, based on historical purchases from other suppliers, may purchase product prior to FDA approval under an EUA.

Pursuant to the Statement of Work in the BARDA Contract, we expect to provide the data necessary for filing an application for an EUA in the second half of 2014. An EUA would make it possible for BARDA to begin procuring 10150 for the strategic national stockpile. If approved under an EUA, procurements from BARDA could result in a significant increase in revenues for Aeolus and potential profitability.

We are also developing 10150 as a treatment for GI-ARS with grant funding from NIH-NIAID. Unlike contract funding, grant funding is paid directly to research facilities and does not flow through our financial statements. The NIH-NIAID funding for GI-ARS is provided in the context of a larger grant program for ARS MCM development and is not currently tied to a defined development program like the BARDA Contract for Lung-ARS. Generally, we believe that the continuation of grant funding for this indication will be dependent on continuing evidence of efficacy in animal trials. There are no existing treatments for GI-ARS and current standard of care is limited to supportive measures, although there are other drugs being developed by other companies for this indication with BARDA funding. If we are able to successfully develop 10150 for use in GI-ARS, we would have an additional argument for its procurement by BARDA for the SNS.

We also benefit from research funded by grants from the NIH CounterACT program for the development of 10150 as a MCM for the effects of nerve gas (e.g., sarin and soman) and chemical vesicant gasses (e.g., mustard gas, phosgene gas and chlorine gas) exposure. Like the funding for GI-ARS, funding for this indication is provided directly to the research facility and does not flow through our financial statements. Continued funding is generally dependent on continuing evidence of efficacy in animal trials. There are no existing treatments for exposure to chemical vesicants. In October 2011, we announced that National Jewish Health was awarded a $12.5 million grant from NIH CounterACT to continue the development of 10150 as a MCM against chlorine gas exposure. Also included in the grant is support for research in looking at tissue plasminogen activator (TPA) and Silabilin as MCMs against sulfur mustard gas exposure. The ultimate objective of the sulfur mustard and chlorine gas work at National Jewish Health will be to complete all work necessary to initiate pivotal efficacy studies in animals for both indications. This would include: running efficacy studies in the rat model for higher doses of sulfur mustard and chlorine gas; establishing endpoints, optimal dosing and duration of treatment for pivotal efficacy studies; and characterizing the natural history from sulfur mustard and chlorine gas damage. We plan to meet with the FDA in early 2014 to discuss filing with the FDA an investigational new drug application (an "IND") for the sulfur mustard indication under the Animal Rule and to present the design of a pivotal study in a rat model developed under the NIH CounterACT program.

We are also funded by grant money from the NIH CounterACT program and the National Institute of Neurological Disorders and Stroke ("NINDS") for the development of 10150 as a MCM for the effects of nerve gas (e.g., sarin and soman) exposure. NIH-CounterACT awarded a contract on September 24, 2011 worth approximately $735,000, to the University of Colorado to develop 10150 as a MCM against nerve agents. Work performed with this initial funding has demonstrated that 10150 significantly improved survival when administered with current treatment in a pilocarpine model for nerve gas exposure. In September 2013, we announced that Dr. Manisha Patel at the University of Colorado had been awarded a $4.3 million grant from NINDS to develop as a MCM for exposure to sarin gas and other nerve agents.

Until February 2011, the Lung-ARS program was principally funded by us and the work was performed at Duke University and the University of Maryland. Since February 11, 2011, substantially all of the costs for the Lung-ARS program have been funded by the BARDA Contract. To date, the GI-ARS development program has been funded by NIH-NIAID through programs at the University of Maryland and Epistem, Ltd., and the chlorine, phosgene, mustard gas and nerve agent programs have been funded by NIH-CounterACT and NINDS through programs at National Jewish Health, the University of Colorado, and the United States Army Medical Research Institute for Chemical Defense ("USAMRICD").

We are also developing 10150 for use in oncology where it would be used in combination with radiation and chemotherapy as both a therapeutic and prophylactic drug. Pre-clinical studies at Duke University have demonstrated that 10150 does not interfere with the benefit of radiation therapy or chemotherapy in prostate and lung cancer. These studies also demonstrated that 10150 displays anti-tumor activity.

Upon the successful completion of an additional Phase I study in healthy normal volunteers funded under the BARDA contract and approval of a protocol by the FDA and the appropriate Institutional Review Boards ("IRBs"), we expect to begin a Phase II study in cancer radiation therapy patients. The Company is considering several potential indications, including prostate cancer, esophageal cancer, head and neck cancer and non-small cell lung cancer.

10150 has been tested in two human Phase I safety studies where it was well-tolerated and no adverse events were observed. Efficacy has been demonstrated in validated animal models for Lung-ARS, GI-ARS, chlorine gas exposure, phosgene gas exposure, sulfur mustard gas exposure (lungs and skin) and nerve gas exposure. In both mouse and non-human primate ("NHP") studies for Lung-ARS, 10150 treated groups showed significantly reduced weight loss, inflammation, oxidative stress, lung damage, and most importantly, mortality. Therapeutic efficacy has been demonstrated when 10150 is administered 24 hours after exposure to radiation, a requirement for consideration as a

radiation MCM for the SNS.

Following the events at the Fukushima nuclear plant in Japan in 2011, we ran murine studies at the request of Japanese researchers to demonstrate the alternative effects of administering leukocyte growth factors ("LGF") used to treat the hematopoietic or bone marrow syndrome of ARS ("H-ARS"). Data showed that 10150 does not interfere with the efficacy of LGF (in this case Amgen's Neupogen(R)). Additionally, the study demonstrated that administration of Neupogen(R), the current standard of care for H-ARS, increased damage to the lungs. When 10150 was administered with Neupogen(R) this damage was significantly reduced. We believe that this finding may have important implications for the potential procurement of 10150 for the SNS. In September 2013, BARDA announced that it had entered into a procurement and inventory management agreement with Amgen to provide Neupogen(R) for the SNS.

We have an active Investigational New Drug Application ("IND") on file with the FDA for AEOL 10150 as a potential treatment for amyotrophic lateral sclerosis ("ALS"). At this time, we do not have any plans to continue development of 10150 for ALS. We expect to file an IND for 10150 for Lung-ARS with the Division of Medical Imaging Products during the first half of 2014. We also plan to file separate INDs for 10150 for cancer with the oncology division of the FDA, and for sulfur mustard gas in 2014. We have already completed two Phase I safety studies in 50 humans demonstrating that 10150 is safe and well tolerated. CMC work has been completed, pilot lots have been prepared and production is being scaled up under the BARDA Contract. We have an IND on file with the FDA for 10150 as a potential treatment for amyotrophic lateral sclerosis ("ALS"), but currently, we have no plans to conduct further clinical trials in ALS.

We have two programs underway for the development of several other drug candidates, AEOL 11207, AEOL1114B and AEOL11203, for the treatment of epilepsy and Parkinson's disease. These programs are being funded, in part, by private foundations, including the Michael J. Fox Foundation, CURE and government grants. In February 2012, data was published in the Journal Neurobiology of Disease from the CURE study indicating AEOL 11207 significantly reduced both the frequency and duration of spontaneous seizures in a pre-clinical epilepsy model. Additionally, the study showed an increase in average life span, protection against neuronal death and no difference in seizure severity.

Two other compounds Ethyl and Hexyl are the subject of a $20 million research grant from NIH-NIAID, for development as a potential MCM for ARS. In general, this research is at an earlier stage of development than 10150. Neither Ethyl nor Hexyl has been tested in humans and no IND is on file for either drug. A significant amount of pre-clinical work would be required to bring either compound into clinical testing. Because this is grant funding, it is paid directly to the research institutions and does not flow through our financial statements.

Risks Associated with Our Business

Our business is subject to numerous risks. Please see the "Risk Factors" section beginning on page 10 of this prospectus.

Governance Developments

Resignation and Appointment of Directors

On May 8, 2013, each of Joseph J. Krivulka, Michael E. Lewis, Ph.D. and Peter D. Suzdak, Ph.D. notified us of his resignation from the Board of Directors (the "Board") of Aeolus and from all committee memberships, as applicable. The decision of each of Mr. Krivulka, Dr. Lewis and Dr. Suzdak to resign from the Board was not due to any disagreement with Aeolus on any matter relating to Aeolus' operations, policies or practices.

Concurrently with the resignations of Mr. Krivulka, Dr. Lewis and Dr. Suzdak from the Board, the Board appointed John Clerici, Mitchell D. Kaye and Jeffrey A. Scott, M.D. to serve as directors of the Board, effective May 8, 2013. Each of Mr. Clerici, Mr. Kaye and Dr. Scott will serve until such time as his respective successor is duly elected and

qualified or until his earlier resignation or removal.

Corporate Information

We were incorporated in the State of Delaware in 1994. Our common stock trades on the OTC Bulletin Board under the symbol “AOLS.” Our principal executive offices are located at 26361 Crown Valley Parkway, Suite 150, Mission Viejo, California 92691, and our phone number at that address is (949) 481-9825. Our website address is www.aolsrx.com. However, the information in, or that can be accessed through, our web site is not part of the registration statement of which this prospectus forms a part. We also make available free of charge through our website our most recent annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports, as soon as reasonably practicable after such material is electronically filed with or furnished to the Securities and Exchange Commission, which we refer to as the SEC.

THE OFFERING

Common stock offered by us	None
Common stock offered by selling stockholders	86,920,683
OTC Bulletin Board Symbol	“AOLS”
Proceeds to us	We will not receive any proceeds from the sale of the shares of common stock covered by this prospectus. However, we will receive the proceeds of any cash exercise of the warrants.
Risk factors	Investing in our common stock involves certain risks. You should read “Risk Factors” beginning on page 10 for a discussion of factors that you should consider carefully before deciding whether to purchase shares of our common stock.

RISK FACTORS

You should carefully consider the following information about risks described below, together with the other information contained in this prospectus and in our other filings with the SEC, before you decide to buy or maintain an investment in our common stock. We believe the risks described below are the risks that are material to us as of the date of this prospectus. If any of the following risks actually occur, our business, financial condition, results of operations and future growth prospects would likely be materially and adversely affected. In these circumstances, the market price of our common stock could decline, and you may lose all or part of your investment.

Risks Related to Our Business

We have operated at a loss and will likely continue to operate at a loss for the foreseeable future.

We have incurred significant historical losses and we had an accumulated deficit of approximately $183,922,000 as of September 30, 2013. During the years ended September 30, 2013 and 2012, we incurred a loss of $510,000 and a gain of $4,069,000, respectively, due to our warrant liability related to outstanding warrants, which are non-cash items and do not impact our financial operations or cash needs. Our operating losses have been due primarily to our expenditures for research and development on our drug candidates and for general and administrative expenses and our lack of significant, or sufficient, revenues to offset all of the expenditures. We are likely to continue to incur operating losses until such time, if ever, that we generate significant recurring revenues from product sales, whether to the U.S. government for the Strategic National Stockpile or to the general healthcare community for commercial indications, like oncology, epilepsy or Parkinson’s disease. We anticipate it will take a minimum of two years (and possibly longer) for us to generate recurring revenues. We expect that it will take at least that long before the development of any of our licensed, or other current potential, products is completed, marketing approvals are obtained from the FDA and commercial sales of any of these products can begin, or that we might receive a procurement from the U.S. Government under an Emergency Use Authorization or Animal Rule Approval.

We may need substantial additional funding to continue our operations and may be unable to raise capital when needed, or at all, which would force us to delay, curtail or eliminate our clinical programs and our product development programs.

We may need to raise substantial additional capital to fund human clinical trials and continue our research and development, unless and until we receive a procurement of sufficient size from the U.S. Government for the Strategic National Stockpile. In addition, we may need to raise substantial additional capital to enforce our proprietary rights, defend, in litigation or otherwise, any claims that we infringe third party patents or other intellectual property rights; and commercialize, for non-government related indications, any of our products that may be approved by the FDA or any international regulatory authority.

On February 19, 2013 and March 4, 2013, the Company entered into Securities Purchase Agreements with certain accredited investors. Under the terms of the agreements, the Company received approximately $3,616,000 in gross proceeds in exchange for the issuance of common stock and warrants. As of September 30, 2013, we had cash of approximately $869,000. Currently, our monthly cash requirements to operate our business that are not reimbursed under the BARDA Contract are approximately $100,000. To the extent we do not have sufficient cash to fund our working capital requirements, we may not be able to pay our payables timely, which may cause vendors to cease providing services to us.

In order to fund on-going operating cash requirements, or to accelerate or expand our oncology and other programs we will need to raise significant additional funds. We are continuously considering strategic and financial options available to us, including public or private equity offerings, debt financings or collaboration arrangements. If we raise

additional funds by issuing securities, our stockholders will experience dilution of their ownership interest. Debt financings, if available, may involve restrictive covenants and require significant interest payments. If we do not receive additional financing to fund our operations not reimbursed under the BARDA Contract, or if BARDA does not exercise any additional options under the BARDA Contract and we are unable to raise sufficient capital for operations, we would have to discontinue some or all of our activities, merge with or sell, lease or license some or all of our assets to another company, or cease operations entirely, and our stockholders might lose all or part of their investments.

In addition, if our catalytic antioxidant program shows scientific progress, we will need significant additional funds to move therapies through the preclinical stages of development and clinical trials. If we are unable to raise the amount of capital necessary, or do not receive a sufficient procurement from the U.S. Government for the Strategic National Stockpile, to complete development and reach commercialization of any of our catalytic antioxidant products, we will need to delay or cease development of one or more of these products or partner with another company for the development and commercialization of these products.

Our independent registered public accounting firm has expressed substantial doubt about our ability to continue as a going concern.

In its audit opinion issued in connection with our consolidated balance sheets as of September 30, 2013 and 2012 and our consolidated statements of operations, stockholder's equity and cash flows for the years ended September 30, 2013 and 2012, our independent registered public accounting firm has expressed substantial doubt about our ability to continue as a going concern given our recurring net losses, negative cash flows from operations and working capital deficiency. The accompanying financial statements have been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities and commitments in the normal course of business. The financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or amounts of liabilities that might be necessary should we be unable to continue in existence.

We have a history of operating losses and expect to continue to incur substantial losses and may never become profitable.

We have no products approved for commercialization in the United States or abroad. Our drug candidates are still being developed, and all but 10150 are still in early stages of development. Our drug candidates will require significant additional development, clinical trials, regulatory clearances or approvals by the FDA and additional investment before they can be commercialized in the United States.

Our likelihood of achieving profitability will depend on numerous factors, including success in:

- developing our existing drug candidates and developing and testing new drug candidates;
- protecting our intellectual property
- establishing our competitive position;
- achieving third-party collaborations;
- receiving regulatory approvals;
- manufacturing and marketing products; and
- receiving government funding and identifying new government funding opportunities.

Many of these factors will depend on circumstances beyond our control. We may not achieve sufficient revenues for profitability. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis in the future. If revenues grow more slowly than we anticipate, or if operating expenses exceed our expectations or cannot be adjusted accordingly, then our business, results of operations, financial condition and cash

flows will be materially and adversely affected.

As of September 30, 2013, we had an accumulated deficit of $183,922,000 from our research, development and other activities. We have not generated material revenues from product sales and do not expect to generate product revenues sufficient to support us for at least several more years. As a result, we may not be successful in obtaining sufficient financing on commercially reasonable terms, or at all. Our requirements for additional capital may be substantial and will be dependent on many factors, including the success of our research and development efforts, our ability to commercialize and market products, our ability to successfully pursue our licensing and collaboration strategy, the receipt of government funding, competing technological developments, costs associated with the protection of our intellectual property and any future change in our business strategy.

Our research and development ("R&D") activities are at an early stage and therefore might never result in viable products.

Our catalytic antioxidant program is in the early stages of development, involves unproven technology, requires significant further R&D and regulatory approvals and is subject to the risks of failure inherent in the development of products or therapeutic procedures based on innovative technologies. These risks include the possibilities that:

- any or all of these proposed products or procedures are found to be unsafe or ineffective or otherwise fail to receive necessary regulatory approvals;
- the proposed products or procedures are not economical to market or do not achieve broad market acceptance;
- third parties hold proprietary rights that preclude us from marketing the proposed products or procedures; and
- third parties market a superior or equivalent product.

Further, the timeframe for commercialization of any product is long and uncertain because of the extended testing and regulatory review process required before marketing approval can be obtained. We may not be able to successfully develop or market any of our proposed products or procedures. If we are not able to successfully market any product, our business will suffer.

If our products are not successfully developed and eventually approved by the FDA, we may be forced to reduce or terminate our operations.

All of our drug candidates are at various stages of development and must be approved by the FDA or similar foreign governmental agencies before they can be marketed. The process for obtaining FDA and foreign regulatory approval is both time-consuming and costly, with no certainty of a successful outcome. This process typically requires extensive preclinical and clinical testing, which may take longer or cost more than we anticipate, and may prove unsuccessful due to numerous factors. Drug candidates that may appear to be promising at early stages of development may not successfully reach the market for a number of reasons. The results of preclinical and initial clinical testing of these drug candidates may not necessarily indicate the results that will be obtained from later or more extensive testing. A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in advanced clinical trials, even after obtaining promising results in earlier trials.

Numerous factors could affect the timing, cost or outcome of our drug development efforts, including the following:

- difficulty in securing research laboratories to conduct research activities;

difficulty in securing centers to conduct trials;

difficulty in enrolling patients in conformity with required protocols or projected timelines;

unexpected adverse reactions by patients in trials;

difficulty in obtaining clinical supplies of the product;

changes in the FDA's or other regulatory body's requirements for our testing during the course of that testing;

inability to generate statistically significant data confirming the efficacy of the product being tested;

modification of the drug during testing; and

reallocation of our limited financial and other resources to other clinical programs.

It is possible that none of the products we develop will obtain the regulatory approvals necessary for us to begin commercializing them. The time required to obtain FDA and other approvals is unpredictable but often can take years following the commencement of clinical trials, depending upon the nature of the drug candidate. Any analysis we perform on data from clinical activities is subject to confirmation and interpretation by regulatory authorities, which could delay, limit or prevent regulatory approval. Any delay or failure in obtaining required approvals could have a material adverse effect on our ability to generate revenues from the particular drug candidate and we may not have the financial resources to continue to develop our drug candidates and, as a result, may have to terminate our operations.

If we do not reach the market with our products before our competitors offer products for the same or similar uses, or if we are not effective in marketing our products, our revenues from product sales, if any, will be reduced.

We face intense competition in our development activities. Many of our competitors are fully integrated pharmaceutical companies, biotechnology companies or more established bioterrorism product companies, which have substantially greater financial, technical, sales and marketing and human resources than we do. These companies might succeed in obtaining regulatory approval for competitive products more rapidly than we can for our products. In addition, competitors might develop technologies and products that are less expensive and perceived to be safer or more effective than those being developed by us, which could impair our product development and render our technology obsolete.

We are and expect to remain dependent upon collaborations with third parties for the development of new products, and adverse events involving these collaborations could prevent us from developing and commercializing our drug candidates and achieving profitability.

We currently license from third parties, and do not own, rights under patents and certain related intellectual property for the development of our drug candidates. In addition, we expect to enter into agreements with third parties to license rights to our drug candidates. We might not be able to enter into or maintain these agreements on terms favorable to us, if at all. Further, if any of our current licenses were to expire or terminate, our business, prospects, financial condition and results of operations could be materially and adversely affected.

Our research and development activities rely on technology licensed from third parties, and termination of any of those licenses would result in loss of significant rights to develop and market our products, which would impair our business, prospects, financial condition and results of operations.

We have exclusive worldwide rights to our antioxidant small molecule technology through license agreements with Duke and the NJH. Each license generally may be terminated by the licensor if we fail to perform our obligations under the agreement, including obligations to develop the compounds and technologies under license. If terminated, we would lose the right to develop the products, which could adversely affect our business, prospects, financial condition and results of operations. The license agreements also generally require us to meet specified milestones or show reasonable diligence in development of the technology. If disputes arise over the definition of these requirements or whether we have satisfied the requirements in a timely manner, or if any other obligations in the license agreements are disputed by the other party, the other party could terminate the agreement, and we could lose our rights to develop the licensed technology.

If new technology is developed from these licenses, we may be required to negotiate certain key financial and other terms, such as royalty payments, for the licensing of this future technology with these research institutions, and it might not be possible to obtain any such license on terms that are satisfactory to us, or at all.

We now rely, and will continue to rely, heavily on third parties for product and clinical development, manufacturing, marketing and distribution of our products.

We currently depend heavily and will depend heavily in the future on third parties for support in product development, clinical development, manufacturing, marketing and distribution of our products. The termination of some or all of our existing collaborative arrangements, or our inability to establish and maintain collaborative arrangements, could have a material adverse effect on our ability to continue or complete clinical development of our products.

We rely on contract clinical research organizations ("CROs") for various aspects of our clinical development activities including clinical trial monitoring, data collection and data management. As a result, we have had and continue to have less control over the conduct of clinical trials, the timing and completion of the trials, the required reporting of adverse events and the management of data developed through the trial than would be the case if we were relying entirely upon our own staff. Although we rely on CROs to conduct our clinical trials, we are responsible for confirming that each of our clinical trials is conducted in accordance with the investigational plan and protocol. Moreover, the FDA and foreign regulatory agencies require us to comply with GCPs for conducting, recording and reporting the results of clinical trials to assure that the data and results are credible and accurate and that the trial participants are adequately protected. Our reliance on third parties does not relieve us of these responsibilities and requirements.

The third parties on which we rely may have staffing difficulties, may undergo changes in priorities or may become financially distressed, adversely affecting their willingness or ability to conduct our trials. We may experience unexpected cost increases that are beyond our control. Any failure of such CROs to successfully accomplish clinical trial monitoring, data collection and data management and the other services they provide for us in a timely manner and in compliance with regulatory requirements could have a material adverse effect on our ability to complete clinical development of our products and obtain regulatory approval. Problems with the timeliness or quality of the work of a CRO may lead us to seek to terminate the relationship and use an alternate service provider. However, making such changes may be costly and would likely delay our trials, and contractual restrictions may make such a change difficult or impossible. Additionally, it may be difficult to find a replacement organization that can conduct our trials in an acceptable manner and at an acceptable cost.

If BARDA opts not to exercise its options under the BARDA Contract, we would be dependent upon grants from NIH for continued development of 10150 for Lung-ARS, or we would need to curtail our development program in this area significantly and we may be placed at a competitive disadvantage in addressing this market opportunity.

During the fiscal years ended September 30, 2013 and 2012, we received 100% of our revenues from our agreement with BARDA, for the development of 10150 as a MCM against Lung-ARS. These revenues have funded some of our personnel and other R&D costs and expenses. Pursuant to the BARDA Contract, we received approximately $10.4 million under the base period of the contract from February 2011 to April 2012. On April 9, 2012, we announced that BARDA had issued a Notice of Intent to Exercise two options valued at $9.1 million. On April 16, 2012, BARDA exercised the two options. On September 17, 2013, we announced that BARDA had exercised $6.0 million in additional contract options, bringing the total exercised contract value to date to approximately $25.5 million. We may receive up to an additional $92.9 million in options exercisable over the remaining years of the contract. If all of the options are exercised by BARDA, the total value of the contract would be approximately $118.4 million.

Under the terms of the BARDA Contract, BARDA may elect not to exercise some or all of the additional options. Because a significant portion of our current revenues are generated from the BARDA Contract, if BARDA does not exercise its options under the BARDA Contract, our ability to develop 10150 as an MCM for Lung-ARS could be negatively impacted, which could harm our competitive position and materially and adversely affect our business, financial condition and results of operations. In general, we believe that future exercise of options under the contract

will depend on successful completion of tasks under exercised options and continued demonstration of efficacy.

Necessary reliance on the "Animal Rule" in conducting trials is time-consuming and expensive.

To obtain FDA approval for our drug candidate for a bioterrorism indication under current FDA regulations, we are required to utilize animal model studies for efficacy and provide animal and human safety data under the "Animal Rule." For many of the biological and chemical threats, animal models are not yet available, and as such we are developing, or will have to develop, appropriate animal models, which is a time-consuming and expensive research effort. Further, we may not be able to sufficiently demonstrate the animal correlation to the satisfaction of the FDA, as these corollaries are difficult to establish and are often unclear. The FDA may decide that our data are insufficient for approval and require additional preclinical, clinical or other studies, refuse to approve our products, or place restrictions on our ability to commercialize those products. Further, other countries do not, at this time, have established criteria for review and approval of these types of products outside their normal review process; i.e., there is no "Animal Rule" equivalent, and consequently we may not be able to make a submission for marketing approval in foreign countries based on such animal data.

Additionally, few facilities in the U.S. and internationally have the capability to test animals with radiation, nerve agents, or other lethal biotoxins or chemical agents or otherwise assist us in qualifying the requisite animal models. We have to compete with other biodefense companies for access to this limited pool of highly specialized resources. We therefore may not be able to secure contracts to conduct the testing in a predictable timeframe, cost-effectively or at all.

Even if we succeed in commercializing our drug candidates, we may not become profitable and manufacturing problems or side effects discovered at later stages can further increase costs of commercialization.

Any drugs resulting from our research and development efforts may not become commercially available. Even if we succeed in developing and commercializing our drug candidates, we may never generate sufficient or sustainable revenues to enable us to be profitable. Even if effective, a product that reaches the market may be subject to additional clinical trials, changes to or re-approvals of our manufacturing facilities or a change in labeling if we or others identify side effects or manufacturing problems after a product is on the market. This could harm sales of the affected products and could increase the cost and expenses of commercializing and marketing them. It could also lead to the suspension or revocation of regulatory approval for the products.

We and our contract manufacturing organizations ("CMOs") will also be required to comply with the applicable FDA current good manufacturing practice ("cGMP") regulations. These regulations include requirements relating to quality control and quality assurance as well as the corresponding maintenance of records and documentation. Manufacturing facilities are subject to inspection by the FDA. These facilities must be approved to supply licensed products to the commercial marketplace. We and our contract manufacturers may not be able to comply with the applicable cGMP requirements and other FDA regulatory requirements. Should we or our contract manufacturers fail to comply, we could be subject to fines or other sanctions or could be prohibited from marketing any products we develop.

Political or social factors may delay or impair our ability to market our products and our business may be materially adversely affected.

Products developed to treat diseases caused by, or to combat the threat of, bioterrorism will be subject to changing political and social environments. The political and social responses to bioterrorism have been unpredictable. Political or social pressures may delay or cause resistance to bringing our products to market or limit pricing of our products, which would harm our business. Changes to favorable laws, such as Project BioShield, could have a material adverse effect on our business, prospects, financial condition and results of operations.

Legislation limiting or restricting liability for medical products used to fight bioterrorism is new, and we cannot be certain that any such protection will apply to our products or if applied what the scope of any such coverage will be.

The U.S. Public Readiness Act was signed into law in December 2005 (the “Public Readiness Act”) and creates general immunity for manufacturers of countermeasures, including security countermeasures (as defined in Section 319F-2(c)(1)(B) of the Public Readiness Act), when the U.S. Secretary of Health and Human Services issues a declaration for their manufacture, administration or use. The declaration is meant to provide general immunity from all claims under state or federal law for loss arising out of the administration or use of a covered countermeasure. Manufacturers are excluded from this protection in cases of willful misconduct. The Secretary of Health and Human Services may not make declarations that would cover any of our other drug candidates or the U.S. Congress may not act in the future to reduce coverage under the Public Readiness Act or it may repeal it altogether.

Upon a declaration by the Secretary of Health and Human Services, a compensation fund would be created to provide "timely, uniform and adequate compensation to eligible individuals for covered injuries directly caused by the administration or use of a covered countermeasure." The "covered injuries" to which the program applies are defined as serious physical injuries or death. Individuals are permitted to bring a willful misconduct action against a manufacturer only after they have exhausted their remedies under the compensation program. A willful misconduct action could be brought against us if an individual(s) has exhausted his or her remedies under the compensation program, which could thereby expose us to liability. Furthermore, the Secretary of Health and Human Services may not issue a declaration under the Public Readiness Act to establish a compensation fund. We may also become subject to standard product liability suits and other third party claims if products we develop which fall outside of the Public Readiness Act cause injury or if treated individuals subsequently become infected or otherwise suffer adverse effects from such products.

Healthcare reform measures and other statutory or regulatory changes could adversely affect our business.

The pharmaceutical and biotechnology industries are subject to extensive regulation, and from time to time legislative bodies and governmental agencies consider changes to such regulations that could have significant impact on industry participants. For example, in light of certain highly-publicized safety issues regarding certain drugs that had received marketing approval, the U.S. Congress is considering various proposals regarding drug safety, including some which would require additional safety studies and monitoring and could make drug development more costly. We are unable to predict what additional legislation or regulation, if any, relating to safety or other aspects of drug development may be enacted in the future or what effect such legislation or regulation would have on our business.

The business and financial condition of pharmaceutical and biotechnology companies are also affected by the efforts of governments, third-party payors and others to contain or reduce the costs of healthcare to consumers. In the United States and various foreign jurisdictions there have been, and we expect that there will continue to be, a number of legislative and regulatory proposals aimed at changing the healthcare system, such as the Affordable Care Act and proposals relating to the reimportation of drugs into the U.S. from other countries (where they are then sold at a lower price) and government control of prescription drug pricing. The roll-out, pendency or approval of such proposals could affect our commercialization efforts and result in a decrease in our share price or limit our ability to raise capital or to obtain strategic collaborations or licenses.

We will need to enter into collaborative arrangements for the manufacturing and marketing of our drug candidates, or we will have to develop the expertise, obtain the additional capital and invest the resources to perform those functions internally.

We do not have the staff or facilities to manufacture or market any of the drug candidates being developed in our catalytic antioxidant program. As a result, we will need to enter into collaborative arrangements to commercialize, manufacture and market products that we expect to emerge from our catalytic antioxidant program, or develop the expertise within Aeolus. We might not be successful in entering into such third party arrangements on terms acceptable to us, if at all. If we are unable to obtain or retain third-party manufacturing or marketing on acceptable terms, we may be delayed in our ability to commercialize products, which could have a material adverse effect on our business, prospects, financial condition and results of operations. Substantial additional funds and personnel would be required if we needed to establish our own manufacturing or marketing operations. We may not be able to obtain adequate funding or establish these capabilities in a cost-effective or timely manner, which could have a material adverse effect on our business, prospects, financial condition and results of operations.

A failure to obtain or maintain patent and other intellectual property rights would allow others to develop and sell products similar to ours, which could impair our business, prospects, financial condition and results of operations.

The success of our business depends, in part, on our ability to establish and maintain adequate protection for our intellectual property, whether owned by us or licensed from third parties. We rely primarily on patents in the United States and in other key markets to protect our intellectual property. If we do not have adequate patent protection, other companies could develop and sell products that compete directly with ours, without incurring any liability to us. Patent prosecution, maintenance and enforcement on a global basis are time-consuming and expensive, and many of these costs must be incurred before we know whether a product covered by the claims can be successfully developed or marketed.

Even if we expend considerable time and money on patent prosecution, a patent application may never issue as a patent. We can never be certain that we were the first to invent the particular technology or that we were the first to file a patent application for the technology because patent applications in the United States and elsewhere are not typically published for public inspection for at least 18 months from the date when they are filed. It is always possible that a competitor is pursuing a patent for the same invention in the United States as we are and has an earlier invention date. In some jurisdictions outside of the United States, priority of invention is determined by the earliest effective filing date, not the date of invention. Consequently, if a third party pursues the same invention and has an earlier filing date, patent protection outside the United States would be unavailable to us. Also, outside the United States, an earlier date of invention cannot overcome a date of publication that precedes the earliest effective filing date. Accordingly, the patenting of our proposed products would be precluded outside the United States if a prior publication anticipates the claims of a pending application, even if the date of publication is within a year of the filing of the pending application.

Even if patents issue, the patent claims allowed might not be sufficiently broad to offer adequate protection for our technology against competitive products. Patent protection differs from country to country, giving rise to increased competition from other products in countries where patent coverage is either unavailable, weak or not adequately enforced, if enforced at all. Once a patent issues, we still face the risk that others will try to design around our patent or will try to challenge the validity of the patent. The cost of defending against a challenge to one or more of our patents could be substantial and even if we prevailed, there could be no assurance that we would recover damages.

If a third party were to bring an infringement claim against us, we would incur significant costs in our defense; if the claim were successful, we would need to develop non-infringing technology or obtain a license from the successful patent holder, if available.

Our business also depends on our ability to develop and market products without infringing on the proprietary rights of others or being in breach of our license agreements. The pharmaceutical industry is characterized by a large number of patents, patent filings and frequent and protracted litigation regarding patent and other intellectual property rights. Many companies have numerous patents that protect their intellectual property rights. Third parties might assert infringement claims against us with respect to our drug candidates and future products. If litigation were required to determine the validity of a third party’s claims, we could be required to spend significant time and financial resources, which could distract our management and prevent us from furthering our core business activities, regardless of the outcome. If we did not prevail in the litigation, we could be required to pay damages, license a third party’s technology, which may not be possible on terms acceptable to us, or at all, or discontinue our own activities and develop non-infringing technology, any of which could prevent or significantly delay pursuit of our development activities.

Protection of trade secret and confidential information is difficult, and loss of confidentiality could eliminate our competitive advantage.

In addition to patent protection, we rely on trade secrets, proprietary know-how and confidential information to protect our technology. We use confidentiality agreements with our employees, consultants and collaborators to maintain the proprietary nature of this technology. However, confidentiality agreements can be breached by the other party, which would make our trade secrets and proprietary know-how legally available for use by others. There is generally no adequate remedy for breach of confidentiality obligations. In addition, the competitive advantage afforded by trade secrets is limited because a third party can independently discover or develop something identical to our own trade secrets or know-how, without incurring any liability to us.

In addition, if our current or former employees, consultants or collaborators were to use information improperly obtained from others (even if unintentional), we may be subject to claims as to ownership and rights in any resulting know-how or inventions.

If we cannot retain or hire qualified personnel or maintain our collaborations, our programs could be delayed and may be discontinued.

As of September 30, 2013, we had four full-time employees. We utilize consultants to assist with our operations and are highly dependent on the services of our executive officers. We do not maintain “key person” life insurance on any of our personnel. We also are dependent on our collaborators for our research and development activities. The loss of key executive officers or collaborators could delay progress in our research and development activities or result in their termination entirely.

We believe that our future success will depend in large part upon our ability to attract and retain highly skilled scientific and managerial personnel. We face intense competition for these kinds of personnel from other companies, research and academic institutions, government entities and other organizations. If we fail to identify, attract and retain personnel, we may be unable to continue the development of our drug candidates, which would have a material adverse effect on our business, prospects, financial condition and results of operations.

We face the risk of product liability claims which could exceed our insurance coverage and deplete our cash resources.

The pharmaceutical and biotechnology industries expose us to the risk of product liability claims alleging that use of our drug candidates caused an injury or harm. These claims can arise at any point in the development, testing, manufacture, marketing or sale of pharmaceutical products and may be made directly by patients involved in clinical trials of our products, by consumers or healthcare providers or by organizations selling our products. Product liability claims can be expensive to defend, even if the product did not actually cause the alleged injury or harm.

Insurance covering product liability claims becomes increasingly expensive as a product candidate moves through the development pipeline to commercialization. We have limited product liability insurance coverage for our clinical trials and this coverage may not be sufficient to cover us against some or all potential losses due to liability, if any, or to the expenses associated with defending against liability claims. A product liability claim successfully asserted against us could exceed our insurance coverage, require us to use our own cash resources and have a material adverse effect on our business, financial condition and results of operations.

In addition, some of our licensing and other agreements with third parties require or might require us to maintain product liability insurance. If we cannot maintain acceptable amounts of coverage on commercially reasonable terms in accordance with the terms set forth in these agreements, the corresponding agreements would be subject to termination.

The costs of compliance with environmental, safety and similar laws could increase our cost of doing business or subject us to liability in the event of noncompliance.

Our business is subject to regulation under state and federal laws regarding occupational safety, laboratory practices, environmental protection and the use, generation, manufacture, storage and disposal of hazardous substances. We may be required to incur significant costs in the future to comply with existing or future environmental and health and safety regulations. Our research activities involve the use of hazardous materials, chemicals and radioactive compounds. Although we believe that our procedures for handling such materials comply with applicable state and federal regulations, we cannot eliminate the risk of contamination or injury from these materials. In the event of

contamination, we could be liable for any resulting damages, which could have a material adverse effect on our business, financial condition and results of operations.

We are subject to intense competition that could materially impact our operating results.

We may be unable to compete successfully against our current or future competitors. The pharmaceutical, biopharmaceutical, biotechnology and bioterrorism industries are characterized by intense competition and rapid and significant technological advancements. Many companies, research institutions and universities are working in a number of areas similar to our primary fields of interest to develop new products. There also is intense competition among companies seeking to acquire products that already are being marketed. Many of the companies with which we compete have or are likely to have substantially greater research and product development capabilities and financial, technical, scientific, manufacturing, marketing, distribution and other resources than at least some of our present or future strategic partners or licensees.

As a result, these competitors may:

- succeed in developing competitive products sooner than us or our strategic partners or licensees;
- obtain FDA and other regulatory approvals (including EUA approvals) for their products before approval of any of our products;
- obtain patents that block or otherwise inhibit the development and commercialization of our drug candidates;
- develop products that are safer or more effective than our products;
- devote greater resources to marketing or selling their products;
- introduce or adapt more quickly to new technologies or scientific advances;
- introduce products that render our products obsolete;
- withstand price competition more successfully than us or our strategic partners or licensees;
- negotiate third-party strategic alliances or licensing arrangements more effectively; or
- take advantage of other opportunities more readily.

Currently, as discussed under “Competition” there are three drugs approved as radiation protection agents. However, there are also many companies working to develop pharmaceuticals that act as a radiation protection agent.

Acceptance of our products in the marketplace is uncertain, and failure to achieve market acceptance will harm our business.

Even if approved for marketing, our products may not achieve market acceptance. The degree of market acceptance will depend upon a number of factors, including:

- the receipt of regulatory approvals for the indications that we are studying;

the establishment and demonstration in the medical community of the safety, clinical efficacy and cost-effectiveness of our products and their potential advantages over existing therapeutic products;

marketing and distribution support;

the introduction, market penetration and pricing strategies of competing and future products; and

coverage and reimbursement policies of governmental and other third-party payors such as insurance companies, health maintenance organizations and other plan administrators.

Physicians, patients, payors or the medical community in general may be unwilling to accept, purchase, utilize or recommend any of our products.

We may be required to make milestone payments and other payments relating to the commercialization of our products.

Our agreements by which we acquired rights to our drug candidates provide for milestone payments by us upon the occurrence of certain regulatory filings and approvals related to the acquired products. In the event that we successfully develop our drug candidates, these milestone payments could be significant. In addition, our agreements require us to pay a royalty interest on worldwide sales. Also, any future license, collaborative or other agreements we may enter into in connection with our development and commercialization activities may require us to pay significant milestone, license and other payments in the future.

We are continually evaluating our business strategy, and may modify this strategy in light of developments in our business and other factors.

We continue to evaluate our business strategy and, as a result, may modify this strategy in the future. In this regard, we may, from time to time, focus our development efforts on different drug candidates or may delay or halt the development of our drug candidates. In addition, as a result of changes in our strategy, we may also change or refocus our existing drug discovery, development, commercialization and manufacturing activities.

Our short-term investments, marketable securities and restricted investments, if any, are subject to certain risks which could materially adversely affect our overall financial position.

We invest our cash in accordance with an established internal policy and customarily in instruments which historically have been highly liquid and carried relatively low risk. However, the capital and credit markets have been experiencing extreme volatility and disruption. Over the past few years, the volatility and disruption have reached unprecedented levels. We maintain a portfolio of investments in short-term investments, marketable debt securities and restricted investments, which are recorded at fair value. Certain of these transactions expose us to credit risk in the event of default of the issuer. To minimize our exposure to credit risk, we invest in securities with strong credit ratings. Should any of our short-term investments, marketable securities or restricted investments lose value or have their liquidity impaired, it could materially and adversely affect our overall financial position by imperiling our ability to fund our operations and forcing us to seek additional financing sooner than we would otherwise. Such financing may not be available on commercially attractive terms or at all.

Our insurance policies are expensive and protect us only from certain business risks, which could leave us exposed to significant, uninsured liabilities.

We do not carry insurance for all categories of risk that our business may encounter. We currently maintain general liability, property, auto, workers' compensation, products liability, fiduciary and directors' and officers' insurance policies. We do not know, however, if we will be able to maintain existing insurance with adequate levels of coverage. For example, the premiums for our directors' and officers' insurance policy have increased in the past and may increase in the future, and this type of insurance may not be available on acceptable terms or at all in the future. Any significant uninsured liability may require us to pay substantial amounts, which would adversely affect our cash position and results of operations.

We may have a limitation on the use of net operating loss carryforwards and tax credits.

Our ability to utilize our net operating loss carryforwards, or NOLs, and tax credits may be limited if we undergo or have undergone an ownership change, as defined in Section 382 of the Internal Revenue Code, as a result of changes in the ownership of outstanding stock. An ownership change generally occurs if the percentage of stock owned by one or more stockholders who own, directly or indirectly, 5% or more of the value of our outstanding stock (or are otherwise treated as 5% stockholders under Section 382 and the regulations promulgated thereunder) has increased by more than 50 percentage points over the lowest percentage of our outstanding stock owned by these stockholders at any time during the testing period, which is generally the three-year period preceding the potential ownership change. In the event of an ownership change, Section 382 imposes an annual limitation on the amount of post-ownership change taxable income a corporation may offset with pre-ownership change NOLs.

We are exposed to risks if we are unable to comply with changes to laws affecting public companies, including the Sarbanes-Oxley Act of 2002 and the Dodd–Frank Wall Street Reform and Consumer Protection Act of 2010, and also to increased costs associated with complying with such laws.

Laws and regulations affecting public companies in the U.S., including the provisions of the Sarbanes-Oxley Act of 2002 and the Dodd–Frank Wall Street Reform and Consumer Protection Act of 2010, will cause us to incur increased costs as we evaluate the implications of new rules and respond to new requirements. Delays or a failure to comply with the new laws, rules and regulations could result in enforcement actions, the assessment of other penalties and civil suits. These laws and regulations make it more expensive for us under indemnities provided by us to our officers and directors and may make it more difficult for us to obtain certain types of insurance, including liability insurance for directors and officers; as such, we may be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. The impact of these events could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, or as executive officers. We may be required to hire additional personnel and utilize additional outside legal, accounting and advisory services — all of which could cause our general and administrative costs to increase beyond what we currently have planned.

Our corporate compliance program cannot guarantee that we are in compliance with all potentially applicable regulations.

The development, manufacturing, pricing, sales, coverage and reimbursement of our products, together with our general operations, are subject to extensive regulation by federal, state and other authorities within the United States and numerous entities outside of the United States. While we have developed and instituted a corporate compliance program based on what we believe are the current best practices, governmental authorities may not find that our business practices comply with current or future administrative or judicial interpretations of potentially applicable laws and regulations. If we fail to comply with any of these laws and regulations, we could be subject to a range of regulatory actions, including suspension or termination of clinical trials, the failure to approve a product candidate, restrictions on our products or manufacturing processes, withdrawal of products from the market, significant fines, or other sanctions or litigation.

Risks Related to Our Dependence on U.S. Government Grants and Contracts

Even with the BARDA Contract, we may not be able to fully fund our research and development of 10150 as a MCM for Lung-ARS.

The BARDA Contract is a cost-plus-fixed-fee reimbursement contract that only reimburses certain specified activities that have been previously authorized by BARDA. Additional activities may be needed and, if so, BARDA may not reimburse us for these activities. Performance under the BARDA Contract requires that we comply with appropriate regulations and operational mandates, with which we have minimal or no operational experience. Our ability to be regularly and fully reimbursed for our activities will depend on our ability to comply and demonstrate compliance with such requirement.

The BARDA Contract award does not guarantee that we will be successful in future clinical trials or that 10150 will be approved by the FDA.

The BARDA Contract provides a cost-plus-fixed-fee reimbursement opportunity for certain specified clinical and development activities, but we remain fully responsible for conducting these activities. The award of BARDA Contract does not guarantee that any of these activities will be successful. Our inability to be successful with certain key clinical or development activities could jeopardize our ability to obtain FDA approval for 10150.

Most of our immediately foreseeable future revenues are contingent upon grants and contracts from the U.S. government and we may not achieve sufficient, if any, revenues from these agreements to attain profitability.

For the foreseeable future, we believe our main customer, if any, will be national governments, primarily the U.S. government. However, we may not ultimately be successful in receiving any future revenues or grants from such governments. The process of obtaining government contracts is lengthy and uncertain and we may have to compete with other companies for each contract. We may not be awarded any contracts to supply the U.S. or other governments with our drug candidates or products as such awards may be made, in whole or in part, to our competitors. If the U.S. government makes significant future contract awards for the supply to the U.S. emergency stockpile of a competing product, our business will be harmed and it is unlikely that we will ultimately be able to supply that particular treatment or product to foreign governments or other third parties. Further, changes in government budgets and agendas, or advances by our competitors, may result in a decreased and de-prioritized emphasis on procuring the biodefense products we are developing.

Due to the current uncertainty surrounding the Federal budget, the U.S. government may be forced or choose to reduce or delay spending in the biodefense field, which could decrease the likelihood of future government contract awards or that the government would procure products from us. Because the Federal government has been operating under a Continuing Resolution in lieu of a formal budget, funding for individual agencies has been set based on a baseline from prior budget years. In the case of BARDA, which was funded under an appropriation that ended on September 30, 2013, funding under a Continuing Resolution requires a request for an "anomaly" from the White House to act as a baseline. This adds additional complexity to the funding process for BARDA until there is a formal Federal budget.

The U.S. government's determination to award any contracts may be challenged by an interested party, such as another bidder, at the Government Accountability Office ("GAO") or in federal court. If such a challenge is successful, a contract may be terminated.

The laws and regulations governing procurements of goods and services by the U.S. government provide procedures by which other bidders and other interested parties may challenge the award of a government contract. If we are awarded a government contract, such challenges or protests could be filed even if there are not any valid legal grounds on which to base the protest. If any such protests are filed, the government agency may decide to suspend our performance under the contract while such protests are being considered by the GAO or the applicable federal court, thus potentially delaying delivery of goods and services and payment. In addition, we could be forced to expend considerable funds to defend any potential award. If a protest is successful, the government may be ordered to terminate the contract and reselect bids. The government could even be directed to award a potential contract to one of the other bidders.

Our business may become subject to audit by the U.S. government and a negative audit could adversely affect our business.

U.S. government agencies such as the Defense Contract Audit Agency (the "DCAA"), routinely audit and investigate government contractors. These agencies review a contractor's performance under its contracts, cost structure and compliance with applicable laws, regulations and standards.

The DCAA also reviews the adequacy of, and a contractor's compliance with, its internal control systems and policies, including the contractor's purchasing, property, estimating, compensation and management information systems. Any costs found to be improperly allocated to a specific contract will not be reimbursed, while such costs already reimbursed must be refunded. If an audit uncovers improper or illegal activities, we may be subject to civil and criminal penalties and administrative sanctions, including:

- termination of contracts;

forfeiture of profits;

suspension of payments;

fines; and

suspension or prohibition from conducting business with the U.S. government.

In addition, we could suffer serious reputational harm if allegations of impropriety were made against us.

Laws and regulations affecting government contracts make it more costly and difficult for us to successfully conduct our business.

We must comply with numerous laws and regulations relating to the formation, administration and performance of government contracts, which can make it more difficult for us to retain our rights under these contracts. These laws and regulations affect how we conduct business with government agencies. Among the most significant government contracting regulations that affect our business are:

- the Federal Acquisition Regulations, and agency-specific regulations supplemental to the Federal Acquisition Regulations, which comprehensively regulate the procurement, formation, administration and performance of government contracts;

- the business ethics and public integrity obligations, which govern conflicts of interest and the hiring of former government employees, restrict the granting of gratuities and funding of lobbying activities and incorporate other requirements such as the Anti-Kickback Act and Foreign Corrupt Practices Act;

- export and import control laws and regulations; and

- laws, regulations and executive orders restricting the use and dissemination of information classified for national security purposes and the exportation of certain products and technical data.

Foreign governments typically also have laws and regulations governing contracts with their respective agencies. These foreign laws and regulations could affect how we conduct business and, in some instances, impose added costs on our business. Any changes in applicable laws and regulations could restrict our ability to obtain contracts, which could limit our ability to conduct our business and materially adversely affect our revenues and results of operations.

Because we depend on clinical research centers and other contractors for clinical and non-clinical testing, including testing under the “Animal Rule”, and for certain research and development activities, the results of our clinical trial, non-clinical animal efficacy studies, and research and development activities are largely beyond our control.

The nature of studies, clinical trials and our business strategy of outsourcing substantially all of our research and development and manufacturing work require that we rely on clinical research centers and other contractors to assist us with research and development, clinical and non-clinical testing (including animal efficacy studies under the “Animal Rule”), patient enrollment and other activities. As a result, our success depends largely on the success of these third parties in performing their responsibilities. Although we prequalify our contractors and believe that they are fully capable of performing their contractual obligations, we cannot directly control the adequacy and timeliness of the resources and expertise that they apply to these activities. Furthermore, we have to compete with other biodefense companies for access to this limited pool of highly specialized resources. If our contractors do not perform their obligations in an adequate and timely manner or we are unable to enter into contracts with them because of prior commitments to our competitors, the pace of clinical or non-clinical development, regulatory approval and commercialization of our drug candidates could be significantly delayed and our prospects could be adversely affected.

Data obtained from clinical trials is susceptible to varying interpretations, which could delay, limit or prevent regulatory clearances.

Data already obtained, or obtained in the future, from pre-clinical studies, non-clinical studies and clinical trials does not necessarily predict the results that will be obtained from later pre-clinical studies and clinical trials. Moreover, pre-clinical and clinical data are susceptible to varying interpretations, which could delay, limit or prevent regulatory approval. A number of companies in the pharmaceutical industry have suffered significant setbacks in advanced clinical trials, even after promising results in earlier trials. The failure to adequately demonstrate the safety and effectiveness of an intended product under development could delay or prevent regulatory clearance of the drug candidate, which would result in delays to commercialization and could materially harm our business. Our studies and clinical trials may not demonstrate sufficient levels of safety and efficacy necessary to obtain the requisite regulatory approvals for our drugs, and our proposed drugs may not be approved for marketing.

We may encounter delays or rejections based on additional government regulation from future legislation or administrative action or changes in FDA policy during the period of development, clinical trials and FDA regulatory review. We may encounter similar delays in foreign countries. If any of our products are approved for commercialization, sales of the products outside the U.S. would be subject to foreign regulatory approvals that vary from country to country. The time required to obtain approvals from foreign countries may be shorter or longer than that required for FDA approval, and requirements for foreign licensing may differ from FDA requirements. We may be unable to obtain requisite approvals from the FDA or foreign regulatory authorities, and even if obtained, such approvals may not be on a timely basis, or they may not cover the uses that we request.

Even if we do ultimately receive FDA approval for any of our drug candidates, these drug candidates will be subject to extensive ongoing regulation, including regulations governing manufacturing, labeling, packaging, testing, dispensing, prescription and procurement quotas, record keeping, reporting, handling, shipment and disposal of any such drug. Failure to obtain and maintain required registrations or to comply with any applicable regulations could further delay or preclude development and commercialization of our drugs and subject us to enforcement action.

Unfavorable provisions in government contracts, some of which may be customary, may harm our business, financial condition and operating results.

Government contracts customarily contain provisions that give the government substantial rights and remedies, many of which are not typically found in commercial contracts, including provisions that allow the government to:

terminate existing contracts, in whole or in part, for any reason or no reason;

unilaterally reduce or modify contracts or subcontracts, including equitable price adjustments;

cancel multi-year contracts and related orders if funds for contract performance for any subsequent year become unavailable;

decline to exercise an option to renew a contract;

exercise an option to purchase only the minimum amount specified in a contract;

decline to exercise an option to purchase the maximum amount specified in a contract;

claim rights to products, including intellectual property, developed under the contract;

take actions that result in a longer development timeline than expected;

audit and object to the contractor’s contract-related costs and fees, including allocated indirect costs;

direct the course of a development program in a manner not chosen by the government contractor;

suspend or debar the contractor from doing business with the government or a specific government agency;

pursue criminal or civil remedies under the False Claims Act and False Statements Act; and

control or prohibit the export of products.

Generally, government contracts contain provisions permitting unilateral termination or modification, in whole or in part, at the government's convenience. Under general principles of government contracting law, if the government terminates a contract for convenience, the terminated company may recover only its incurred or committed costs, settlement expenses and profit on work completed prior to the termination.

If the government terminates a contract for default, the defaulting company is entitled to recover costs incurred and associated profits on accepted items only and may be liable for excess costs incurred by the government in procuring undelivered items from another source. Some government contracts grant the government the right to use, for or on behalf of the U.S. government, any technologies developed by the contractor under the government contract. If we were to develop technology under a contract with such a provision, we might not be able to prohibit third parties, including our competitors, from using that technology in providing products and services to the government.

Risks Related to Owning Our Stock

Our principal stockholders own a significant percentage of our outstanding common stock and are, and will continue to be, able to exercise significant influence over our affairs.

As of September 30, 2013, Xmark Opportunity Partners, LLC ("Xmark") possessed voting power over 97,931,944 shares, or 72.8% of our outstanding common stock as of such date, through its management of Goodnow Capital, L.L.C. ("Goodnow"), Xmark Opportunity Fund, L.P., Xmark Opportunity Fund, Ltd. and Xmark JV Investment Partners, LLC (collectively, the "Xmark Funds"), and through a voting trust agreement by and among Biomedical Value Fund, L.P., Biomedical Value Fund, Ltd., Xmark and us (the "Xmark voting Trust") with respect to 1,000,000 shares. As a result, Xmark is able to determine a significant part of the composition of our board of directors, holds significant voting power with respect to matters requiring stockholder approval and is able to exercise significant influence over our operations. The interests of Xmark may be different than the interests of other stockholders on these and other matters. This concentration of ownership also could have the effect of delaying or preventing a change in our control or otherwise discouraging a potential acquirer from attempting to obtain control of us, which could reduce the price of our common stock.

David Cavalier, an employee and our Chairman of the board of directors and Mitchell D. Kaye, a Director, are affiliated with Xmark, which possessed voting power of 72.8% of our outstanding common stock as of September 30, 2013. Accordingly, Mr. Cavalier and Mr. Kaye currently have, and will continue to have, a significant influence over the outcome of all corporate actions requiring stockholder approval.

Our executive officers and directors and holders of greater than five percent of our outstanding common stock, together with entities that may be deemed affiliates of, or related to, such persons or entities, beneficially owned greater than 72.8% of our outstanding common stock as of September 30, 2013. As a result, these stockholders, acting together, may be able to control our management and affairs and matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions, such as mergers, consolidations or the sale of substantially all of our assets. The interests of our current major stockholders may not always coincide with the interests of other stockholders and they may take actions to advance their respective interests to the detriment of other stockholders.

Future sales of our common stock in the public market could create selling pressure on our common stock and lower our stock price.

Significant future sales of our common stock in the public market, including in particular the shares offered under this prospectus and under the 2013 Financing (defined below), could lower our stock price and impair our ability to raise funds.

In addition to the shares covered by this prospectus, the holders of outstanding common stock and common stock subject to warrants held by investors in our 2013 Financing have a registration covering 30.6 million shares of common stock (the “2013 Financing”), which has been declared effective and is on file with the SEC. Sales of a substantial amount of common stock in the public market, or the perception that these sales may occur, could create selling pressure on our common stock and adversely affect the market price of our common stock prevailing from time to time in the public market and could impair our ability to raise funds in additional offerings.

As of December 31, 2013, we had 134.5 million outstanding shares of our common stock that were subject to dilution by 17.9 million shares of common stock issuable upon the exercise of outstanding warrants.

We may need to sell additional shares of our common stock, preferred stock or other securities to meet our capital requirements and these future sales could cause dilution and adversely affect our stock price.

Sales of substantial amounts of capital stock, or the perception that such sales could occur, could adversely affect the prevailing market price of the common stock and our ability to raise capital. We may issue additional common stock in future financing transactions or as incentive compensation for our executive management and other key personnel, consultants and advisors. Issuing any equity securities would be dilutive to the equity interests represented by our then-outstanding shares of common stock. The market price for our common stock could decrease as the market takes into account the dilutive effect of any of these issuances.

In the event of the conversion of our preferred stock and exercises of currently outstanding options and warrants, the ownership interests of our current stockholders could be substantially diluted, which would reduce the market price of our common stock and could make it more difficult for us to raise funds in the future.

As of December 31, 2013, we had 134,550,068 shares of common stock outstanding. We may grant to our employees, directors and consultants, options to purchase shares of our common stock under our 2004 Stock Incentive Plan. In addition, as of September 30, 2013, options to purchase 11,214,898 shares were outstanding at exercise prices ranging from $0.23 to $5.00 per share, with a weighted average exercise price of $0.52 per share, and 14,180,909 shares were reserved for issuance under the 2004 Stock Incentive Plan. In addition, as of September 30, 2013, warrants to purchase 17,879,627 shares of common stock were outstanding at exercise prices ranging from $0.25 to $2.50 per share, with a weighted exercise price of $0.30 per share.

In connection with prior collaborations and financing transactions, we also issued 526,080 shares of Series B preferred stock and warrants to purchase 896,037 shares of Series B preferred stock at an exercise price of $0.01 per share to affiliates of Elan Corporation, plc (“Elan”). These securities generally are exercisable and convertible at the option of the Elan affiliates. Each preferred share is convertible into one share of common stock. The warrant has a term of five years, a cashless exercise provision and customary anti-dilution adjustments in the event of stock splits, stock combination, reorganizations and similar events.

Future issuances of common stock pursuant to the exercise of outstanding warrants and/or options described above could adversely impact us by diluting our outstanding common stock, which could adversely affect our stock price. Sales of a substantial amount of these shares of common stock in the public market, or the perception that these sales may occur, could adversely affect the market price of our common stock prevailing from time to time in the public market and could impair our ability to raise funds in additional offerings.

Our common stock is not listed on a national securities exchange, is illiquid and is characterized by low and/or erratic trading volume, and the per share price of our common stock has fluctuated from $0.22 to $0.48 during the last two fiscal years.

Our common stock is quoted on the OTCQB under the symbol “AOLS.” An active public market for our common stock is unlikely to develop as long as we are not listed on a national securities exchange. Even if listed, the market for our stock may be impaired because of the limited number of investors, the significant ownership stake of Xmark, and our small market capitalization, which is less than that authorized for investment by many institutional investors.

Historically, the public market for our common stock has been characterized by low and/or erratic trading volume, often resulting in price volatility. For the fiscal year ended September 30, 2013, the average daily trading volume for

our common stock was approximately 29,000 shares. Although trading in our common stock increased over the course of fiscal year 2013, we continued to have very light trading activity in our common stock, with the fourth fiscal quarter averaging only approximately 45,000 shares per day. In addition, the price of our common stock has been volatile. Our common stock had a closing price of $0.37 on October 1, 2012 and ended fiscal year 2013 at a closing price of $0.28. During the twelve month period ended September 30, 2013, our common stock had a low closing price of $0.22, which occurred on September 11, 2013, and had a high closing price of $0.46, which occurred on April 30, 2013.

The market price of our common stock is subject to wide fluctuations due to factors that we cannot control, including the results of preclinical and clinical testing of our products under development, decisions by collaborators regarding product development, regulatory developments, market conditions in the pharmaceutical and biotechnology industries, future announcements concerning our competitors, adverse developments concerning proprietary rights, public concern as to the safety or commercial value of any products and general economic conditions.

Furthermore, the stock market has experienced significant price and volume fluctuation unrelated to the operating performance of particular companies. These market fluctuations can adversely affect the market price and volatility of our common stock.

If registration rights that we have previously granted are exercised, or if we grant additional registration rights in the future, the price of our common stock may be adversely affected.

Upon receiving notice from Elan, we are obligated to register with the SEC shares of common stock underlying the Series B Convertible Preferred Stock and warrants to purchase Series B Convertible Preferred Stock held by the Elan affiliates. If these securities are registered with the SEC, they may be sold in the open market. We expect that we also will be required to register any securities sold in future private financings. The sale of a significant amount of shares in the open market, or the perception that these sales may occur, could cause the trading price of our common stock to decline or become highly volatile.

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

Provisions in our amended and restated certificate of incorporation and bylaws may delay or prevent an acquisition of us or a change in our management. These provisions include a prohibition on certain actions by written consent of our stockholders and the ability of our board of directors to issue up to 7,150,000 shares of “blank check” preferred stock without stockholder approval. As a result, our board of directors has the power to issue shares without stockholder approval, and such shares can be issued with such rights, preferences, and limitations as may be determined by our board of directors. The rights of the holders of common stock will be subject to, and may be adversely affected by, the rights of any holders of preferred stock that may be issued in the future. In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the General Corporation Law of the State of Delaware, which prohibits stockholders owning in excess of 15% of our outstanding voting stock from merging or combining with us. These provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors, which is responsible for appointing the members of our management.

We do not expect to pay cash dividends on our common stock for the foreseeable future.

We have never paid cash dividends on our common stock and do not anticipate that any cash dividends will be paid on the common stock for the foreseeable future. The payment of any cash dividend by us will be at the discretion of our board of directors and will depend on, among other things, our earnings, capital, regulatory requirements and financial condition. Furthermore, the terms of some of our financing arrangements directly limit our ability to pay cash dividends on our common stock.

We have identified a material weakness in internal controls over financial reporting.

A material weakness is a significant deficiency, or combination of deficiencies, in internal control over financial reporting that results in more than a remote likelihood that a material misstatement of the annual or interim financial statements will not be prevented or detected. As a result of the determination that our diluted net income (loss) per share calculations did not include the net income effect of changes in fair value related to dilutive, liability classified warrants for the fiscal years ended September 30, 2012 and 2011, and the quarterly periods included therein, management has determined that a material weakness in internal controls existed as of September 30, 2012 and led to a previously disclosed restatement. Management believes the weakness is due to a deficiency in technical resources over financial reporting and is evaluating mitigating controls to prevent future misstatements.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements within the meaning of Section 27A of the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, that relate to future events or our future financial performance. You can identify forward-looking statements by terminology such as “may,” “might,” “will,” “could,” “should,” “would,” “expect,” “plan,” “anticipate,” “believe,” “estimate,” “predict,” “intend,” “potential” or “continue” or the negative of or other comparable terminology. Our actual results might differ materially from any forward-looking statement due to various risks, uncertainties and contingencies, including but not limited to those identified in the section entitled “Risk Factors” beginning on page 10 of this prospectus, as well as those discussed in our other filings with the SEC and the following:

- our need for, and our ability to obtain, additional funds;
- our ability to obtain grants to develop our drug candidates;
- uncertainties relating to non-clinical studies, clinical trials and regulatory reviews and approvals;
- uncertainties relating to our pre-clinical trials and regulatory reviews and approvals;
- our dependence on a limited number of therapeutic compounds;
- the early stage of the drug candidates we are developing;
- the acceptance of any future products by physicians and patients;
- competition with and dependence on collaborative partners;
- loss of key consultants, management or scientific personnel;
- our ability to obtain adequate intellectual property protection and to enforce these rights; and
- our ability to avoid infringement of the intellectual property rights of others.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. We disclaim any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

DESCRIPTION OF PRIVATE PLACEMENTS CONCERNING SECURITIES COVERED BY THIS PROSPECTUS

2012 Private Placement

On March 30, 2012 and April 4, 2012, we entered into a Securities Purchase Agreement, which we refer to as the 2012 Purchase Agreement, with certain accredited investors to sell and issue to such investors an aggregate of approximately 2,200,166 units, which we refer to as the 2012 Units, at a purchase price of $0.30 per unit, resulting in aggregate gross proceeds to us of approximately $660,000, we refer to this transaction throughout the prospectus as the 2012 private placement. Each 2012 Unit consists of (i) one share of common stock and (ii) a five year warrant to purchase 0.75 shares our common stock. The warrants in the 2012 private placement have an initial exercise price of $0.40 per share.

One of the investors who participated in the April 4, 2012 closing of the 2012 private placement was JJK Partners, LLC whose managing partner is Joseph Krivulka, who previously served as a member of our Board of Directors (from 2004 through December 31, 2013). JJK Partners purchased 333,333 of the 2012 Units, resulting in aggregate proceeds of $100,000 to us.

In connection with the 2012 Purchase Agreement, we entered into a Registration Rights Agreement with the investors who participated in the 2012 private placement, which we refer to as the 2012 RRA. Pursuant to the 2012 RRA, we agreed to file a registration statement with the SEC, within 45 days from closing to register the resale of the common stock and the shares issuable upon exercise of the warrants issued in the 2012 private placement (collectively, the "2012 Registrable Securities"). We also agreed to use our best efforts to have the registration statement declared effective as promptly as possible after the filing thereof, but in any event within 120 days (180 days if the we receive comments from the SEC) from the filing date. We agreed to keep the registration statement continuously effective until the earlier to occur of (i) the date after which all of the 2012 Registrable Securities registered thereunder have been sold and (ii) the date on which all of the 2012 Registrable Securities covered by the registration statement may be sold without volume restrictions pursuant to Rule 144 under the Securities Act.

In the event (i) the registration statement has not been filed by the agreed upon filing date, (ii) an acceleration request has not been filed within five trading days of the date which we are notified that the registration statement will not be reviewed by the SEC staff or is not subject to further review and comment by the SEC staff, (iii) the registration statement has not been declared effective by the required effectiveness date, or (iv) sales cannot be made pursuant to such registration statement for any reason (other than by reason of a permissible delay under the terms of the 2012 RRA) after the registration statement has been declared effective by the SEC (each such event, a "Registration Default"), then we have agreed to pay each of the investors as liquidated damages an amount equal to 0.5% of the purchase price paid by each such investor with respect to any Registrable Securities then held and not registered pursuant to an effective registration statement, per each 30-day period or portion thereof during which the Registration Default remains uncured thereafter. However, liquidated damages, if any, payable as a result of any Registration Default shall cease to accrue, in any event, after the date that is six (6) months after the closing.

We granted the investors in the 2012 private placement customary indemnification rights in connection with the registration statement. These investors have also granted us customary indemnification rights in connection with the registration statement.

The foregoing description of the 2012 private placement does not purport to be complete and is qualified in its entirety by reference to the Form of Securities Purchase Agreement, the Form of 2012 RRA and the Form of warrant, copies of which were attached as Exhibits 10.1, 10.2 and 10.3, respectively, to the Form 8-K we filed with the SEC on April 4, 2012.

30

2010 Private Placement

On August 11, 2010, we entered into a Securities Purchase Agreement, which we refer to as the 2010 Purchase Agreement, with two accredited institutional investors pursuant to which the Company sold and issued to such investors in a private placement an aggregate of 2,500,000 units, which we refer to as the 2010 Units, which units are comprised of an aggregate of 2,500,000 shares of common stock of the Company and warrants to purchase up to an aggregate of 1,875,000 additional shares of common stock, which we refer to as the 2010 Warrants. Each 2010 Unit represents one share of common stock and a warrant to purchase 0.75 of one share of common stock, at a purchase price of $0.40 per unit for aggregate gross proceeds of $1,000,000; we refer to this transaction throughout this prospectus as the 2010 private placement. The 2010 Warrants are exercisable for a seven-year period from their date of issuance; have an initial exercise price of $0.50 per share subject to adjustment pursuant to the 2010 Warrants; contain a “cashless exercise” feature that allows the holder to exercise the Warrants without a cash payment to the Company under certain circumstances; contain a dividend participation right which allows the holder to receive any cash dividends paid on the Common Stock without exercising the Warrant; contain a provision that provides for the reduction of the exercise price to $0.01 in the event of any payment of cash dividends by us or upon a change of control; and contain anti-dilution provisions in the event of a stock dividend or split, dividend payment or other issuance, reorganization, recapitalization or similar event. The 2010 Warrants are subject to an issuance limitation that prevents the holder of the warrants from exercising the warrants if the holder would beneficially own more than 9.99% of the shares of Common Stock then issued and outstanding, which such limitation cannot be modified by the holder before the sixty-first day after notice to the Company of the holder’s intention to waive the issuance limitation.

The net proceeds to us from the 2010 private placement, after deducting for expenses, were approximately $900,000.

We also granted to the investors in the 2010 private placement the option to acquire, collectively, up to 2,500,000 additional 2010 Units, comprised of an aggregate of 2,500,000 shares of common stock of the Company and warrants to purchase up to an aggregate of 1,875,000 additional shares of common stock at a per unit purchase price of $0.40, which we refer to as the 2010 Call Option. In addition, the investors in the 2010 private placement granted to us the option to require these investors, severally and not jointly, to acquire up to 2,500,000 additional 2010 Units, less any additional 2010 Units acquired under the 2010 Call Option, at the per unit purchase price of $0.40, which we refer to as the 2010 Put Option.

On December 28, 2010, the investors exercised their 2010 Call Option and we received $1,000,000 in proceeds in exchange for 2,500,000 common shares and 1,875,000 additional 2010 Warrants, with an initial exercise price of $0.40 per share, subject to adjustment as provided in the warrants. The net cash proceeds to us from the exercise of the 2010 Call Option, after deducting for expenses, were approximately $990,000.

In connection with the 2010 private placement, the Company also entered into a Registration Rights Agreement with the Investors, which we refer to as the 2010 RRA. Pursuant to the 2010 RRA, the Company agreed to file one or more registration statements with the SEC covering the resale of the shares of common stock issued as part of the 2010 Units and all shares of common stock issuable upon exercise of the 2010 Warrants (the “2010 Registrable Securities”) upon demand of the holders of a majority of the 2010 Registrable Securities. Pursuant to the 2010 RRA, we also granted the Investors certain piggyback registration rights, pursuant to which the investors in the 2010 private placement have elected to include the securities they acquired in this registration statement. The Company also agreed to use its commercially reasonable efforts to keep the registration statements effective for a specified period.

Affiliates of Xmark were the sole investors in the 2010 private placement. Together with its affiliates, Xmark beneficially owned approximately 67.5% of the Company's outstanding common stock prior to the 2010 private placement. Xmark is the sole manager of Goodnow and possesses sole power to vote and direct the disposition of all securities of the Company held by Goodnow. Goodnow has the right to designate up to two directors for election to

the Company's Board of Directors pursuant to the terms of a purchase agreement between Goodnow and the Company. David C. Cavalier, a current executive officer and director of the Company, is President of Goodnow.

The foregoing description of the 2010 private placement does not purport to be complete and is qualified in its entirety by reference to the 2010 RRA, 2010 Purchase Agreement, and 2010 Warrants attached as exhibits 4.1, 10.1 and 10.2, respectively, to the Form 8-K we filed with the SEC on August 12, 2010.

2009 Private Placement and conversion

On October 6, 2009, we entered into a Securities Purchase and Exchange Agreement, which we refer to as the 2009 Purchase Agreement, with several accredited institutional investors pursuant to which we sold and issued to the investors in a private placement an aggregate of 5,892,857 units, which we refer to as the 2009 Units, comprised of an aggregate of 5,892,857 shares of our common stock and warrants to purchase up to an aggregate of 11,785,714 additional shares of Common, which we refer to as the 2009 Warrants, with an initial exercise price of $0.28 per share, subject to adjustment pursuant to the 2009 Warrants. Each 2009 Unit represents one share of common stock and a 2009 Warrant to purchase two shares of common stock, at a purchase price of $0.28 per Unit for aggregate gross proceeds of $1,650,000, we refer to this transaction throughout the prospectus as the 2009 private placement. The 2009 Warrants are exercisable for a seven year period from their date of issuance; contain a "cashless exercise" feature that allows the holder to exercise the 2009 Warrants without a cash payment to the Company under certain circumstances; contain a dividend participation right which allows the holder to receive any cash dividends paid on the Common Stock without exercising the 2009 Warrant and contain a provision that provides for the reduction of the exercise price to $0.01 in the event of any such payment of cash dividends by the Company or upon a change of control and contain anti-dilution provisions in the event of a stock dividend or split, dividend payment or other issuance, reorganization, recapitalization or similar event. The 2009 Warrants are subject to an issuance limitation that prevents the holder of the warrants from exercising the warrants if the holder would beneficially own more than 9.99% of the shares of Common Stock then issued and outstanding, which such limitation cannot be modified by the holder before the sixty-first day after notice to the Company of the holder's intention to waive the issuance limitation.

The net proceeds to us from the 2009 private placement, after deducting for expenses, were approximately $1.6 million.

We also granted to the investors in the 2009 private placement the option to acquire, collectively, up to an additional 5,892,857 additional 2009 Units, comprised of an aggregate of 5,892,857 shares of common stock and warrants to purchase up to an aggregate of 11,785,714 additional shares of common stock at the per Additional Unit purchase price of $0.28, which we refer to as the 2009 Call Option. In addition, the Investors granted to us the option to require these investors, severally and not jointly, to acquire up to 5,892,857 additional 2009 Units, less any 2009 Units acquired under the 2009 Call Option, at the per unit purchase price of $0.28, which we refer to as the 2009 Put Option.

On July 30, 2010, the Company exercised the 2009 Put Option. As a result of the exercise, the Company received $1.65 million in gross proceeds from the investors in exchange for 5,892,857 additional 2009 Units, comprised of an aggregate of 5,892,857 shares of common stock and warrants to purchase up to an aggregate of 11,785,714 additional shares of common stock at a purchase price of $0.28 per share.

In addition, the investors agreed to convert all $1,000,000 of the Company's Senior Convertible Notes issued in 2008, which we refer to as the 2008 Notes into common stock at a conversion rate of $0.35 per share, resulting in the issuance to the investors of 2,857,143 shares of common stock, which we refer to as the Conversion Shares, and to exchange their remaining option to purchase an additional $4,000,000 in Senior Convertible Notes for warrants to purchase up to 14,285,714 shares of Common Stock in substantially the same of form and terms of the 2009 Warrants issued in the 2009 private placement, including an initial exercise price of $0.28 per share, subject to adjustment pursuant to the warrants, which we refer to as the Note Warrants. As consideration for the investors to convert the 2008 Notes, the Company agreed to exchange warrants to purchase up to 2,000,000 shares of Common Stock issued to the investors in connection with the sale of the 2008 Notes, warrants to purchase up to 2,150,000 shares of Common Stock issued to the investors and one of their affiliates in connection with a financing completed in November 2005 and warrants to purchase up to 13,392,857 shares of Common Stock issued to the Investors in connection with a financing completed in March 2009 in exchange for warrants to purchase up to 17,542,857 shares of Common Stock in substantially the same form and terms of the 2009 Warrants issued in the 2009 private

placement, including an initial exercise price of $0.28 per share, subject to adjustment pursuant to the warrants, we refer to these warrants as the Exchange Warrants. We refer to the series of transactions described in this paragraph collectively as the conversion.

On December 24, 2009, the Company entered into an amendment to the 2009 Purchase Agreement, which we refer to as the Purchase Agreement Amendment, pursuant to which the Company agreed to lower the conversion price of the 2008 Notes from $0.35 per share to $0.28 per share and as a result, issued to the investors in the 2009 private placement an additional 714,286 shares of the Company's common stock upon conversion of the 2008 Notes. The Purchase Agreement Amendment was executed to resolve a misunderstanding regarding one of the financing terms between the investors and us. The Company did not receive any proceeds from the issuance of additional shares.

In connection with the 2009 private placement and the conversion, we also entered into a Registration Rights Agreement, which we refer to as the 2009 RRA, with the investors. Pursuant to the 2009 RRA, we agreed to file one or more registration statements with the SEC covering the resale of the shares issued in the 2009 private placement, the Conversion Shares, 5,357,143 shares of common stock issued to the same investors in a previous private placement that closed in March 30, 2009 and all shares of common stock issuable upon exercise of the 2009 Warrants, the Note Warrants and the Exchange Warrants (collectively, the "2009 Registrable Securities") upon demand of the holders of a majority of the 2009 Registrable Securities. The Company also agreed to use its commercially reasonable efforts to keep the Registration Statements effective for a specified period.

Affiliates of Xmark were the sole investors in the 2009 private placement and, together with the Company, were the sole participants in the Conversion. Together with its affiliates, Xmark beneficially owned approximately 55% of the Company's outstanding common stock prior to the 2009 private placement and the Conversion. As disclosed above, Xmark Opportunity Partners, LLC is the sole manager of Goodnow, and possesses sole power to vote and direct the disposition of all securities of the Company held by Goodnow. Goodnow has the right to designate up to two directors for election to the Company's Board of Directors pursuant to the terms of a purchase agreement between Goodnow and the Company. David C. Cavalier, a current executive officer and director of the Company, is President of Goodnow.

The foregoing description of the 2009 private placement and conversion does not purport to be complete and is qualified in its entirety by reference to the 2009 RRA, 2009 Purchase Agreement and 2009 Warrants attached as exhibits 4.1, 10.1 and 10.2, respectively, to the Form 8-K we filed with the SEC on October 6, 2009 and by reference to the Purchase Agreement Amendment attached as exhibit 10.1 to the Form 8-K we filed with the SEC on December 28, 2009.

Each of the private placements noted above were made in reliance on Section 4(2) of the Securities Act, and Rule 506 promulgated thereunder. The investors who participated in these three private placements and the associated conversions and secondary closings, as the case may be, are referred to throughout this prospectus as the selling stockholders.

2013 Warrant Repricing, Exercise and Lockup Agreement

Effective February 15, 2013, the Company and each of Xmark JV Investment Partners, LLC, Xmark Opportunity Fund, Ltd. and Xmark Opportunity Fund, L.P. (collectively, the "Xmark Entities") entered into a Warrant Repricing, Exercise and Lockup Agreement (the "Xmark Warrant Agreement") pursuant to which the Company agreed to reduce the exercise price of outstanding warrants to purchase an aggregate of up to 59,149,000 shares of Common stock held by the Xmark Entities (the "Xmark Warrants") to $0.01 per shares. The Xmark Warants were issued in connection with the transactions previously described within this section of the Prospectus. In consideration for the reduction of the exercise price of the Xmark Warrants, each of the Xmark Entities agreed to immediately exercise all of the Xmark Warrants by cashless exercise. The Xmark Warrant Agreement also provides that the Xmark Entities will not transfer the shares issuable upon exercise of the Xmark Warrants (the "Xmark Warrant Shares") until the Company either (i) declares a cash dividend on its common stock or otherwise makes a cash distribution or (ii) effects a Change of Control, subject in each case to the terms of the Xmark Warrant Agreement.

33

USE OF PROCEEDS

All proceeds from the sale of our common stock covered by this prospectus will belong to the selling stockholders who offer and sell their shares. We will not receive any proceeds from the sale of the common stock by the selling stockholders. A portion of the shares covered by this prospectus are issuable upon exercise of warrants to purchase our common stock. Upon any exercise of the warrants for cash, the selling stockholders would pay us the exercise price of the warrants. Under certain conditions set forth in the warrants, the warrants are exercisable on a cashless basis. If any warrants are exercised on a cashless basis, we would not receive any cash payment from the selling stockholders upon any exercise of such warrants.

DETERMINATION OF OFFERING PRICE

This offering is being made solely to allow the selling stockholders to offer and sell shares of common stock to the public. The selling stockholders may offer for resale some or all of their shares at the time and price that they choose. On any given day, the price per share is likely to be based on the quoted price for the common stock on the OTC Bulletin Board on the date of sale, unless shares are sold in private transactions. Consequently, we cannot currently make a determination of the price at which shares offered for resale pursuant to this prospectus may be sold.

MARKET INFORMATION / PRICE RANGE OF COMMON STOCK / DIVIDENDS

Price Range of Common Stock

Our common stock is quoted on the OTC Bulletin Board under the symbol “AOLS.” The following sets forth the quarterly high and low trading prices as reported by the OTC Bulletin Board for the periods indicated. These prices are based on quotations between dealers, which do not reflect retail mark-up, markdown or commissions, and do not necessarily represent actual transactions.

	High	Low
Fiscal Year Ending September 30, 2011		
October 1, 2010 through December 31, 2010	$0.70	$0.37
January 1, 2011 through March 31, 2011	$1.10	$0.46
April 1, 2011 through June 30, 2011	$0.71	$0.31
July 1, 2011 through September 30, 2011	$0.53	$0.36
Fiscal Year Ending September 30, 2012		
October 1, 2011 through December 31, 2011	$0.55	$0.30
January 1, 2012 through March 31, 2012	$0.41	$0.30
April 1, 2012 through June 30, 2012	$0.41	$0.21
July 1, 2012 through September 30, 2012	$0.44	$0.21
Fiscal Year Ending September 30, 2013		
October 1, 2012 through December 31, 2012	$0.39	$0.22
January 1, 2013 through March 31, 2013	$0.42	$0.28
April 1, 2013 through June 30, 2013	$0.46	$0.32
July 1, 2013 through September 30, 2013	$0.34	$0.22
Fiscal Year Ending September 30, 2014		
October 1, 2013 through December 31, 2013	$0.29	$0.23
January 1, 2014 through March 31, 2014	$0.32	$0.23
April 1, 2014 through May 19, 2014	$0.27	$0.24

On May 19, 2014, the last reported sales price of our common stock on the OTC Bulletin Board was $0.26 per share.

Approximate Number of Equity Security Holders

As of December 11, 2013 the number of record holders of our common stock was 100, and we estimate that the number of beneficial owners was approximately 4,000.

Dividend Policy

We have never paid a cash dividend on our common stock and we do not anticipate paying cash dividends on our common stock in the foreseeable future. A future cash dividend, if paid, would enable the Xmark Entities to dispose

of up to 59.1 million shares of common stock that were previously subject to warrants. Such parties are bound by an agreement which provides that the Xmark Entities will not transfer the shares issued upon exercise of the Xmark Warrants (the "Xmark Warrant Shares") until the Company either (i) declares a cash dividend on its common stock or otherwise makes a cash distribution or (ii) effects a Change of Control, subject in each case to the terms of the Xmark Warrant Agreement. See "Certain Relationships and Related Party Transactions – 2013 Warrant Repricing, Exercise and Lockup Agreement."

Moreover, any additional preferred stock to be issued and any future credit facilities might contain restrictions on our ability to declare and pay dividends on our common stock. We plan to retain all earnings, if any, for the foreseeable future for use in the operation of our business and to fund future growth.

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

Introduction

You should read the following discussion in conjunction with our consolidated financial statements and the notes appearing elsewhere in this Annual Report on Form 10-K. The following discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of various factors, including those discussed in Item 1A – "Risk Factors" and elsewhere in this Annual Report on Form 10-K.

Overview

We are developing a new class of catalytic antioxidant compounds as medical countermeasures against biological, chemical and radiological weapons as well as for diseases and disorders of the central nervous system, respiratory system, autoimmune system and oncology. Our initial target indications are as a protective agent against the effects of acute radiation syndrome, sulfur mustard gas exposure and chlorine gas exposure. We have reported positive safety results from two Phase I clinical trials of 10150, our lead drug candidate, with no serious adverse events noted.

We had net loss of $3,208,000 and net income of $1,698,000 for the fiscal years ended September 30, 2013 and 2012, respectively. We had an accumulated deficit of approximately $183,922,000 at September 30, 2013. We have not yet generated any revenue from product sales and we cannot provide assurances that we will receive any product revenue from non-government sales in the foreseeable future, if at all.

We have not had any recurring revenue from product sales. Therefore, we have relied on public or private equity offerings, debt financings, collaboration arrangements and grants to finance our operations.

Corporate Matters

On February 11, 2011, we signed a five-year, cost-plus contract with BARDA for the development of 10150 as a MCM against Lung-ARS (the "BARDA Contract"). BARDA is the government agency responsible for the advanced development and purchase of medical countermeasures for chemical, biological, radiological and nuclear threats. The contract fully funds the advanced development of 10150 through approval by the FDA under 21 CFR Part 314 Subpart I and Part 601 Subpart H (the "Animal Rule"). The Animal Rule allows for approval of drugs using only animal studies when human clinical trials cannot be conducted ethically.

Pursuant to the BARDA Contract we were awarded approximately $10.4 million for the base period of the contract (from February 2011 to April 2012). On April 16, 2012, we announced that BARDA had exercised two options under the BARDA Contract worth approximately $9.1 million. On September 17, 2013, we announced that BARDA had exercised $6.0 million in additional contract options, bringing the total exercised contract value to date to approximately $25.5 million. We may receive up to an additional $92.9 million in options exercisable over the remaining years of the contract. Options are exercised based on the progress of the development program, including the completion of clinical trials or manufacturing tasks under previously exercised options. The final goal of the contract is to achieve FDA approval for 10150 and the development of commercial manufacturing capability. In order to achieve these goals, we believe it will be necessary to exercise the majority of the options in the contract. We also believe that BARDA is likely to continue to exercise options as long as 10150 continues to perform in testing for Lung-ARS. In the event we begin sales to the U.S. government under an EUA, we believe that BARDA is highly likely to exercise the majority of the remaining options under the contract. One of the requirements of an EUA is that the development program continue towards the goal of FDA approval. If all of the options are exercised by BARDA,

the total value of the contract would be approximately $118.4 million.

Research and development activities under the contract to date include animal efficacy studies, animal model development with radiation survival curve studies, dosing studies, bulk drug manufacturing, bulk drug and final drug product manufacturing, validation testing, compliance studies, stability studies and the filing of an orphan drug status application and a fast track designation application with the FDA.

Among the key deliverables accomplished in the program, we hired the necessary personnel required under the contract, completed studies in mice and NHPs, manufactured a GMP batch for use in human safety studies and a non-GMP batch of material for use in animal efficacy studies, developed significant improvements to the process for manufacturing compound which will reduce the cost of producing the drug; made several discoveries related to the mechanism of damage of radiation and mechanism of action of 10150; met with the FDA to discuss our IND filing for Lung-ARS; and designed and initiated quality, reporting, risk management and project management programs required under the BARDA Contract.

In the event BARDA exercises the remaining options under the contract, we expect to conduct, among other things, bulk drug and final drug product manufacturing, stability studies, animal pivotal efficacy studies, human clinical safety studies and Phase I, Phase II and pre-new drug application ("NDA") meetings and applications with the FDA.

On July 29, 2013, Aeolus presented the results and deliverables that had been produced during the first 28 months of the contract at an "In-Progress Review" meeting with BARDA, and requested the exercise of additional contract options.

On September 17, 2013 we announced that BARDA had exercised $6.0 million in additional options under the contract. The options that BARDA exercised will fund our IND filing for 10150 as a treatment for Lung-ARS, additional animal efficacy studies designed to optimize timing and duration of dosing and the continued development of large-scale GMP manufacturing capability to meet potential future demand. When combined with our ongoing studies in non-human primates and our completed work in GMP manufacturing development, these options will help Aeolus meet the requirements for a pre-EUA filing for AEOL in 2014. For additional developments under the BARDA Agreement preceding our 2013 fiscal year, please see Item 1 "Business – BARDA Contract; Background and Recent Developments."

On May 5, 2014, a modification of the BARDA contract was effected, which is described below under "Results of Operations."

Under the BARDA Contract, we plan to provide to BARDA the data necessary in order to file an Emergency Use Authorization ("EUA") with the FDA in 2014. An EUA is a legal means for the FDA to approve new drugs or new indications for previously approved drugs that may be stockpiled and used during a declared emergency. To date, about half of the procurements for the national stockpile for medical countermeasures against potential terrorist events have been made under EUAs, prior to approval by the FDA for the indication in question.

Results of Operations

Three months ended March 31, 2014 versus three months ended March 31, 2013

We had net loss of $437,000 and net loss of $5,782,000 (including a non-cash adjustment for increases in valuation of warrants of $5,020,000), and cash outflows from operations of $14,000 and $1,634,000 for the three months ended March 31, 2014 and March 31, 2013, respectively.

Revenue for the three months ended March 31, 2014 was $1,438,000, which compares to $859,000 for the three months ended March 31, 2013. The revenue is from the collaboration with BARDA announced on February 11, 2011. Since being awarded the BARDA Contract, we generate contract revenue from a cost-plus fee arrangement. Revenues on reimbursable contracts are recognized as costs are incurred, generally based on allowable costs incurred during the period, plus any recognizable earned fee. We consider fixed fees under cost-plus fee contracts to be earned in proportion to the allowable costs incurred in performance of the contract.

Research and Development ("R&D") expenses increased $555,000, or 90%, to $1,173,000 for the three months ended March 31, 2014 from $618,000 for the three months ended March 31, 2013. The increase is primarily attributable to work related to the BARDA Contract.

General and administrative ("G&A") expenses decreased $301,000, or 30%, to $702,000 for the three months ended March 31, 2014 from $1,003,000 for the three months ended March 31, 2013. Investor relations expenses decreased by $95,000 due to no fundraising expenses in the current period. Current year legal and accounting expenses also decreased a combined $98,000 due to the prior year's restatement.

Six months ended March 31, 2014 versus six months ended March 31, 2013

We had net loss of $1,132,000 and net loss of $1,755,000 (including a non-cash adjustment for increases in valuation of warrants of $510,000), and cash outflows from operations of $349,000 and $1,913,000 for the six months ended March 31, 2014 and March 31, 2013, respectively.

Revenue for the six months ended March 31, 2014 was $2,231,000, which compares to $2,201,000 for the six months ended March 31, 2013. The revenue is from the collaboration with BARDA announced on February 11, 2011. Since being awarded the BARDA Contract, we generate contract revenue from a cost-plus fee arrangement. Revenues on reimbursable contracts are recognized as costs are incurred, generally based on allowable costs incurred during the period, plus any recognizable earned fee. We consider fixed fees under cost-plus fee contracts to be earned in proportion to the allowable costs incurred in performance of the contract.

Research and Development ("R&D") expenses increased $93,000, or 5%, to $1,880,000 for the six months ended March 31, 2014 from $1,787,000 for the six months ended March 31, 2013. The increase is primarily attributable to work related to the BARDA Contract.

General and administrative ("G&A") expenses decreased $176,000, or 11%, to $1,483,000 for the six months ended March 31, 2014 from $1,659,000 for the six months ended March 31, 2013. Legal fees decreased by $116,000 due to the prior year's restatement. Investor relations expenses decreased by $87,000 due to no fundraising expenses in the current period.

Fiscal Year Ended September 30, 2013 Compared to Fiscal Year Ended September 30, 2012

We had net loss of $3,208,000 (including a non-cash adjustment for increases in valuation of warrants of approximately $510,000) for the fiscal year ended September 30, 2013, versus net income of $1,698,000 (including a non-cash gain for decreases in valuation of warrants of $4,069,000) for the fiscal year ended September 30, 2012.

Revenue for the fiscal year ended September 30, 2013 was approximately $3,928,000, compared to $7,293,000 revenue for the fiscal year ended September 30, 2012. The revenue is from the collaboration with BARDA announced on February 11, 2011. Since being awarded the BARDA Contract, we generate contract revenue from a cost-plus fee arrangement. Revenues on reimbursable contracts are recognized as costs are incurred, generally based on allowable costs incurred during the period, plus any recognizable earned fee. We consider fixed fees under cost-plus fee contracts to be earned in proportion to the allowable costs incurred in performance of the contract. Revenue was lower primarily due to the timing of work related to the BARDA contract.

Research and Development

Research and development expenses decreased by $3,108,000, or 48%, to approximately $3,360,000 for the fiscal year ended September 30, 2013 from approximately $6,468,000 for the fiscal year ended September 30, 2012. R&D expenses were lower during the fiscal year ended September 30, 2013 versus September 30, 2012 due to the timing of work related to the BARDA Contract. For the fiscal year ended September 30, 2013, consultant expenses decreased by $495,000 due to costs associated with the BARDA Contract. Preclinical fees decreased about $1,639,000 in 2013 over the comparable period in 2012 due to decreased animal studies to support our ARS development program. Manufacturing expenses decreased about $941,000. We currently have eight development programs in progress: studies of 10150 as a medical countermeasure against the effects of sulfur mustard gas and chlorine gas on the lungs, against the effects of radiation on the lungs and on the gastro-intestinal tract, and as a treatment for cancer, studies of 11207 and several other compounds as potential treatments for Parkinson's disease and epilepsy, and a study of Hexyl as protectant against radiation exposure.

R&D expenses for our antioxidant program have totaled approximately $52,083,000 from inception through September 30, 2013. Because of the uncertainty of our research and development and clinical studies, we are unable to predict the total level of spending on the program or the program completion date. Future R&D expenses will be determined primarily by the exercise of options under the BARDA contract and the possible initiation of human clinical studies in oncology. We anticipate that much of the R & D expense, except for the possible oncology studies, will be reimbursed by the BARDA contract.

General and Administrative

General and administrative ("G&A") expenses include corporate costs required to support Aeolus, our employees and consultants and our stockholders. These costs include personnel and outside costs in the areas of legal, human resources, investor relations and finance. Additionally, we include in general and administrative expenses such costs as rent, repair and maintenance of equipment, depreciation, utilities, information technology and procurement costs that we need to support the corporate functions listed above.

G&A expenses increased approximately $70,000, or 2%, to approximately $3,266,000 for the fiscal year ended September 30, 2013 from about $3,196,000 for the fiscal year ended September 30, 2012. Consulting stock expense increased by about $287,000 as a result of increased awards for the period. The increase in consulting stock expense was partially offset by a decrease in salaries and benefits of about $172,000.

Other Income or Expense

As previously disclosed, certain of our warrants to purchase common stock were deemed to be a liability upon adoption of a new accounting pronouncement on October 1, 2009. Subsequent changes to the fair market value resulted in an offsetting loss in the statements of operations of approximately $510,000 for the fiscal year ended September 30, 2013, as compared to a gain of approximately $4,069,000 for the fiscal year ended September 30, 2012. The warrant liability and revaluations have not and will not have any impact on our working capital, liquidity or business operations.

Fiscal Year Ended September 30, 2012 Compared to Fiscal Year Ended September 30, 2011

We had net income of $1,698,000 (including a non-cash gain for decreases in valuation of warrants of approximately $4,069,000) for the fiscal year ended September 30, 2012, versus net income of $299,000 (including a non-cash gain for decreases in valuation of warrants of $3,887,000) for the fiscal year ended September 30, 2011.

Revenue for the fiscal year ended September 30, 2012 was approximately $7,293,000, compared to $4,821,000 revenue for the fiscal year ended September 30, 2011. The revenue is from the collaboration with BARDA announced on February 11, 2011. Since being awarded the BARDA Contract, we generate contract revenue from a cost-plus fee arrangement. Revenues on reimbursable contracts are recognized as costs are incurred, generally based on allowable costs incurred during the period, plus any recognizable earned fee. We consider fixed fees under cost-plus fee contracts to be earned in proportion to the allowable costs incurred in performance of the contract.

Research and Development

Research and development expenses increased by $1,413,000, or 28%, to approximately $6,468,000 for the fiscal year ended September 30, 2012 from approximately $5,055,000 for the fiscal year ended September 30, 2011. R&D expenses were higher during the fiscal year ended September 30, 2012 versus September 30, 2011 primarily due to the timing of work related to the BARDA Contract and the fact that we only operated under the contract for 8 months of fiscal 2011 versus a full year in 2012. For the fiscal year ended September 30, 2012, consultant expenses increased by $626,000 due to costs associated with the BARDA Contract. Preclinical fees increased about $202,000 over the comparable period in 2011 due to increased animal studies to support our ARS development program. The increase also reflected production and development of 10150 for planned upcoming BARDA studies, for which manufacturing expenses increased about $590,000. We currently have eight development programs in progress: studies of 10150 as a medical countermeasure against the effects of sulfur mustard gas and chlorine gas on the lungs, against the effects of radiation on the lungs and on the gastro-intestinal tract, and as a treatment for cancer, studies of AEOL 11207 and several other compounds as potential treatments for Parkinson's disease and epilepsy, and a study of Hexyl as

protectant against radiation exposure.

R&D expenses for our antioxidant program have totaled approximately $48,723,000 from inception through September 30, 2012. Because of the uncertainty of our research and development and clinical studies, we are unable to predict the total level of spending on the program or the program completion date. However, we expect R&D expenses during fiscal year 2013 will be comparable to fiscal 2012 since we will continue development under the BARDA Contract. We anticipate that much of the R&D spending should be reimbursed under that contract.

General and administrative ("G&A") expenses include corporate costs required to support Aeolus, our employees and consultants and our stockholders. These costs include personnel and outside costs in the areas of legal, human resources, investor relations and finance. Additionally, we include in general and administrative expenses such costs as rent, repair and maintenance of equipment, depreciation, utilities, information technology and procurement costs that we need to support the corporate functions listed above.

G&A expenses decreased approximately $472,000, or 13%, to approximately $3,196,000 for the fiscal year ended September 30, 2012 from about $3,668,000 for the fiscal year ended September 30, 2011. Consulting fees decreased by about $456,000 due to shifting some contractors to employees. As a result, the decrease in consulting fees was partially offset by an increase in salaries and wages of about $304,000. Consulting stock expense decreased by about $356,000 as a result of fewer awards and a lower stock price for the period.

Other Income or Expense

As previously disclosed, certain of our warrants to purchase common stock were deemed to be a liability upon adoption of a new accounting pronouncement on October 1, 2009. Subsequent changes to the fair market value resulted in an offsetting gain in the statements of operations of approximately $4,069,000 for the fiscal year ended September 30, 2012, as compared to approximately $3,887,000 for the fiscal year ended September 30, 2011. The warrant liability and revaluations have not and will not have any impact on our working capital, liquidity or business operations.

Liquidity and Capital Resources

We had cash and cash equivalents of $520,000 on March 31, 2014, and $869,000 on September 30, 2013. The decrease in cash was primarily due to cash provided by operating activities.

We had net loss of $1,132,000 for the six months ended March 31, 2014. We had cash outflows from operations of $349,000. We expect to incur additional losses and negative cash flow from operations during the remainder of fiscal year 2014 and for several more years.

We had net loss of $3,208,000 (including a non-cash loss for increases in valuation of warrants of $510,000) for the fiscal year ended September 30, 2013, compared to net income of $1,698,000 (including a non-cash gain for decreases in valuation of warrants of $4,069,000) for the fiscal year ended September 30, 2012. For the same periods, we had cash outflows from operations of approximately $2,970,000 and $879,000, respectively, with the outflows increasing in 2013 due to payment of accrued accounts payable following our February and March financing.

As of September 30, 2013, we had approximately $869,000 of cash and cash equivalents, an increase of $588,000 from September 30, 2012. In order to fund on-going operating cash requirements, or to accelerate or expand our oncology and other programs, we may need to raise significant additional funds.

On February 11, 2011, we were awarded the BARDA Contract to fund the development of AEOL 10150 as a medical countermeasure for Lung-ARS from its current status to FDA approval in response to Special Instructions Amendment 4 to a Broad Agency Announcement (BAA-BARDA-09-34) for advanced research and development of medical countermeasures for chemical, biological, radiological and nuclear threats. The contract value could be up to $118.4 million depending on options exercised by BARDA and the requirements for approval by the FDA. Under the BARDA Contract, substantially all of the costs of the development of AEOL 10150 as a medical countermeasure for pulmonary injuries resulting from an acute exposure to radiation from a radiological/nuclear accident or attack, particularly injuries associated with ARS or Delayed Effects of Acute Radiation Exposure would be paid for by the U.S. government through BARDA funding. We recognized $2,231,000 in revenue during the six months ended

March 31, 2014 related to the BARDA Contract. The BARDA Contract includes provisions to cover some, but not all, general corporate overhead as well as a small provision for profit. The net impact of the BARDA Contract on our liquidity is that our projected cash burn has been reduced. Certain costs, typically those of being a public company, like legal costs associated with being a public company, Investor Relations/Public Relations costs and patent-related costs, are not included in overhead reimbursement in the BARDA Contract. In order to fund on-going operating cash requirements or to accelerate or expand our oncology and other programs we may need to raise significant additional funds.

On May 5, 2014, the Company executed a Modification of Contract (the "Modification") with BARDA. The purpose of the Modification is to (1) make available $1,778,000 to reimburse the Company for actual costs incurred under the first three years of the BARDA Contract, (2) establish an increased provisional indirect billing rate for fiscal year 2014 and the rest of the BARDA Contract period of performance, and (3) establish a cap on the indirect billing rate for the remaining contract period of performance. The effect of the Modification will be (a) to increase the cash balance of the Company and (b) to increase the billing rate for indirect costs under the contract, in each case subsequent to the period ended March 31, 2014.

We do not have any revenues from product sales and, therefore, we rely on investors, grants, collaborations and licensing of our compounds to finance our operations. We generate limited revenue from reimbursable, cost-plus fee R&D contracts and grants. Revenues on reimbursable contracts are recognized as costs are incurred, generally based on allowable costs incurred during the period, plus any recognizable earned fee. We consider fixed fees under cost-plus fee contracts to be earned in proportion to the allowable costs incurred in performance of the contract.

On February 19, 2013 and March 4, 2013, the Company entered into Securities Purchase Agreements (the “Purchase Agreements”) with certain accredited investors (the “Purchasers”). Under the terms of the agreements, the Company received approximately $3,616,000 in gross proceeds in exchange for the issuance of an aggregate of 14,462,000 units (the “Units”), consisting of 14,462,000 shares of common stock and 14,462,000 warrants, at a purchase price of $0.25 per unit. Each Unit consists of (i) one share of common stock (the “Common Shares”) and (ii) a five -year warrant to purchase one share of the Company’s common stock (the “Warrants”). The Warrants have an initial exercise price of $0.25 per share.

On February 19, 2013, the Company received $3,225,000 in gross proceeds in exchange for the issuance of an aggregate of 12,900,000 Units, which consisted of 12,900,000 shares of common stock and 12,900,000 warrants.

On March 4, 2013, the Company received approximately $390,000 in gross proceeds in exchange for the issuance of an aggregate of 1,562,000 Units, which consisted of 1,562,000 shares of common stock and 1,562,000 warrants.

Net cash proceeds from the February/March 2013 Financing, after deducting for expenses, were approximately $3,558,000. The Company also incurred non-cash expenses in the form of 365,000 warrants issued to consultants, at similar terms as the financing Warrants, for services provided. The Company issued a total of 14,827,000 warrants in connection with the February/March 2013 Financing.

Our ongoing future cash requirements will depend on numerous factors, particularly the progress of our catalytic antioxidant program and clinical trials and our ability to negotiate and complete collaborative agreements or out-licensing arrangements. In order to help fund our on-going operating cash requirements, we intend to seek new collaborations for our antioxidant research program that include initial cash payments and on-going research support. In addition, we might sell additional shares of our stock and/or convertible debentures and explore other strategic and financial alternatives, including a merger with another company, the sale of stock and/or debt, the establishment of new collaborations for current research programs, that include initial cash payments and ongoing research support and the out-licensing of our compounds for development by a third party. We expect to incur additional losses and negative cash flow from operations for several more years.

Under the BARDA Contract, substantially all of the costs of the development of 10150 as a medical countermeasure for pulmonary injuries resulting from an acute exposure to radiation from a radiological/nuclear accident or attack, particularly injuries associated with ARS or DEARE would be paid for by the U.S. government through BARDA funding. We recognized approximately $3,928,000 in revenue during the fiscal year ended September 30, 2013 related to the BARDA Contract.

43

Since the terms of the BARDA Contract include provisions to cover some general corporate overhead as well as a small provision for profit, the result on our liquidity is that our cash burn is related to the level of non-BARDA contract activities that we pursue. In order to fund on-going operating cash requirements, or to further accelerate or expand our programs, we expect to need to raise significant additional funds in order to pursue non-BARDA contract programs, including our oncology program.

We have incurred significant losses from operations to date. Our ongoing future cash requirements will depend on numerous factors, particularly the progress of our catalytic antioxidant program, potential government procurements for the national stockpile, clinical trials and/or ability to negotiate and complete collaborative agreements or out-licensing arrangements. In addition, we might sell additional shares of our stock and/or debt and explore other strategic and financial alternatives, including a merger or joint venture with another company, the sale of stock and/or debt, the establishment of new collaborations for current research programs, that include initial cash payments and ongoing research support and the out-licensing of our compounds for development by a third party.

There are significant uncertainties as to our ability to access potential sources of capital. We may not be able to enter into any collaboration on terms acceptable to us, or at all, due to conditions in the pharmaceutical industry or in the economy in general or based on the prospects of our catalytic antioxidant program. Even if we are successful in obtaining collaboration for our antioxidant program, we may have to relinquish rights to technologies, product candidates or markets that we might otherwise develop ourselves. These same risks apply to any attempt to out-license our compounds.

Similarly, due to market conditions, the illiquid nature of our stock and other possible limitations on equity offerings, we may not be able to sell additional securities or raise other funds on terms acceptable to us, if at all. Any additional equity financing, if available, could result in substantial dilution to existing stockholders.

Our forecast of the period of time through which our financial resources will be adequate to support our operations is forward-looking information, and actual results could vary.

Contractual Obligations

Our contractual obligations (in thousands) as of September 30, 2013 were as follows:

		Payments due by period			
Contractual Obligations	Total	Less than 1 Year	1-3 Years	3-5 Years	More than 5 Years
Short and long-term debt	$ —	$ —	$ —	$ —	$ —
Capital lease obligations	—	—	—	—	—
Operating leases	1	1	—	—	—
Purchase obligations	—	—	—	—	—
Total	$ 1	$ 1	$ —	$ —	$ —

Off Balance Sheet Arrangements

We do not have any off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources as defined under the rules of SEC Release No. FR-67. We do not have any capital leases.

Relationship with Goodnow Capital, LLC and Xmark Opportunity Partners, LLC

In July 2003, we initiated a series of transactions that led to our corporate reorganization and recapitalization. We obtained an aggregate of $8,000,000 in secured bridge financing in the form of convertible promissory notes we issued to Goodnow Capital, LLC ("Goodnow"). A portion of this financing allowed us to pay our past due payables and become current. We used the remainder for our operations, including a toxicology study for our catalytic antioxidant compounds under development as a treatment for ALS.

We completed our corporate reorganization on November 20, 2003. The reorganization involved the merger of our former parent company into one of our wholly owned subsidiaries. Subsequent to our 2003 reorganization, we completed a number of equity and debt financings, the majority of which included Xmark as investors. As of September 30, 2013, Xmark Opportunity Partners, LLC, through its management of Goodnow and the Xmark Funds, and through the Xmark Voting Trust and options held by David Cavalier, an affiliate of Xmark and the Chairperson of our Board of Directors, had voting power over 72.8% of our outstanding common stock and had beneficial ownership, calculated based on SEC requirements, of approximately 70.2% of our common stock. As a result of this significant ownership, Xmark Opportunity Partners, LLC and its affiliates is able to control future actions voted on by our stockholders.

In addition, under the terms of the warrants to purchase up to 61,822,749 shares of our common stock issued to Xmark on October 6, 2009 as well as subsequent warrant issuances on July 30, 2010, August 11, 2010 and December 28, 2010 (collectively, the "Xmark Warrants"), if we were to pay a dividend on our common stock the exercise price of these warrants would be reset from $0.28 per share or $0.50 per share, as applicable, to $0.01 per share and the warrant holders would also receive any such dividend paid. The Xmark Warrants also contain a provision that provides for the reduction of the exercise price to $0.01 upon a change of control and anti-dilution provisions in the event of a stock dividend or split, dividend payment or other issuance, reorganization, recapitalization or similar event. In addition, the Xmark Warrants, among other restrictions, prohibit the sale of Aeolus to an entity other than one that is publicly traded.

Effective February 19, 2013, the Company and each of Xmark JV Investment Partners, LLC, Xmark Opportunity Fund, Ltd. and Xmark Opportunity Fund, L.P. (collectively, the "Xmark Entities") entered into a Warrant Repricing, Exercise and Lockup Agreement (the "Xmark Warrant Agreement") pursuant to which the Company agreed to reduce the exercise price of outstanding warrants to purchase an aggregate of up to 59,149,999 shares of Common Stock held by the Xmark Entities (the "Xmark Warrants") to $0.01 per share. In consideration for the reduction of the exercise price of the Xmark Warrants, each of the Xmark Entities agreed to immediately exercise all of the Xmark Warrants by cashless exercise. The Xmark Warrant Agreement also provides that the Xmark Entities will not transfer the shares issued upon exercise of the Xmark Warrants (the "Xmark Warrant Shares") until the Company either (i) declares a cash dividend on its common stock or otherwise makes a cash distribution or (ii) effects a Change of Control, subject in each case to the terms of the Xmark Warrant Agreement.

Modifying the exercise price of the warrants to a fixed amount of $0.01 eliminated the requirement for warrant liability accounting treatment and resulted in a charge of $2,084,000, as described under "Warrant Liability" in Note A of the financial statements.

Critical Accounting Policies and Estimates

Our consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America, which require us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues, expenses and related disclosure of contingent assets and liabilities. We evaluate our estimates, judgments and the policies underlying these estimates on a periodic basis as the situation changes, and regularly discuss financial events, policies, and issues with our independent registered public accounting firm and members of our audit committee. We routinely evaluate our estimates and policies regarding revenue recognition; clinical trial, preclinical, manufacturing and patent related liabilities; license obligations; inventory; intangible assets; share-based payments; and deferred tax assets.

We generally enter into contractual agreements with third-party vendors to provide clinical, preclinical and manufacturing services in the ordinary course of business. Many of these contracts are subject to milestone-based invoicing and the contract could extend over several years. We record liabilities under these contractual commitments when we determine an obligation has been incurred, regardless of the timing of the invoice. Patent-related liabilities are recorded based upon various assumptions or events that we believe are the most reasonable to each individual circumstance, as well as based upon historical experience. License milestone liabilities and the related expense are recorded when the milestone criterion achievement is probable. We have not recognized any assets for inventory, intangible items or deferred taxes as we have yet to receive regulatory approval for any of our compounds. Any potential asset that could be recorded in regards to any of these items is fully reserved. In all cases, actual results may differ from our estimates under different assumptions or conditions.

Warrant Liability

On October 1, 2009, we adopted new accounting guidance, originally referred to as EITF 07-5 and recently codified by FASB as ASC Topic 815. The guidance revised previously existing guidance for determining whether an Instrument (or Embedded Feature) is indexed to an entity's own stock. Equity-linked instruments (or embedded features) that otherwise meet the definition of a derivative are not accounted for as derivatives if certain criteria are met, one of which is that the instrument (or embedded feature) must be indexed to the entity's own stock. We applied the new guidance to outstanding instruments as of October 1, 2009. The fair value of the warrants affected by the new guidance at the dates of issuance totaled $8,282,000 and was initially recorded as a component of additional paid-in capital. Upon adoption of the new guidance, we recorded a decrease to the opening balance of additional-paid-in capital of $8,142,000 and recorded a decrease to accumulated deficit totaling $4,353,000, representing the decrease in the fair value of the warrants from the date of issuance to October 1, 2009. The fair value of the warrants at October 1, 2009 of $3,789,000 was classified as a liability in the balance sheet as of that date.

Increases or decreases in fair value of the warrants are included as a component of other income (expenses) in the accompanying statement of operations for the respective period. As of September 30, 2013, the liability for warrants decreased to approximately $0, resulting in an additional loss to the statements of operations for the fiscal year ended September 30, 2013 of approximately $510,000. The warrant liability and revaluations did not have any impact on our working capital, liquidity or business operations.

Effective February 19, 2013, the Company and each of Xmark JV Investment Partners, LLC, Xmark Opportunity Fund, Ltd. and Xmark Opportunity Fund, L.P. (collectively, the "Xmark Entities") entered into a Warrant Repricing, Exercise and Lockup Agreement (the "Xmark Warrant Agreement") pursuant to which the Company agreed to reduce the exercise price of outstanding warrants to purchase an aggregate of up to 59,149,999 shares of Common Stock held by the Xmark Entities (the "Xmark Warrants") to $0.01 per share. In consideration for the reduction of the exercise price of the Xmark Warrants, each of the Xmark Entities agreed to immediately exercise all of the Xmark Warrants by cashless exercise. The Xmark Warrant Agreement also provides that the Xmark Entities will not transfer the shares issuable upon exercise of the Xmark Warrants (the "Xmark Warrant Shares") until the Company either (i) declares a cash dividend on its common stock or otherwise makes a cash distribution or (ii) effects a Change of Control, subject in each case to the terms of the Xmark Warrant Agreement.

Modifying the exercise price of the warrants to a fixed amount of $0.01 eliminated the requirement for warrant liability accounting treatment and resulted in a charge of $2,084,000, as described under "Warrant Liability" in Note B of the financial statements.

Revenue Recognition

We do not currently generate revenue from product sales, but do generate revenue from the BARDA Contract. We recognize revenue from the BARDA Contract in accordance with the authoritative guidance for revenue recognition. Revenue is recognized when all of the following criteria are met: (i) persuasive evidence of an arrangement exists, (ii) delivery (or passage of title) has occurred or services have been rendered, (iii) the seller's price to the buyer is fixed or determinable, and (iv) collectability is reasonably assured. We also comply with the authoritative guidance for revenue recognition regarding arrangements with multiple deliverables.

The BARDA Contract is classified as a “cost-plus-fixed-fee” contract. We recognize government contract revenue in accordance with the authoritative guidance for revenue recognition including the authoritative guidance specific to federal government contracts. Reimbursable costs under the contract primarily include direct labor, subcontract costs, materials, equipment, travel, and indirect costs. In addition, we receive a fixed fee under the BARDA Contract, which is unconditionally earned as allowable costs are incurred and is not contingent on success factors. Reimbursable costs under this BARDA Contract, including the fixed fee, are generally recognized as revenue in the period the reimbursable costs are incurred and become billable.

BUSINESS

General

Overview

Aeolus Pharmaceuticals, Inc. ("we," "us" or "Aeolus") is a Southern California-based biopharmaceutical company leveraging significant U.S. Government funding to develop a platform of novel compounds in biodefense and oncology. The platform consists of over 200 compounds licensed from the University of Colorado ("UC") Duke University ("Duke") and National Jewish Health ("NJH").

Our lead compound, AEOL 10150 ("10150"), is being developed under contract with the Biomedical Advanced Research and Development Authority ("BARDA"), a division of the U.S. Department of Health and Human Services ("HHS"), as a medical countermeasure ("MCM") against the pulmonary sub-syndrome of acute radiation syndrome ("Pulmonary Acute Radiation Syndrome" or "Lung-ARS") and the delayed effects of acute radiation exposure ("DEARE"). 10150 is also being developed as a MCM for the gastrointestinal sub-syndrome of acute radiation syndrome ("GI-ARS") with grant money from the National Institute for Allergy and Infectious Diseases ("NIAID"), one of the National Institutes of Health ("NIH"). Both syndromes are caused by acute exposure to high levels of radiation due to a nuclear detonation or radiological event.

We are also developing 10150 as a MCM for exposure to chemical vesicants (e.g., chlorine gas, sulfur mustard gas and phosgene gas) and nerve agents (e.g., sarin gas and soman gas) with grant money from the NIH Countermeasures Against Chemical Threats ("NIH-CounterACT") program. 10150 previously demonstrated safety and efficacy in animal studies in each of these potential indications, and has previously been tested in two Phase I human clinical trials with no drug-related serious adverse events reported.

We are also developing 10150 for use in combination with radiation therapy for cancer as a treatment to reduce side effects caused by radiation toxicity and improve local tumor control. A significant portion of the development work funded by the BARDA contract is applicable to the development program for radiation oncology, including safety, toxicology, pharmacokinetics and Chemistry, Manufacturing and Controls ("CMC"). Once we complete our first study in healthy normal volunteer patients under the BARDA contract, we plan to initiate studies in cancer patients receiving radiation therapy consistent with our strategy outlined below to use non-dilutive capital sources.

A second and a third compound AEOL 10113 ("Ethyl") and AEOL 10171 ("Hexyl") have been the focus of an NIH NIAID center grant to study their potential as radiation mitigators.

Finally, we have a pipeline of approximately 180 additional compounds. Four of these compounds have demonstrated efficacy as treatments for epilepsy and Parkinson's disease. These studies have been funded by Citizens United for Research in Epilepsy ("CURE") and the Michael J. Fox Foundation, after initial research funded by Aeolus showed promise in these indications. Consistent with our strategy outlined below, the development of additional compounds in our portfolio is dependent on our finding non-dilutive capital sources to fund the work.

We were incorporated in the State of Delaware in 1994. Our common stock trades on the OTCQB under the symbol "AOLS." Our principal executive offices are located at 26361 Crown Valley Parkway, Suite 150 Mission Viejo, California 92691, and our phone number at that address is (949) 481-9825. Our website address is www.aeoluspharma.com. However, the information on, or that can be accessed through our website is not part of this report. We also make available, free of charge through our website, our most recent annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports, as soon as reasonably practicable after such material is electronically filed with or furnished to the SEC.

Strategy

Our strategy is to use non-dilutive capital wherever possible to develop our promising platform of broad-spectrum, catalytic antioxidant compounds in important unmet medical indications of clinical and national strategic importance.

To date, we, and/or our research collaborators, have been awarded more than $150 million in non-dilutive U.S. government funding for three of our leading compounds, 10150, Ethyl and Hexyl. This includes grants and contracts from federal agencies, such as BARDA, NIH-NIAID and NIH-CounterACT. Additionally, research is currently being conducted on several other compounds with funding from private foundations, such as the Michael J. Fox Foundation and CURE.

The expected benefit of this strategy is threefold. First, a significant portion of the research to be completed under the government funding mechanisms, particularly the contract with BARDA, is applicable to our 10150 development program for radiation therapy in cancer patients. Specifically, safety, toxicology, pharmacokinetic and CMC data generated from the BARDA Lung-ARS program can be used to support a New Drug Application ("NDA") for cancer radiation therapy.

Second, cost-plus development contracts, like our contract with BARDA, include funds for overhead and profit. These overhead and profit streams have significantly reduced our cash burn rate, which reduces our need to raise capital and, therefore, dilution.

Third, the purpose of the BARDA development contract is to fund 10150 so that procurements can be made for the national stockpile. Procurements may be made if either the drug meets the requirements for approval by the U.S. Food and Drug Administration (the "FDA") under the "Animal Rule" or prior to Animal Rule approval through the Emergency Use Authorization ("EUA"). Most of BARDA's procurements to date have been under an EUA. Our contract with BARDA calls for us to provide the data necessary for an EUA filing for 10150 as a MCM for Lung-ARS in the second half of 2014. Procurements could generate significant cash and profit that could be re-invested to further develop 10150 for radiation oncology indications (and other compounds for additional indications). The amount of any potential procurement is undisclosed by BARDA at this time and is unknown to us. Based on publicly available information, as well as other procurements made by the agency under EUAs, we believe the agency may purchase sufficient courses of therapy to treat a minimum of one hundred thousand people, with options to purchase an additional two hundred thousand courses of treatment. If purchases of such volumes occurred, the revenue to the Company could provide funding to advance numerous clinical studies, including potentially large Phase III programs in radiation oncology. This funding could allow us to fund studies with less dependence on collaborative partnering arrangements and future equity offerings, which is consistent with our strategy to deploy non-dilutive capital wherever possible to develop our compounds for unmet medical indications and thereby generate value for our stockholders.

We are developing a new class of broad-spectrum, catalytic antioxidant compounds based on technology discovered and researched at Duke University, the University of Colorado and National Jewish Health, developed by Drs. Irwin Fridovich, Brian Day and others. Dr. Day is our Chief Scientific Officer.

These compounds, known as metalloporphyrins, scavenge reactive oxygen species ("ROS") at the cellular level, mimicking the effect of the body's own natural antioxidant enzyme, Superoxide Dismutase ("SOD"). While the benefits of antioxidants in reducing oxidative stress are well-known research with our compounds indicates that metalloporphyrins can be used to affect signaling via ROS at the cellular level. In addition, there is evidence that high-levels of ROS can affect gene expression and this may be modulated through the use of metalloporphyrins. We believe this could have a profound beneficial impact on people who have been exposed, or are about to be exposed, to high-doses of radiation, whether from cancer therapy or a nuclear event.

Our lead compound, 10150, is a metalloporphyrin specifically designed to neutralize reactive oxygen and nitrogen species. The neutralization of these species reduces oxidative stress, inflammation, and subsequent tissue damage-signaling cascades resulting from radiation or chemical exposure. We are developing 10150 as a MCM for national defense and for use in oncology.

Our primary development program is the advanced development of 10150 for Lung-ARS and DEARE. On February 11, 2011, we signed a five-year, cost-plus contract with BARDA for the development of 10150 as a MCM against Lung-ARS (the "BARDA Contract"). BARDA is the government agency responsible for the advanced development and purchase of medical countermeasures for chemical, biological, radiological and nuclear threats. The contract fully funds the advanced development of 10150 through approval by the FDA under 21 CFR Part 314 Subpart I and Part 601 Subpart H (the "Animal Rule.") The Animal Rule allows for approval of drugs using only animal studies when human clinical trials cannot be conducted ethically.

Pursuant to the BARDA Contract we were awarded approximately $10.4 million for the base period of the contract (from February 2011 to April 2012). On April 16, 2012, we announced that BARDA had exercised two options under the BARDA Contract worth approximately $9.1 million. On September 17, 2013, we announced that BARDA had exercised $6.0 million in additional contract options, bringing the total exercised contract value to date to approximately $25.5 million. We may receive up to an additional $92.9 million in options exercisable over the remaining years of the BARDA Contract. Options are exercised based on the progress of the development program, including the completion of clinical trials or manufacturing tasks under previously exercised options. The final goal of the contract is to achieve FDA approval for 10150 and the development of commercial manufacturing capability. In order to achieve these goals, we believe it will be necessary to exercise the majority of the options in the contract. We also believe that BARDA is likely to continue to exercise options as long as 10150 continues to demonstrate efficacy and safety in animal testing for Lung-ARS. In the event we begin sales to the U.S. government under an EUA, we believe that BARDA is likely to exercise the majority of the remaining options under the contract. One of the requirements of an EUA is that the development program continue towards the goal of FDA approval. If all of the options are exercised by BARDA, the total value of the contract would be approximately $118.4 million.

There are no existing treatments for Lung-ARS or DEARE and we are not aware of any compounds in development that have shown efficacy when administered after exposure to radiation. 10150 has demonstrated efficacy in two animal models (mouse and non-human primate) when administered after exposure to radiation. The U.S. government's planning scenario for a radiation incident is a 10 kiloton detonation of a nuclear device in a major American city. It is estimated that several hundred thousand civilians would be exposed to high doses of radiation in this scenario.

The BARDA Contract is designed to complete the work necessary for 10150 to be purchased for the US Strategic National Stockpile (the "SNS"). BARDA currently acquires drugs for the SNS through a Special Reserve Fund (the "SRF") created under Project BioShield and reauthorized under the Pandemic All-Hazards Preparedness Reauthorization Act of 2013. Although the final goal of the contract is full FDA approval under the Animal Rule, BARDA, based on historical purchases from other suppliers, may purchase product prior to FDA approval under an EUA.

Pursuant to the Statement of Work in the BARDA Contract, we expect to provide the data necessary for filing an application for an EUA in the second half of 2014. An EUA would make it possible for BARDA to begin procuring 10150 for the strategic national stockpile. If approved under an EUA, procurements from BARDA could result in a significant increase in revenues for Aeolus and potential profitability.

We are also developing 10150 as a treatment for GI-ARS with grant funding from NIH-NIAID. Unlike contract funding, grant funding is paid directly to research facilities and does not flow through our financial statements. The NIH-NIAID funding for GI-ARS is provided in the context of a larger grant program for ARS MCM development and is not currently tied to a defined development program like the BARDA Contract for Lung-ARS. Generally, we believe that the continuation of grant funding for this indication will be dependent on continuing evidence of efficacy in animal trials. There are no existing treatments for GI-ARS and current standard of care is limited to supportive measures, although there are other drugs being developed by other companies for this indication with BARDA funding. If we are able to successfully develop 10150 for use in GI-ARS, we would have an additional argument for its procurement by BARDA for the SNS.

We also benefit from research funded by grants from the NIH CounterACT program for the development of 10150 as a MCM for the effects of nerve gas (e.g., sarin and soman) and chemical vesicant gasses (e.g., mustard gas, phosgene gas and chlorine gas) exposure. Like the funding for GI-ARS, funding for this indication is provided directly to the research facility and does not flow through our financial statements. Continued funding is generally dependent on

continuing evidence of efficacy in animal trials. There are no existing treatments for exposure to chemical vesicants. In October 2011, we announced that National Jewish Health was awarded a $12.5 million grant from NIH CounterACT to continue the development of 10150 as a MCM against chlorine gas exposure. Also included in the grant is support for research in looking at tissue plasminogen activator (TPA) and Silabilin as MCMs against sulfur mustard gas exposure. The ultimate objective of the sulfur mustard and chlorine gas work at National Jewish Health will be to complete all work necessary to initiate pivotal efficacy studies in animals for both indications. This would include: running efficacy studies in the rat model for higher doses of sulfur mustard and chlorine gas; establishing endpoints, optimal dosing and duration of treatment for pivotal efficacy studies; and characterizing the natural history from sulfur mustard and chlorine gas damage. We plan to meet with the FDA in early 2014 to discuss filing with the FDA an investigational new drug application (an "IND") for the sulfur mustard indication under the Animal Rule and to present the design of a pivotal study in a rat model developed under the NIH CounterACT program.

We are also funded by grant money from the NIH CounterACT program and the National Institute of Neurological Disorders and Stroke ("NINDS") for the development of 10150 as a MCM for the effects of nerve gas (e.g., sarin and soman) exposure. NIH-CounterACT awarded a contract on September 24, 2011 worth approximately $735,000, to the University of Colorado to develop 10150 as a MCM against nerve agents. Work performed with this initial funding has demonstrated that 10150 significantly improved survival when administered with current treatment in a pilocarpine model for nerve gas exposure. In September 2013, we announced that Dr. Manisha Patel at the University of Colorado had been awarded a $4.3 million grant from NINDS to develop as a MCM for exposure to sarin gas and other nerve agents.

Until February 2011, the Lung-ARS program was principally funded by us and the work was performed at Duke University and the University of Maryland. Since February 11, 2011, substantially all of the costs for the Lung-ARS program have been funded by the BARDA Contract. To date, the GI-ARS development program has been funded by NIH-NIAID through programs at the University of Maryland and Epistem, Ltd., and the chlorine, phosgene, mustard gas and nerve agent programs have been funded by NIH-CounterACT and NINDS through programs at National Jewish Health, the University of Colorado, and the United States Army Medical Research Institute for Chemical Defense ("USAMRICD").

We are also developing 10150 for use in oncology where it would be used in combination with radiation and chemotherapy as both a therapeutic and prophylactic drug. Pre-clinical studies at Duke University have demonstrated that 10150 does not interfere with the benefit of radiation therapy or chemotherapy in prostate and lung cancer. These studies also demonstrated that 10150 displays anti-tumor activity.

Upon the successful completion of an additional Phase I study in healthy normal volunteers funded under the BARDA contract and approval of a protocol by the FDA and the appropriate Institutional Review Boards ("IRBs"), we expect to begin a Phase II study in cancer radiation therapy patients. The Company is considering several potential indications, including prostate cancer, esophageal cancer, head and neck cancer and non-small cell lung cancer.

10150 has been tested in two human Phase I safety studies where it was well-tolerated and no adverse events were observed. Efficacy has been demonstrated in validated animal models for Lung-ARS, GI-ARS, chlorine gas exposure, phosgene gas exposure, sulfur mustard gas exposure (lungs and skin) and nerve gas exposure. In both mouse and non-human primate ("NHP") studies for Lung-ARS, 10150 treated groups showed significantly reduced weight loss, inflammation, oxidative stress, lung damage, and most importantly, mortality. Therapeutic efficacy has been demonstrated when 10150 is administered 24 hours after exposure to radiation, a requirement for consideration as a radiation MCM for the SNS.

Following the events at the Fukushima nuclear plant in Japan in 2011, we ran murine studies at the request of Japanese researchers to demonstrate the alternative effects of administering leukocyte growth factors ("LGF") used to treat the hematopoietic or bone marrow syndrome of ARS ("H-ARS"). Data showed that 10150 does not interfere with the efficacy of LGF (in this case Amgen's Neupogen(R)). Additionally, the study demonstrated that administration of Neupogen(R), the current standard of care for H-ARS, increased damage to the lungs. When 10150 was administered with Neupogen(R) this damage was significantly reduced. We believe that this finding may have important implications for the potential procurement of 10150 for the SNS. In September 2013, BARDA announced that it had entered into a procurement and inventory management agreement with Amgen to provide Neupogen(R) for the SNS.

We have an active Investigational New Drug Application ("IND") on file with the FDA for AEOL 10150 as a potential treatment for amyotrophic lateral sclerosis ("ALS"). At this time, we do not have any plans to continue development of 10150 for ALS. We expect to file an IND for 10150 for Lung-ARS with the Division of Medical Imaging Products during the first half of 2014. We also plan to file separate INDs for 10150 for cancer with the oncology division of the FDA, and for sulfur mustard gas in 2014. We have already completed two Phase I safety studies in 50 humans

demonstrating that 10150 is safe and well tolerated. CMC work has been completed, pilot lots have been prepared and production is being scaled up under the BARDA Contract. We have an IND on file with the FDA for 10150 as a potential treatment for amyotrophic lateral sclerosis (“ALS”), but currently, we have no plans to conduct further clinical trials in ALS.

We have two programs underway for the development of several other drug candidates, AEOL 11207, AEOL1114B and AEOL11203, for the treatment of epilepsy and Parkinson's disease. These programs are being funded, in part, by private foundations, including the Michael J. Fox Foundation, CURE and government grants. In February 2012, data was published in the Journal Neurobiology of Disease from the CURE study indicating AEOL 11207 significantly reduced both the frequency and duration of spontaneous seizures in a pre-clinical epilepsy model. Additionally, the study showed an increase in average life span, protection against neuronal death and no difference in seizure severity.

Two other compounds Ethyl and Hexyl are the subject of a $20 million research grant from NIH-NIAID, for development as a potential MCM for ARS. In general, this research is at an earlier stage of development than 10150. Neither Ethyl nor Hexyl has been tested in humans and no IND is on file for either drug. A significant amount of pre-clinical work would be required to bring either compound into clinical testing. Because this is grant funding, it is paid directly to the research institutions and does not flow through our financial statements.

Aeolus' Catalytic Antioxidant Program

We established our research and development program to explore and exploit the therapeutic potential of small molecule catalytic antioxidants. We have achieved our initial research objectives and begun to extend our preclinical accomplishments into non-clinical studies, clinical trials and drug development programs.

Our catalytic antioxidant program is designed to:

- Retain the catalytic mechanism and high antioxidant efficiency of the natural enzymes, and
- Create and develop stable and small molecule antioxidants without the limitations of SOD so that they:
  - Have broader antioxidant activity,
  - Have better tissue penetration,
  - Have a longer life in the body, and
  - Are not proteins, which are more difficult and expensive to manufacture.

We created a class of small molecules that consume reactive oxygen and nitrogen species catalytically; that is, these molecules are not themselves consumed in the reaction. Our class of compounds is a group of manganoporphyrins (an anti-oxidant containing manganese) that retain the benefits of antioxidant enzymes, are active in animal models of disease and, unlike the body's own enzymes, have properties that make them suitable drug development candidates.

Our most advanced compound, 10150 (Figure 1), is a small molecule, broad-based, catalytic antioxidant that has shown the ability to scavenge a broad range of reactive oxygen species, or free radicals. As a catalytic antioxidant, 10150 mimics, and thereby amplifies, the body's natural enzymatic systems for eliminating these damaging compounds. Because oxygen- and nitrogen-derived reactive species are believed to have an important role in the pathogenesis of many diseases, we believe that our catalytic antioxidants and 10150 may have a broad range of potential therapeutic uses.

Figure 1

AEOL 10150 Overview

Product Type	√ Catalytic antioxidants(manganoporphyrin)
Administration Route	√ Subcutaneous administration; self-injection possible
Indications in Development	√ Oncology (Used in combination with radiation and chemo) √ Pulmonary ARS/DEARE √ GI-ARS; Sulfur Mustard; Chlorine Gas; Nerve Gas
Technical Readiness Level (TRL)	√ TRL 7/8 for Pulmonary Effects of ARS/DEARE
Regulatory Status	√ Active IND (IND-67741) Phase I (2 studies, 50 patients total 37 treated, 13 placebo)

AEOL 10150 has shown efficacy in a variety of animal models as a protectant against radiation injury, sulfur mustard gas exposure, nerve gas exposure, ALS, stroke, pulmonary diseases, and diabetes. We filed an IND for AEOL 10150 in April 2004, under which human safety trials were conducted as more fully described below under the heading "10150 Clinical Program to Date." We plan to file an IND for Lung-ARS with the medical imaging products division of the FDA and an additional IND with the oncology division of the FDA in 2014. For a more detailed description of antioxidants see the section below under the heading "Background on Antioxidants."

AEOL 10150 Medical Countermeasure Development Program

We and our research partners have been awarded in excess of $143 million for the development of 10150 as a dual-use, broad spectrum medical countermeasure. The table below details the indications currently under development and the sources of funding from the US Government.

Indication	Funding Source	Amount of Grant/Contract	Research Partners
Lung-ARS	BARDA	Up to $118.4 million	University of Maryland
GI-ARS	NIH-NIAID	Undefined	Epistem, Ltd. University of Maryland
Chlorine Gas	NIH CounterACT	$20.3 million	National Jewish Health
Mustard Gas	NIH CounterACT	Part of the NIH-CounterACT grant above	National Jewish Health University of Colorado
Nerve Agents	NIH CounterACT	$5 million	University of Colorado
Phosgene	Institute of Chemical Defense	Undefined	Institute of Chemical Defense

Overview

The U.S. Government's current planning scenario for a nuclear attack is a 10 kiloton detonation in a major American city. For purposes of comparison, the yield of the bomb dropped on Hiroshima in World War II was approximately

16 kilotons. Such an attack would potentially expose hundreds of thousands of citizens to acute, high dose, ionizing radiation and the lethal effects of Acute Radiation Syndrome (“ARS”).

ARS is not a single disease, but a series of sub-syndromes that follow exposure to ionizing radiation. BARDA is pursuing separate development plans for each sub-syndrome. 10150 is the only compound in advanced development with BARDA for Lung-ARS.

Immediately after exposure, the most critical syndromes of ARS are the acute hematopoietic (bone marrow) syndrome ("H-ARS") and early-onset GI-ARS because symptoms begin very quickly and can be lethal. However, depending on the level and location of radiation exposure, the lethal effects of both H-ARS and early-onset GI-ARS may be reduced with proper treatment, including supportive care (fluids and antibiotics) and LGFs like Amgen's Neupogen(R).

In September 2013, BARDA announced that it had entered into a vendor-managed supply agreement with Amgen to supply its LGF, Neupogen(R), to the SNS as a treatment for H-ARS. Although Neupogen(R) is an FDA-approved drug for neutropenia, it is not approved for H-ARS and would be used under an EUA. The procurement of Neupogen(R) for the SNS is significant for 10150 and its potential role in the treatment of ARS. A 2011 murine study conducted at Indiana University at the request of Japanese researchers confirmed that 10150 does not interfere with the positive effects of Neupogen(R) in H-ARS and the two products in combination were safe and well-tolerated. More importantly, this study also demonstrated that treatment of H-ARS with Neupogen(R) exacerbates radiation damage to the lung, even at sub-lethal doses of radiation. Treatment with Neupogen(R) in combination with 10150 significantly reduced the lung damage. We believe that the use of Neupogen(R) in treating H-ARS makes the use of 10150 crucial in managing the lung effects of acute radiation exposure.

When patients survive H-ARS and GI-ARS, respiratory failure becomes the major cause of death. Research has shown that damage associated with the exposure to upper half body irradiation or total body irradiation is an acute, but delayed, onset of radiation pneumonitis (inflammation of lung tissue) followed by lung fibrosis (scarring caused by inflammation).The incidence of radiation pneumonitis rises very steeply at relatively low radiation doses. This is Lung-ARS, the syndrome that 10150 is being developed to treat.

We believe it is in the government's interest in to provide care not only for survival from the short-term effects of radiation exposure following an event (e.g., H-ARS and GI-ARS), but also to provide care for the delayed effects of radiation exposure, such as Lung-ARS. There are no current FDA-approved or EUA-approved therapies for Lung-ARS. We believe 10150 is the only drug in advanced development with BARDA for Lung-ARS.

Pre-clinical studies

In a 2013 study run under the BARDA contract at the University of Maryland at Baltimore, a total of 120, CBA/J mice were exposed to 14.6 Gray of whole thorax lung irradiation ("WTLI"). Four cohorts of animals were treated with daily doses of 5mg, 10 mg, 25 mg or 40 mg/kg of 10150 beginning 24 hours after exposure for a total for 28 days. The results are shown in the table below. Survival at six months post-exposure in the optimal treatment group of 25mg/kg of 10150 improved to 40 percent, compared to 10 percent survival in the radiation only group. In addition, animals receiving 10150 showed significant protection of the lungs as measured by differences in wet lung weights and breathing frequency. This study confirms previous studies in animals that demonstrate 10150's protection of the lungs from radiation exposure. We plan to publish the detailed results of the study with our research collaborators as soon as possible.

Treatment	Survival	Number of Animals
Radiation Only	10%	20
Radiation + 5 mg/kg AEOL 10150	16%	19
Radiation + 10 mg/kg AEOL 10150	16%	19
Radiation + 25 mg/kg AEOL 10150	40%	20
Radiation + 40 mg/kg AEOL 10150	30%	20

A number of other preclinical studies by Zeljko Vujaskovic, MD, PhD; Mitchell Anscher, MD, et al at Duke University have demonstrated the efficacy of 10150 in radioprotection of normal tissue.

In 2011, we announced positive results from study of 10150 and Neupogen(R) as combination therapy for treatment of ARS. The study was conducted by Christie Orschell, PhD of Indiana University. The primary endpoint of the study was to determine drug-drug interactions between Neupogen(R) and 10150, as well as to monitor safety and tolerability of the two treatments given simultaneously. Results of the study confirmed that 10150 does not interfere with the positive effects of Neupogen(R) on the hematopoietic, or bone marrow, syndrome of Acute Radiation Syndrome (ARS), and the two products in combination were safe and well tolerated. In 2012, we announced further data from this study, which demonstrated that treatment of the hematopoietic sub-syndrome of acute radiation syndrome (Heme-ARS) with Neupogen(R) exacerbates radiation damage to the lung. The study also confirmed that treatment with 10150 in combination with Neupogen(R) significantly reduced the lung damage.

The study entitled “Pilot Study to Test the Effects of Aeolus 10150 on Neupogen(R)-Induced ANC Recovery in Sub-Lethally Irradiated C57Bl/6 Mice” was initiated at the request of Shigetaka Asano, MD of Waseda University and Arinobu Tojo, MD, PhD and Tokiko Nagamura, MD at the Institute of Medical Science at the University of Tokyo to determine whether there would be any interference with the demonstrated efficacy of Neupogen(R) as a medical countermeasure against the hematopoietic complications of radiation exposure. In previous treatment of radiation accident victims at Tokai-mura, Dr. Asano and others were able to use Granulocyte Colony Stimulating Factor (G-CSF) and supportive care to enable victims of 8 to 12 Gy exposure to survive the hematopoietic (heme) syndrome. Unfortunately, these patients later died due to lung and multi-organ complications. As 10150 has shown separate efficacy against lung and GI complications in mice and in Lung-ARS in non-human primates, this study was undertaken to evaluate whether the Neupogen(R) and Aeolus 10150 compounds would be beneficial if used in tandem.

The use of Neupogen(R) or other G-CSFs or Neulasta(R) or other Granulocyte-Macrophage Colony Stimulating Factor (GM-CSF) products is recommended by the Radiation Emergency Assistance Center/Training Site (REAC/TS) at radiation exposures greater than 2 to 3 Gy to mitigate damage to the hematopoietic system. REAC/TS is a response asset of the U.S. Department of Energy and provides treatment capabilities and consultation assistance nationally and internationally. In animal studies G-CSF's have been shown to be effective in increasing survival at levels up to 7.5 Gy due to their positive effects on the hematopoietic damage created by radiation exposure. BARDA began procuring Neupogen(R) and Sanofi-Aventis’ drug Leukine(R) for the Strategic National Stockpile in September 2013.

LGFs as a class have not demonstrated an effect on the two other major sub-syndromes -- GI and Lung. 10150 has demonstrated efficacy in treating the GI sub-syndrome in pilot studies conducted by NIH-NIAID, by protecting crypt cells and reducing diarrhea. More extensive studies of the drug in treating the pulmonary effects of radiation at Duke University and the University of Maryland have shown improved survival and enhanced lung function and improved histology at exposures up to 15 Gy in mice and 11.5 Gy in non-human primates. These exposure levels caused death in 100 percent of animals that were not treated with 10150. Studies at Duke University have also shown a significant survival advantage for animals treated with 10150 after 15 Gy upper half body irradiation, which causes lethal damage to both the GI tract and the lungs.

In summary, 10150 has consistently shown a protective effect against the harmful effects in radiation, including in particular when the drug is administered up to 24 hours after exposure.

Non- clinical studies

In 2010, we initiated a study to confirm the efficacy of 10150 as an MCM to nuclear and radiological exposure in non-human primates (“NHPs”). The study was designed to test the efficacy of 10150 as a treatment for Lung-ARS and to begin establishing an animal model that can be validated and could be utilized by the FDA for approval of an MCM for Pulmonary Acute Radiation Syndrome under the “Animal Rule”. The FDA “Animal Rule” enumerates criteria whereby the FDA can rely on animal efficacy data when “evidence is needed to demonstrate efficacy of new drugs

against lethal or permanently disabling toxic substances when efficacy studies in humans, ethically cannot be conducted." The criteria are discussed below.

Preliminary results from the study were reported during the fiscal year, showing that 10150 promotes survival in a non-human primate model of Lung-ARS. The primary objective of the study was to determine if 10150 could mitigate radiation-induced lung injury and enhance survival in rhesus macaques exposed to whole thorax lung irradiation ("WTLI") and administered supportive care. Two cohorts of NHPs were exposed to 11.5Gy LINAC-derived photon radiation in the WTLI protocol. The control cohort had n=6 and 10150-treated cohort was n=7.This model showed 100% incidence of severe radiation-induced lung damage. 10150 was administered subcutaneously at 5mg/kg beginning at day 1 post WTLI and continued as a single, daily injection for 28 consecutive days. The final results were presented at the 14th International Congress of Radiation Research in Warsaw, Poland in September 2011. Key findings in the study include:

1. Exposure of the whole thorax to 11.5 Gy resulted in radiation-induced lung injury in all NHPs in the study and proved 100% fatal in the control animals, despite supportive care including dexamethasone. 11.5 Gy is, therefore, equal to or greater than the LD100/180dose for the WTLI model.

2. 10150, as administered in this pilot study (daily for 28 days at a dose of 5mg/kg subcutaneously), demonstrated potential efficacy as a mitigator against fatal radiation-induced lung injury. Treatment with the drug resulted in 28.6% survival following exposure to a radiation dose that proved to be 100% fatal in the untreated control group.

3. Serial CT scans demonstrated less quantitative radiographic injury (pneumonitis, fibrosis, effusions) in the 10150-treated cohort, suggesting that the drug reduces the severity of the radiographically detectable lung injury.

4. Dexamethasone administration yielded a transient benefit on both clinical and radiographic evidence of pneumonitis. The 10150 treated cohort required 1/3 less dexamethasone support due to reduced pulmonary injury in the 10150 treated group, resulting in less frequent clinical "triggers" (respiratory rate≥80) to treat with dexamethasone.

5. The results of this pilot study are encouraging and suggest that treatment with 10150 results in reduced clinical, radiographic and anatomic evidence of radiation-induced lung injury, which also results in improved survival. 10150 merits further study as a post-exposure MCM against radiation-induced lung injury.

In rodents, non-human primates and humans, radiation of the lungs can cause reduced breathing capacity, pneumonitis, fibrosis, weight loss and death and is characterized by oxidative stress, inflammation and elevated macrophage counts. 10150 has proven to be an effective countermeasure to radiation exposure of the lungs in mice and rats in published studies such as Rabbani et al Int J Rad Oncol Biol Phys 67:573-80, 2007, Rabbani et al Free Rad Res 41:1273-82, 2007 and Gridley et al Anticancer Res 27:3101-9, 2007.

Clinical studies

We believe our two previous Phase I clinical studies can be utilized in any potential IND and New Drug Application ("NDA") filing with the FDA for 10150 as an MCM for ARS. We do not have any clinical trials currently underway, but we are in the process of planning additional safety studies funded under the BARDA Contract, which we expect to commence in 2014.

Future Development Plans

Our objective is to develop 10150 as an MCM against Lung-ARS via the FDA's "Animal Rule". This development pathway requires demonstration of the key study efficacy parameter of 10150 treatment in two animal models relevant to the human radiation response and its treatment, demonstration of safety in humans, demonstration of relevant dosing and administration in humans, and clear identification of the mechanism of radiation-induced damage to the

lung and its amelioration by the drug candidate.

10150 has several distinct advantages as an MCM, including the following:

- Demonstrated survival increase in animal studies when administered 24 hours after exposure (P<0.05),
- Demonstrated reduction in lung fibrosis in animal studies up to 24 hours post exposure (P<0.05),

- Demonstrated histological improvement in lung tissue post-radiation exposure,
- Addresses an unmet medical need as an MCM to Lung-ARS,
- Established safety profile in both clinical and pre-clinical studies,
- Subcutaneous self-administration possible by exposed individuals during emergency,
- Rapid administration, allowing large numbers of patients to be treated quickly,
- Stable for up to 4½ years at 0–8°C and 1 year at room temperature,
- Requires no non-standard storage conditions (i.e., not photosensitive),
- Currently in development as an adjunct to radiation therapy; if approved will provide a pre-existing distribution and stockpile resource at oncology centers in the event of a radiological emergency,
- Demonstrated advantage when used in combination with Neupogen(R),
- Demonstrated potential as both a therapeutic and prophylactic,
- Demonstrated potential to address multiple sub-syndromes of ARS,
- Demonstrated potential to address sulfur mustard gas, phosgene gas, chlorine gas and nerve agent exposures.
- Potential dual use as an adjunct treatment for cancer patients receiving radiation therapy, subject to separate FDA approval for this indication.

We believe that in order to file a NDA for Lung-ARS with the FDA, we will need to demonstrate efficacy in animal models and demonstrate product safety. We also plan to request Fast Track status for this indication. If the FDA accepts our Fast Track request, a rolling NDA submission process is enabled, a key step in achieving Priority Review. The FDA determines within 45 days of a company's request, made once the complete NDA is submitted, whether a Priority or Standard Review designation will be assigned. The Company plans to file the Lung ARS IND and Fast Track Request during the first half of 2014.

The FDA's "Animal Rule" enumerates criteria whereby the FDA can rely on animal efficacy data when evidence is needed to demonstrate efficacy of new drugs against lethal or permanently disabling toxic substances when efficacy studies in humans cannot be ethically conducted. The criteria are as follows:

- Knowledge of the mechanism of radiation-induced damage to the lung and its amelioration by the candidate drug.

- Pharmacokinetic and pharmacodynamic analysis to provide information on relevant dose and administration schedule.

- Direct correlation of key study parameters (e.g., survival or major morbidity) with the desired clinical benefit in humans.

- Collection of efficacy data in two species relevant to the human radiation response and its treatment unless otherwise justified under GLP-compliant conditions.

- A Phase I safety trial using the same product and formulation as used in the pivotal trial(s) is required.

Demonstrate Efficacy in Animal Models

Under the BARDA contract, we have developed and validated mouse and NHP models for Lung-ARS. We have also presented these models to the FDA and they have concurred with our design and our development plan for

demonstrating efficacy. We believe that the efficacy data produced in pivotal studies using validated models will provide the data required to demonstrate efficacy of 10150 at the dose and schedule proposed for licensure. A second criterion of the “Animal Rule” is that the models must be reflective of “real world” conditions to which a human is likely to be exposed. Our models have been designed to reflect these real world conditions.

Demonstrate Product Safety

For product approval under the “Animal Rule”, we will also demonstrate product safety using the same product and formulation used in the animal efficacy trials and proposed for use in humans. Demonstration of safety includes preclinical demonstration of safety via the standard pre-clinical studies and analyses methods and Phase I safety trials sufficient to demonstrate product safety in the target patient population. We believe our safety studies completed as a therapy for ALS may be utilized to demonstrate safety for this indication. We also plan to conduct two additional Phase I clinical safety studies, which are included in the BARDA Contract.

Competition

Currently there are no FDA-approved drugs for the treatment of Lung-ARS. We are also not aware of any other drug candidates that have demonstrated the ability to protect the lungs from radiation given post-exposure, which we believe is a critical aspect of the development of an MCM against the effects of acute radiation syndrome. We are also not aware of any drugs with large advanced development funding from BARDA for Lung-ARS.

However, in general, we face significant competition for U.S. government funding for both development and procurements of an MCM for biological, chemical and nuclear threats, diagnostic testing systems and other emergency preparedness countermeasures. The U.S. federal government has currently allocated a significant amount of research funding to the development of countermeasures against the effects of radiation exposure. As a result, there are many drug candidates under development as a possible countermeasure against the various effects and sub-syndromes of radiation exposure.

Funding and Funding Options

On February 11, 2011, we signed a five-year, cost-plus contract with BARDA for the development of 10150 as a MCM against Lung-ARS (the "BARDA Contract"). BARDA is the government agency responsible for the advanced development and purchase of medical countermeasures for chemical, biological, radiological and nuclear threats. The contract funds the advanced development of 10150 through approval by the United States Food & Drug Administration ("FDA") under the "Animal Rule." The Animal Rule allows for approval of drugs using only animal studies when human clinical trials cannot be conducted ethically.

Pursuant to the BARDA Contract we were awarded approximately $10.4 million for the base period of the contract (from February 2011 to April 2012). On April 16, 2012, we announced that BARDA had exercised two options under the BARDA Contract worth approximately $9.1 million. On September 17, 2013, we announced that BARDA had exercised $6.0 million in additional contract options, bringing the total exercised contract value to date to approximately $25.5 million. We may receive up to an additional $92.9 million in options exercisable over the remaining years of the contract. Options are exercised based on the progress of the development program, including the completion of clinical trials or manufacturing tasks under previously exercised options. The final goal of the contract is to achieve FDA approval for 10150 and the development of commercial manufacturing capability. In order to achieve these goals, we believe it will be necessary to exercise the majority of the options in the contract. We also believe that BARDA is likely to continue to exercise options as long as 10150 continues to demonstrate efficacy and safety in testing for Lung-ARS. In the event we begin sales to the U.S. government under an EUA, we believe that BARDA is likely to exercise the majority of the remaining options under the contract. One of the requirements of an EUA is that the development program continue towards the goal of FDA approval. If all of the options are exercised by BARDA, the total value of the contract would be approximately $118.4 million.

As of September 30, 2013, we were operating within the projected budget for the BARDA base period and exercised options. Further, stemming from operational efficiencies in the base and option periods, we have been able to add several additional program elements in each of the first two years of the contract and remain within the base period and two exercised option contract amounts.

Since we have been awarded the BARDA Contract, substantially all of the costs associated with the research and development of 10150 as a MCM for Lung-ARS have been covered by the BARDA Contract, and we expect such costs to continue to be covered by the BARDA Contract. We believe that continued funding under the BARDA contract is primarily dependent on continued positive results with 10150 in animal studies and the general risks of doing business with the government. See Risk Factors – "Risks Related to Our Dependence on U.S. Government Grants and Contracts.

10150 as a potential medical countermeasure against the effects of mustard gas

Overview

Sulfur mustards, of which sulfur mustard gas ("SM") is a member, are a class of related cytotoxic, vesicant chemical warfare agents with the ability to form large blisters on exposed skin and cause pneumonitis and fibrosis in the lungs. In their pure form most sulfur mustards are colorless, odorless, viscous liquids at room temperature. When used as warfare agents they are usually yellow-brown in color and have an odor resembling mustard plants, garlic or horseradish. Mustard agents, including sulfur mustard, are regulated under the 1993 Chemical Weapons Convention. Three classes of chemicals are monitored under this Convention, with sulfur and nitrogen mustard grouped in the highest risk class, "schedule 1." However, concerns about its use in a terrorist attack have led to resurgence in research to develop a protectant against exposure.

Mustard gas is a strong vesicant (blister-causing agent). Due to its alkylating properties, it is also strongly mutagenic (causing damage to the DNA of exposed cells) and carcinogenic (cancer causing). Those exposed usually suffer no immediate symptoms. Within 4 to 24 hours the exposure develops into deep, itching or burning blisters wherever the mustard contacted the skin; the eyes (if exposed) become sore and the eyelids swollen, possibly leading to conjunctivitis and blindness. At very high concentrations, if inhaled, it causes bleeding and blistering within the respiratory system, damaging the mucous membrane and causing pulmonary edema. Blister agent exposure over more than 50% body surface area is usually fatal.

The NIH awarded a five-year, $7.8 million Center of Excellence grant to National Jewish Health and the University of Colorado Health Sciences Center, both in Denver, Colorado. This Center of Excellence was developed to focus on sulfur mustard toxicity in the lung and skin with the long-term goal to develop an effective treatment for mustard gas induced injury in lung and skin.10150 has been identified by the National Jewish Health Center of Excellence as a lead compound for its center, and research work there has been focused on further testing and studies of 10150.

Research in the area of mustard gas-mediated lung injury has provided experimental evidence that the mechanisms of these injuries are directly linked to the formation of reactive oxygen and nitrogen species and that superoxide dismutase and catalase can improve injury responses. This theory has led to the hypothesis that the administration of catalytic antioxidant therapy can protect against mustard gas-induced acute lung and dermal injury.

Non-clinical studies

In July 2013, we announced that four separate studies conducted at USAMRICD using 85 rats and comparing 2 different 10150 dosing regimens conclusively demonstrated that 10150 improves survival against an LD60-70 sulfur mustard gas exposure. 10150 improved sulfur mustard gas survival up to 82% over 48 hours. The improvement in survival seen with 10150 treated animals after sulfur mustard gas exposure correlated with improvements in clinical scores, blood oxygenation and airway obstruction. The best improvements in survival and lung function occurred with the 10150 dosing regimen of 5 mg/kg body weight given every 4 hours by subcutaneous injection ($p < 0.0004$).

The primary endpoints in these studies were survival and blood oxygen saturation. Secondary endpoints included clinical scores, blood gas and histopathology for cast formations. 10150 or PBS was given to rats one hour after sulfur mustard vapor exposure and repeated every 4 or 8 hours. Forty-eight hours after exposure, lung edema was assessed by changes in the bronchoalveolar lavage (BAL) protein levels. At euthanasia, 48 hours after exposure, 10150 significantly improved ($p < 0.0001$) pulse oximetry, and 10150 treated rats had improved blood oxygenation throughout the study period. Treatment with 10150 also restored blood gas parameters to near normal levels, including: pO2 ($p < 0.001$), pCO2 ($p < 0.0016$) and pH ($p < 0.0006$). Finally, 10150 treatment reduced airway cast formation by 50% at 24 hours ($p < 0.017$).

In prior studies 10150 reduced lung edema ($p < 0.05$), decreased SM-induced increases in macrophages ($p < 0.05$) and epithelial cells in BAL fluid ($p < 0.05$). In all three measurements 10150 provided approximately 100 percent protection -- with levels approximating that of the control animals in the study. These results indicate that 10150 significantly improves survival and attenuates lung injury from mustard gas exposure and may provide an effective countermeasure against mustard gas-induced lung injury.

The first whole mustard gas study was completed in October 2009. In June 2010, National Jewish Health and Lovelace Respiratory Research Institute reported results from a second whole mustard study confirming that 10150 protects lungs from whole mustard gas exposure in rats. The two studies demonstrated that10150 protects lungs from whole mustard gas exposure in rats. The primary objective of the study was to determine whether administration of 10150, after exposure, reduces the severity of acute lung injury induced by mustard gas. 10150 was given to rats one hour after sulfur mustard exposure and repeated every 6 hours. Twenty-four hours after exposure, lung edema was assessed by changes in the BAL protein levels. 10150 significantly reduced ($p<0.05$) mustard gas-induced lung edema as measured by BAL protein levels. In addition, 10150 decreased SM-induced increase in the numbers of BAL neutrophils. These results indicate that 10150 can attenuate lung injury from mustard gas exposure and may provide an effective countermeasure against mustard gas-induced lung injury.

Future Development Plans

We plan to meet with the FDA in 2014 to discuss a pivotal rat study and a second animal model for this indication. We expect to file an IND for the sulfur mustard, in the first half of 2014. We also seek to launch the two pivotal efficacy studies required for approval by the FDA under the “Animal Rule” as well as complete the necessary safety studies as further described under the heading “10150 as a potential medical countermeasure against the effects of Pulmonary Acute Radiation Syndrome – Future Development Plans – Demonstrate Product Safety.”

Competition

There are currently no effective treatments for mustard gas exposure.

However, in general, we face significant competition for U.S. government funding for both development and procurements of medical countermeasures for biological, chemical and nuclear threats, diagnostic testing systems and other emergency preparedness countermeasures. The U.S. federal government has currently allocated a significant amount of research funding to the development of countermeasures against bioterrorism. As a result, there are many drug candidates under development as a possible countermeasure against chemical threat agents.

Funding Options

This development program to date has been funded under the NIH-CounterACT Program and we expect that future efficacy studies necessary for approval by the FDA, including the pivotal rat study and second animal model described above, will be funded by the NIH-CounterACT program.

Overview

Chlorine gas is a toxic gas that inflicts airway injury through primary oxidative stress and secondary inflammation. Chlorine inhalation was recently used in terrorist/insurgent attacks on military and civilian populations and has caused numerous industrial, transportation, swimming pool, and household accidents, as well as deaths to members of the U.S. military in the past. Chlorine gas, also known as bertholite, was first used as a weapon in World War I. Chlorine gas was also used against the local population and coalition forces in the first Iraq War in the form of chlorine bombs.

One of the primary goals of the NIH-CounterACT program is to assist in the development of safe and effective medical countermeasures designed to prevent, diagnose, and treat the conditions caused by potential and existing chemical agents of terrorism and which can be added to the SNS. The SNS is maintained by the Centers for Disease Control and Prevention (“CDC”). The SNS now includes CHEMPACKS that are forward-deployed in secure,

environmentally controlled areas throughout the United States available for rapid distribution in case of emergency. CHEMPACKS were developed for threats like chemical and nerve gas where treatment must be administered in less than 24 hours and shipment of MCMs from SNS warehouse locations is not practicable. The CDC has established a diagnostic response network for the detection of nerve agents, mustard, cyanide and toxic metals.

Worldwide, independent of warfare and chemical terrorism, chlorine is the greatest single cause of major toxic release incidents (16.Davis DS, Dewolf GB, Ferland KA, et al. Accidental Release of Air Toxins. Park Ridge, New Jersey: NDC; 1989:6-9.). In the U.S., there are about 5-6,000 exposures per year resulting in, on average, about one death, 10 major, 400-500 moderate, and 3-4,000 minor adverse outcomes. Chlorine gas causes damage to upper and lower respiratory tracts. While chlorine is an irritant, its intermediate water solubility may delay emergence of upper airway symptoms for several minutes. No specific beneficial therapies are available. 10150 has demonstrated a decrease in airway injury, inflammation, oxidative damage, hyperreactivity and cell proliferation after acute chlorine gas inhalation in mice, and therefore could be a possible beneficial therapy for chlorine gas inhalation injury to the airways.

Pre-clinical studies

Under a grant from NIH CounterACT, researchers from National Jewish Health and McGill University have completed a series of preliminary studies demonstrating that 10150 protects lungs from chlorine gas exposure in mice and rats. The primary objective of these studies was to determine whether administration of 10150, after exposure, reduces the severity of acute lung injury and asthma-like symptoms induced by chlorine gas. 10150 was given to mice at a 5 mg/kg subcutaneous dose one hour after chlorine gas exposure (100 ppm for 5 minutes) and repeated every 6 hours. Twenty-four hours after exposure, lung inflammation was assessed by changes in bronchoalveolar lavage ("BAL") cellularity and neutrophil influx. 10150 significantly reduced ($p<0.05$, n=6/group) chlorine gas-induced lung inflammation as measured by BAL fluid cellularity levels by 40% that appeared to be due to limiting neutrophil influx. 10150 also significantly attenuated ($p<0.05$, n=6) the degree of asthma-like airway reactivity induced by chlorine gas exposure by 40%. These results indicate that 10150 can attenuate lung injury and asthma-like symptoms from chlorine gas exposure and may provide an effective countermeasure against chlorine gas-induced lung injury.

National Jewish Health replicated the mice studies previously conducted by McGill University in rats to determine whether 10150 mitigates lung damage due to chlorine gas exposure. In the study, 10150 significantly reduced protein, white blood cell, red blood cell, macrophage and neutrophil counts in Broncho-alveolar lavage fluid.

Future Development Plans

We plan to develop a second animal model and to launch the two pivotal efficacy studies required for approval by the FDA under the "Animal Rule." We believe that the safety and CMC work being done under the BARDA Lung-ARS further described under the heading "10150 as a potential medical countermeasure against the effects of Pulmonary Acute Radiation Syndrome – Future Development Plans" will be sufficient to satisfy the safety and CMC requirements for an NDA filing.

Competition

There are currently no effective treatments for chlorine gas exposure.

However, in general, we face significant competition for U.S. government funding for both development and procurements of MCMs for biological, chemical and nuclear threats, diagnostic testing systems and other emergency preparedness countermeasures. The U.S. federal government has currently allocated a significant amount of research funding to the development of countermeasures against bioterrorism. As a result, there are many drug candidates under development as a possible countermeasure against chemical threat agents.

Funding Options

This development program to date has been funded under the NIH-CounterACT Program and we expect that future efficacy studies necessary for approval by the FDA will be funded by the NIH-CounterACT program.

Overview

Nerve agents, such as sarin gas, have been used in Syria, Iraq and Japan and pose a threat to civilian and military personnel. Sarin gas exposure can cause pain, weakness, vomiting, diarrhea and changes in heart rate within minutes to 18 hours after exposure. High levels of exposure can cause convulsions, paralysis, breathing problems and death. BARDA classifies nerve agents as a priority threat.

10150 is the focus of a sponsored research grant awarded by the National Institutes of Health (NIH), National Institute of Neurological Disorders and Stroke (NINDS) and Office of the Director (OD) to the University of Colorado to test its potential efficacy as a MCM against nerve agents.

Pre-clinical studies

In September 2013, we announced that researchers, led by Dr. Manisha Patel at the University of Colorado, completed a pilot study demonstrating that 10150 provides neuroprotection, decreases oxidative stress, and significantly improves survival in rats exposed to pilocarpine – a surrogate for the nerve agents soman and sarin gas. These data were presented at the 6th Annual CounterACT Countermeasures Against Chemical Threats Network Research Symposium in Washington, D.C.

The current standard of care for nerve agent exposure is Atropine(R) and benzodiazepines. In this study 10150 significantly improved the survival of animals exposed to pilocarpine. Injection of 10150 sixty minutes after pilocarpine in the presence of standard therapy resulted in 100% survival and near complete inhibition of oxidative stress indices in the hippocampus. Detailed data is expected to be published in 2014.

Future Development Plans

On September 10th 2013, NIH-NINDS notified Dr. Patel that a total of $4.3 million had been awarded for her project titled “Neuroprotective Effects of AEOL 10150 against organophosphate toxicity.” The research work will be conducted in Dr. Patel’s lab at the University of Colorado, National Jewish Health as well as at the USAMRICD. Funding for this research has been awarded under a grant supported by the CounterACT Program, National Institutes of Health Office of the Director (NIH OD), and the NINDS

Competition

The current standard of care for nerve agent exposure is Atropine(R) and benzodiazepines. 10150 would be added to current standard of care to improve outcomes. We believe that other companies are developing potential treatments for nerve gas, although it is difficult to evaluate their success unless data is announced publicly

However, in general, we face significant competition for U.S. government funding for both development and procurements of medical countermeasures for biological, chemical and nuclear threats, diagnostic testing systems and other emergency preparedness countermeasures. The U.S. federal government has currently allocated a significant amount of research funding to the development of countermeasures against bioterrorism. As a result, there are many drug candidates under development as a possible countermeasure against chemical threat agents.

Funding Options

This development program to date has been funded under the NIH-CounterACT Program and NINDS and we expect that future efficacy studies necessary for approval by the FDA will also be funded by the $4.3 million grant to Dr. Patel.

Overview

62

GI-ARS is an acute syndrome that develops following high-dose radiation exposure. The intestinal epithelium, a single layer of cells lining the surface of the GI lumen, is responsible for vital functions of nutrient absorption, maintaining fluid and electrolyte balance and protection of the body from bacteria, bacterial toxins and non-absorbed materials. The functional integrity of the GI system is maintained via incessant production of epithelial cells from specialized stem cells located in crypts at the base of the epithelial folds. High-dose, total-body irradiation can result in killing of the crypt stem cells and loss of the protective and absorptive epithelial barrier. There are no FDA-approved drugs or biologics to treat GI-ARS.

Pre-clinical studies

The NIH-NIAID's Radiation/Nuclear Medical Countermeasures development program has also been testing 10150 as a countermeasure for GI-ARS through the Medical Countermeasures Against Chemical Threats ("MCART") program. The studies are being funded by the NIAID and are designed to test the efficacy of 10150 as a treatment for damage to the GI tract due to exposure to radiation.

Preliminary results have demonstrated that 10150 can effectively increase regeneration of GI stem cells, reduce the severity and duration of diarrhea and improve survival when administered at 24 hours after doses of total-body irradiation that produce the lethal GI syndrome.

Future Development Plans

In collaboration with the NIH-NIAID, we are planning additional studies to continue testing 10150 for GI-ARS. Upon completion of these studies we would need to demonstrate efficacy in animal models and demonstrate product safety based upon the FDA's "Animal Rule". We will also demonstrate product safety using the same product and formulation used in the animal efficacy trials and proposed for use in humans. Demonstration of safety includes preclinical demonstration of safety via the standard pre-clinical studies and analyses methods and Phase I safety trials sufficient to demonstrate product safety in the target patient population. We believe our safety studies previously completed as a therapy candidate for ALS and those to be performed under our Lung-ARS contract with BARDA will be more than adequate to demonstrate safety for this indication.

Competition

We are unaware of any compounds that protect crypt stem cells and that increase survival when given to animals exposed to radiation at levels greater than 10 Gy and given after exposure. There are several companies developing drug candidates that have shown efficacy when given prior to exposure or at lower levels of radiation.

However, in general, we face significant competition for U.S. government funding for both development and procurements of medical countermeasures for biological, chemical and nuclear threats, diagnostic testing systems and other emergency preparedness countermeasures. The U.S. federal government has currently allocated a significant amount of research funding to the development of countermeasures against the effects of radiation exposure. As a result, there are many drug candidates under development as a possible countermeasure against the effects of radiation exposure.

Funding Options

Funding for the development of 10150 in GI-ARS is provided by NIH-NIAID through a broad grant program for the development of MCMs for ARS. Grant funding is awarded directly to research facilities and does not flow through our financial statements. The funding for 10150 in GI-ARS is not tied to a defined development plan, but is disbursed as each step in development is completed. We believe continued funding is dependent on continued demonstration of

efficacy in animal studies.

Overview

According to the American Cancer Society, cancer is the second leading cause of death by disease, representing one out of every four deaths in the United States. Approximately 572,000 Americans were expected to die of cancer in 2011. In 2012, about 1.6 million new cancer cases were expected to be diagnosed in the United States. According to the Radiological Society of North America, about 50 to 60 percent of cancer patients are treated with radiation at some time during their disease.

Combinations of surgery, chemotherapy and radiation treatments are the mainstay of modern cancer therapy. Success is often determined by the ability of patients to tolerate the most aggressive, and most effective, treatment regimens. Radiation therapy-induced toxicity remains a major factor limiting radiation doses. The ability to deliver maximal radiation doses for treatment of tumors without injury to surrounding normal tissue has important implications in oncology therapeutic outcomes because higher doses of radiation therapy may improve both local tumor control and patient survival.

Advances in the tools of molecular and cellular biology have enabled researchers to develop a better understanding of the underlying mechanisms responsible for radiation therapy-induced normal tissue injury. For decades ionizing radiation has been known to increase production of free radicals, which is reflected by the accumulation of oxidatively damaged cellular macromolecules.

As one example of radiation-induced damage to adjacent normal tissue, radiation therapy may injure pulmonary tissue either directly via generation of ROS or indirectly via the action on parenchymal and inflammatory cells through biological mediators such as TGF- and pro-inflammatory cytokines. Since the discovery of SOD, it is apparent that these enzymes provide an essential line of defense against ROS. SODs and SOD mimics, such as 10150, act by catalyzing the degradation of superoxide radicals into oxygen and hydrogen peroxide. SODs are localized intra/extracellularly, are widely expressed throughout the body, and are important in maintenance of redox status (the balance between oxidation and reduction). Previous studies have demonstrated that treating irradiated animal models with SOD delivered by injection of the enzyme through liposome/viral-mediated gene therapy or insertion of human SOD gene can ameliorate radiation therapy-induced damage. For an illustrative example of the radiation therapy reaction see Figure 9.

Figure 9

Figure 9 above shows the dual mechanism of action of radiation therapy and the application of 10150 to the process.

In vitro studies have demonstrated that 10150 reduces the formation of lipid peroxides, forms of ROS, and that it inactivates biologically important ROS molecules such as superoxide, hydrogen peroxide and peroxynitrite. 10150 inactivates these ROS by one or two electron oxidation or reduction reactions in which the oxidation state of the manganese moiety in 10150 changes. 10150 is not consumed in the reaction and it continues to inactivate such ROS molecules as long as it is present at the target site. Preclinical models and human safety studies suggest 10150 is not metabolized in the body and is excreted in feces and urine.

Pre- clinical studies

Figure 10

Figure 10.Relative tumor volumes of human prostate tumor implants in nude mice: Implants of well-vascularized PC3 tumors were grown to substantial size prior to receiving fractionated radiation (5 Gy daily for three days).10150 (7.5 mg/kg/bid) was administered subcutaneously commencing on the first day of irradiation and continued for 20 days. Other groups of mice received either no irradiation, irradiation only or 10150 without irradiation.

Due to the similar mechanisms of actions between radiation therapy (in oncology) and radiation exposure (from nuclear events), we believe that the pre-clinical studies performed for the development of 10150 as a potential medical countermeasure against the effects of Lung-ARS, as described herein, also provide support for the development of

10150 in oncology, to be used in combination with radiation therapy.

We have performed several additional studies specifically for this indication to ensure the use of an antioxidant in radioprotection of normal adjacent tissue does not interfere with the efficacy of tumor radiotherapy. A number of preclinical, in vivo studies have addressed this issue and have demonstrated that 10150 does not negatively impact tumor radiotherapy.

In one study (Vujaskovic, et al. of Duke University), human prostate tumors (PC3) grown in nude mice to substantial size were irradiated with 5 Gy per day for 3 days for a total of 15 Gy. 10150 at 7.5 mg/kg/bid was administered subcutaneously on the first day of radiation and continued for either of two time courses: when tumor volume reached 5 times the initial volume or for twenty days. The receding tumor volume curves for irradiation only and for irradiation plus 10150 demonstrated no difference. Therefore 10150 did not interfere with the radiation effect on prostate tumors.

In another study of prostate cancer tumors (Gridley, et al of Loma Linda University), mouse prostate cancer cell line RM-9 was injected subcutaneously into C57/Bl6 mice, followed by up to 16 days of 10150 delivered intraperitonealy at 6 mg/kg/day. On day seven, a single dose of radiation (10 Gy) was delivered. Therefore, the mice received compound for seven days prior to radiation. The results of this study demonstrated that 10150 does not protect the prostate tumor against radiation, however, 10150 showed a trend towards increasing the effectiveness of the radiation treatment. The primary effect appears to be in down-regulation of radiation induced HIF-1 expression and VEGF and up-regulation of IL-4. Thus, 10150, through its down-regulation of VEGF, may inhibit formation of blood vessels (i.e., angiogenisis) required for tumor re-growth and protects normal tissues from damage induced by radiation and chemotherapy.

In another study (Vujaskovic, et al. of Duke University), mice were implanted with human NSCLC tumors and treated with all potential combinations of paclitaxel, radiation and 10150 to determine the impact on tumor growth. The results showed that 10150 did not impact the effects of either radiation therapy or paclitaxel. Further, the study indicated that the greatest impact in inhibiting tumor growth was with the regimen that included all three courses of treatment, radiation, paclitaxel and10150.

Figure 11

Figure 11 above measures tumor volume against time after implantation of RM-9 tumor cells and shows that 10150 treatment resulted in inhibition of tumor re-growth in a study performed by Dr. Gridley of Loma Linda University. Daily intraperitoneal injections of 10150 were initiated on day 1.At 12 days, approximately one half of each tumor-bearing group and control mice with no tumor were euthanized for in vitro analyses; remaining mice/group were followed for tumor growth and euthanized individually when maximum allowed tumor volume was attained. Each point represents the mean +/- standard error of the mean. Two-way analysis of the variance for days 8 to 14 revealed that group and time had highly significant main effects (Ps<0.001) and a group x time interaction was noted (P<0.001).

Figure 12

Figure 12 above shows the HIF-1 Expression in prostate tumors and the impact of the treatment of 10150 in a study by Dr. Gridley of Loma Linda University.

Figure 13

Figure 13 above shows impact on tumor growth in mice that were implanted with human NSCLC tumors and treated with all potential combinations of paclitaxel, Radiation and 10150.

In summary, the data obtained in these preclinical studies suggest that the post-irradiation, long-term delivery of 10150 may be protective against radiation-induced lung injury, as assessed by histopathology and immunohistochemistry. Oxidative stress, inflammation and hypoxia, which play important roles in the pathogenesis of radiation mediated fibrosis, were shown to be reduced in animals treated with higher doses of 10150. Studies have also shown that 10150 does not adversely impact tumor response to radiation therapy. Thus, treatment with 10150 does not significantly protect tumors from the cell killing effects of radiation therapy. This combined with other studies that have shown that 10150 significantly prevents radiation induced normal tissue injury suggests that 10150 has the potential to achieve protection of normal tissue without protection of tumor tissue. Additionally, it appears the down-regulation of radiation induced HIF-1 expression and VEGF and up-regulation of IL-4 may provide additional anti-tumor effects. Thus, 10150, through its down-regulation of VEGF, may inhibit formation of blood vessels required for tumor re-growth, while protecting normal tissues from damage induced by radiation and chemotherapy.

Future Development Plans

We are leveraging the significant investment made by U.S. government agencies to develop this promising compound for use in oncology indications, where it would be used in combination with chemotherapy and radiation therapy, and is currently in development for use as both a therapeutic and prophylactic drug. Data has already been published showing that 10150 does not interfere with the therapeutic benefit of radiation therapy in prostate and lung cancer preclinical studies.

In 2014, we expect to initiate a safety study in healthy normal volunteers funded under the BARDA Contract. Upon the successful completion of the Phase I study and approval of its protocol by the FDA and the appropriate IRBs, we expect to begin a Phase II study in cancer patients receiving radiation therapy. A specific indication has not yet been chosen, however, we are considering esophageal, prostate, head and neck and NSCLC patients.

Competition

There are currently three drugs approved for the treatment of the side effects of radiation therapy. We do not believe that any of these drugs directly competes with 10150 in terms of mechanism of action or targeted therapeutic benefit when used in combination with radiation therapy.

Amifostine (Ethyol(R)) is approved by the FDA as a radioprotector. Amifostine (Ethyol) is marketed by MedImmune, Inc. for use in reduction of chemotherapy-induced kidney toxicity associated with repeated administration of cisplatin in patients with advanced ovarian cancer and radiation-induced xerostomia (damage to the salivary gland) in patients undergoing post-operative radiation treatment for head and neck cancer. MedImmune, Inc. is studying Amifostine in other indications of radiation therapy. KepivanceTM (palifermin) is marketed by Amgen, Inc. for use in the treatment of severe oral mucositis (mouth sores) in patients with hematologic (blood) cancers who are undergoing high-dose chemotherapy followed by bone transplant. Amgen, Inc. is also studying Kepivance as an antimucositis agent in patients with head and neck cancer, non-small cell lung cancer and colon cancer. Salagen Tablets (pilocarpine hydrochloride) is marketed by Eisai Pharmaceuticals in the United States as a treatment for the symptoms of xerostomia induced by radiation therapy in head and neck cancer patients. In addition, there are many drugs under development to treat the side effects of radiation therapy.

Funding Options

Substantially all of our costs associated with the CMC and toxicology necessary for the oncology indications, plus human safety studies in humans, have been covered by the BARDA Contract. We expect such costs to continue to be covered by the BARDA Contract unless BARDA chooses not to exercise its options under the BARDA Contract. In such a circumstance, we would need to raise additional capital, or partner with another firm, in order to complete the

non-clinical and safety programs related to Lung-ARS noted above. We will need to internally fund the human efficacy programs in oncology, as well as any non-clinical studies that may be necessary for specific oncology indications. We may still raise capital through other sources even if BARDA exercises additional options under the BARDA Contract. It may be possible to include cancer patients receiving radiation therapy in our safety studies under the BARDA contract, although there can be no guarantee of this. The use of cancer patients as well as healthy normal volunteers in the safety study has been suggested by the FDA in correspondence from our June 2012 meeting.

10150 Clinical Development Program to Date

10150 has been tested for safety, tolerability and pharmacokinetics with no serious or clinically significant adverse effects observed. To date, 38 patients have received 10150 in three clinical trials designed to test the safety and tolerability of the drug candidate.

In September 2005, we completed a multi-center, double-blind, randomized, placebo-controlled, Phase I clinical trial. This escalating-dose study was conducted to evaluate the safety, tolerability and pharmacokinetics of 10150 administered by twice daily subcutaneous injections in patients with ALS.

In the Phase Ia study, 4-5 patients diagnosed with ALS were placed in a dosage cohort (3 or 4 receiving 10150 and 1 receiving placebo).Each dose cohort was evaluated at a separate clinical center. In total, seven separate cohorts were evaluated in the study, and 25 ALS patients received 10150.Based upon an analysis of the data, it was concluded that single doses of 10150 ranging from 3 mg to 75 mg were safe and well tolerated. In addition, no serious or clinically significant adverse clinical events were reported, nor were there any significant laboratory abnormalities. Based upon extensive cardiovascular monitoring (i.e., frequent electrocardiograms and continuous Holter recordings for up to 48 hours following dosing), there were no compound-related cardiovascular abnormalities.

The most frequently reported adverse events in this Phase I clinical trial were injection site reactions, followed by dizziness and headache. Adverse events were primarily mild in severity, and approximately one-half of the events were considered to have a possible relationship to the study medication. In addition, no clinically meaningful findings were noted in the safety, laboratory, vital sign, the Unified Parkinson's Disease Rating Scale ("UPDRS"), functional ALS, or electro cardiogram ("ECG") data. All cohorts exhibited dose-related peak plasma drug concentrations and consistent disappearance half-lives.

In October 2006, we completed a multi-center, double-blind, randomized, placebo-controlled, Phase Ib clinical trial. This multiple dose study was conducted to evaluate the safety, tolerability and pharmacokinetics of 10150 administered by subcutaneous injection and infusion pump in patients with ALS. Under the multiple dose protocol, three groups of six ALS patients (four receiving 10150 and two receiving placebo) were enrolled.

The Phase Ib study was conducted at five academic clinical ALS centers. Male and female ALS patients, 18 to 70 years of age, who were ambulatory (with the use of a walker or cane, if needed) and capable of orthostatic blood pressure assessments were enrolled in the study. Clinical signs/symptoms, laboratory values, cardiac assessments and pharmacokinetics (PK) were performed.

Based upon an analysis of the data, it was concluded that multiple doses of 10150 for a period of six and one half consecutive days in the amount of 40 mg per day, 60 mg per day and 2 mg per kilogram per day were safe and well tolerated. No serious or clinically significant adverse events were reported or observed. The most frequent adverse events related to study compound were injection site observations related to compound delivery. There were no significant laboratory abnormalities. Based upon extensive cardiovascular monitoring (i.e., frequent electrocardiograms and continuous Holter recordings throughout the six and one half days of dosing), there were no compound-related cardiovascular abnormalities.

Pharmacokinetic findings from the Phase Ib study to data are as follows:

- Increases in Cmax and AUC (0-8) appear to correlate with increases in dose, but the correlation is not strong.

- The mean Cmax for the 40 mg cohort was 1,735 ng/mL; 2,315 ng/mL for the 60 mg cohort and 1,653 ng/mL for the 2 mg/kg cohort.

- There were probable linear correlations between both Cmax and AUC(0-8) and dose based on body weight.

- The terminal half-life (a measurement of the time period for which a compound stays in the body) as determined from Day 7 data was approximately 8 to 9 hours.

- Steady-state occurs within three days of multiple dosing. There was no evidence for a third longer half-life that would be associated with long term accumulation. Thus, compound accumulation is not expected beyond the third day with multiple dosing.

- From 48 hours to the end of the infusion, the plasma concentrations of 10150 during the infusion showed little variability, indicating a smoother delivery of the drug than with twice-daily injections.

During 2008, we completed a follow-on Phase I open label compassionate use multiple dose study of 10150 in a patient diagnosed with progressive and debilitating amyotrophic ALS. The study was conducted at the University of California, Los Angeles by Martina Wiedau-Pazos, M.D., and was designed to evaluate the safety and efficacy of 10150 in an ALS patient over an extended period of time. The patient received a subcutaneous injection of 75mg of 10150 two times each day for 34 days. Efficacy and safety data was monitored for the duration of the study. The primary objective of this study was to assess the clinical efficacy of 10150 with respect to the patient's baseline assessment of functional status. Secondary objectives included the assessments of muscle strength, respiratory function, quality of life and safety. The patent's baseline efficacy results were an ALS Functional Rating Scale ("ALSFRS-R") rating of 19, Muscle strength Manual Muscle Testing Scale ("MMTS") of 68 and a forced vital capacity ("FVC") of 30%. The patient's results after 2 months were an ALSFRS-R rating of 22, a MMTS rating of 86 and an FVC of 28%. It should be noted that the subject began using breathing assistance (BiPAP) approximately two weeks after the study started. The patient discontinued treatment due to nausea and moderately increased liver transaminases. Other drug-associated adverse events included mild skin irritation at the injection site and mild urine discoloration.

AEOL 11207

Overview

We have selected AEOL 11207 as our second development candidate based upon results from data obtained from our pre-clinical testing of our pipeline drug candidates. Because of the wide-ranging therapeutic opportunities that the compound evidenced in diverse pre-clinical models of human diseases, we have not yet ascertained what the most robust therapeutic use of AEOL 11207 might be. However, data collected to date suggest that AEOL 11207 may be useful as a potential once-every-other-day oral therapeutic treatment option for central nervous system ("CNS") disorders, most likely Parkinson's disease.

Parkinson's disease is a common neurodegenerative disorder, second in occurrence among these disorders only to Alzheimer's disease. According to the National Parkinson Foundation, Parkinson's affects as many as one million people in the United States, with approximately 60,000 new cases diagnosed in the United States each year.

Parkinson's specifically involves the progressive destruction of the nerves that secrete dopamine and control the basal ganglia, an area of the brain involved in the regulation of movement. Dopamine turnover has been shown to elevate the levels of ROS in the brain. In addition, a street-drug contaminant has appeared that can cause parkinsonism in drug abusers. The compound N-methyl-4-phenyl-1, 2, 3, 6tetrahydropyridine ("MPTP") has been identified in underground laboratory preparations of a potent analog of meperidine (Demerol). MPTP-containing powder, sometimes sold as a new "synthetic heroin," can be dissolved in water and administered intravenously or taken by the intranasal route. MPTP has been documented to produce irreversible chronic Parkinson symptoms in drug abusers. Agents such as MPTP overproduce ROS in the basal ganglia. Therefore, ROS mediated neuronal dysfunction may play a key role in the development of Parkinson's disease. Symptoms of this disease include tremors, rigidity and bradykinesia (i.e., slowness of movement). In the more advanced stages, it can cause fluctuations in motor function, sleep problems and

various neuro-psychiatric disorders. A biological hallmark of Parkinson’s disease is a reduction in brain dopamine levels. Preventing or slowing the destruction of brain cells that lead to the depletion of dopamine levels in the brain is an important therapeutic approach for the treatment of this disease.

Pre-clinical studies

Data developed by our scientists and Dr. Manisha Patel at the University of Colorado Health Sciences Center and Department of Medicine, indicate that when administered orally, AEOL 11207 is greater than 80% bioavailable, meaning that it is readily absorbed and reaches both the circulatory system and the brain in sufficient amounts to demonstrate biological activity. Data developed with AEOL 11207 in a widely used animal model of Parkinson's disease (the "MPTP model") showed that when administered orally, AEOL 11207 crosses the blood brain barrier and protected dopamine neurons in a dose-dependent manner. Further data suggest that the compound has a half- life (a measurement of the time period for which a compound stays in the body) of about 3 days in both the circulatory system and the brain, and that prior to stopping administration of the compound, the levels of AEOL 11207 in both the circulatory system and brain reach a steady state (a valuable measurement of when the levels of the drug in the body remain substantially constant, neither increasing nor decreasing) after 2 days of dosing. Data have also been developed that indicate that when dosing of AEOL 11207 is stopped, the compound is excreted from the body.

In September 2010, Manisha Patel of the University of Colorado was informed by the Michael J. Fox Foundation that she had been awarded a supplement to her grant. The funds are for the synthesis of additional quantities of AEOL1114B and AEOL11203; for the completion of the evaluation of AEOL1114B and AEOL11203's effects on MPTP toxicity (TH+ cells in substantia nigra), and behavioral testing and accumulation of manganese after chronic dosing.

Prior to receiving the funding for this program, we filed a new composition of matter and use patent for AEOL 11114B and 11203.

Future Development Plans

For this and other reasons, we believe that the therapeutic rationale for developing AEOL 11207 as a neuroprotectant, may substantially change the course of therapeutic treatment options for Parkinson's disease if AEOL 11207 were to achieve regulatory approval for commercialization. However, we are unable to determine at this time that such regulatory approval for AEOL 11207 can be or will be secured and we will not be able to further develop AEOL 11207 unless funding for this purpose is obtained.

AEOL 11207 is patent-protected and has the same chemical core structure as 10150. Because of this common structural feature, it is anticipated that AEOL 11207 may evidence substantially the same safety profile in clinical evaluations as observed with 10150, making clinical trial design and testing of AEOL 11207 more robust and facile. Furthermore, all of our compounds evidence the ability to scavenge and decrease ROS and reactive nitrogen species (RNS), all of which are implicated in a variety of CNS diseases.

Funding Options

The University of Colorado, our research provider for the development of AEOL 11207 for the treatment of Parkinson's Disease, received a grant from the Michael J. Fox Foundation to further test AEOL 11207 and several of our other compounds, including AEOL11203, and AEOL1114B,. We expect the work under the Michael J. Fox grant to be completed by the middle of 2014.

Contracts and Grants

We seek to advance development of our drug candidates through external funding arrangements. We may slow down development programs or place them on hold during periods that are not covered by external funding. We have received external funding awards for the development of 10150 as an MCM for Lung-ARS, GI-ARS, mustard gas and

chlorine gas exposure from the NIH.

BARDA Contract; Background and Recent Developments

In December 2009, we were informed by BARDA that we had been chosen to submit a full proposal for funding of our Lung-ARS program from its current stage through FDA approval, based on a summary “white paper” submitted by us earlier in 2009. We submitted a full proposal in February 2010. We were notified in July 2010 that our proposal had been chosen by BARDA, and then entered into negotiations for a development contract with the agency.

On February 11, 2011, we signed a five-year, cost-plus contract with BARDA for the development of 10150 as a MCM against Lung-ARS (the "BARDA Contract"). BARDA is the government agency responsible for the advanced development and purchase of medical countermeasures for chemical, biological, radiological and nuclear threats. The contract fully funds the advanced development of 10150 through approval by the FDA under 21 CFR Part 314 Subpart I and Part 601 Subpart H (the "Animal Rule.") The Animal Rule allows for approval of drugs using only animal studies when human clinical trials cannot be conducted ethically.

We were awarded approximately $10.4 million in the base period of the contract. On April 16, 2012, we announced that BARDA had exercised two options under the BARDA Contract worth approximately $9.1 million. On September 17, 2013, we announced that BARDA had exercised $6.0 million in additional contract options, bringing the total exercised contract value to date to approximately $25.5 million. We may receive up to an additional $92.9 million in options exercisable over the remaining years of the contract. If all of the options are exercised by BARDA, the total value of the contract would be approximately $118.4 million.

Pursuant to the Statement of Work in the BARDA Contract, we expect to provide the data necessary for filing an application for an EUA in the second half of 2014. An EUA would make it possible for BARDA to begin procuring 10150 for the strategic national stockpile. Procurements from BARDA may result in significant revenues, and profitability, for Aeolus.

Activities under the contract to date include animal efficacy studies, animal model development with radiation survival curve studies, dosing studies, bulk drug manufacturing, bulk drug and final drug product manufacturing, validation testing, compliance studies, stability studies and the filing of an orphan drug status application and a fast track designation application with the FDA.

Following the commencement of the BARDA Contract, we entered into a series of agreements with various parties in furtherance of our efforts under the BARDA Contract, which are described below.

On February 18, 2011, we entered into a Research and Manufacturing Agreement with Johnson Matthey Pharmaceutical Materials, Inc. (d/b/a Johnson Matthey Pharma Services) ("JMPS"), pursuant to which we engaged JMPS to, among other things, assess and develop a reliable separations or manufacturing process for certain chemical compounds as required by us and to perform such additional work as may be required or agreed upon by the parties and to manufacture compounds for us. Each project performed by JMPS under the agreement will have a detailed project description and separate fee agreement based on the nature and duration of the project and the specific services to be performed by JMPS. The term of the agreement with JMPS will continue until February 16, 2016 or the date on which all projects under the agreement have been completed or terminated.

On March 16, 2011, we and the Office of Research and Development of the University of Maryland, Baltimore ("UMB") entered into a Sub-award Agreement, pursuant to which we engaged UMB to, among other things, develop a whole thorax lung irradiation model for use in studies supporting the licensure of 10150. The Sub-award Agreement is a fixed fee agreement inclusive of all direct and indirect costs. As a result of the contract modification and no-cost extension with BARDA mentioned below, the term of the Sub-award Agreement will continue through at least June 30, 2014.

On February 14, 2012, the Aeolus team presented the results and deliverables that had been produced during the first twelve months under the base period of the BARDA Contract at an "In-Progress Review" meeting with BARDA, and requested the exercise of additional contract options, which contain additional key items required in the advanced development of 10150.

On February 15, 2012, we announced that we entered into a contract modification and no-cost extension with BARDA. The modification and extension allowed us to continue operating under the base period of the contract awarded in February 2011, and restructured the timing and components of the options that could be awarded under the remaining four years of the agreement. The changes did not impact the total potential value of the contract, which remains at approximately $118.4 million. The contract restructure was driven by our ability to generate cost savings in the base year contract, and to allow BARDA to better manage contract options to expedite development program.

On April 16, 2012, we announced that BARDA had exercised two contract options worth approximately $9.1 million. BARDA's exercise of the options was in response to the presentation of the deliverables and progress made under the contract at the meeting on February 14, 2012. Among the key items in the options BARDA exercised are animal efficacy studies, mechanism of action research and manufacturing and process validation work. All of these items build off of work successfully completed during the first twelve months of the contract base period. The contract is designed to produce the data necessary for an approval under the FDA “Animal Rule” and for a potential Emergency Use Authorization (EUA). An approval or EUA would allow the federal government to buy 10150 for the Strategic National Stockpile under Project Bioshield. Project Bioshield is designed to accelerate the research, development, purchase and availability of effective medical countermeasures for the Strategic National Stockpile.

On November 7, 2012, we and the Office of Research and Development of the University of Maryland, Baltimore (“UMB”) entered into a Sub-award Agreement, pursuant to which we engaged UMB to, among other things, perform mouse studies supporting the licensure of 10150. Prior to this agreement, our mouse studies had been conducted at Duke University. In 2012, the research team at Duke responsible for conducting the studies moved to UMB. The Sub-award Agreement is a fixed fee agreement inclusive of all direct and indirect costs. As a result of the contract modification and no-cost extension with BARDA mentioned above, the term of the Sub-award Agreement will continue through at least June 30, 2014.

On July 29, 2013, Aeolus presented the results and deliverables that had been produced during the first 28 months of the contract at an "In-Progress Review" meeting with BARDA, and requested the exercise of additional contract options.

On September 17, 2013 we announced that BARDA had exercised $6.0 million in additional options under the contract. The options that BARDA exercised will fund our IND filing for AEOL-10150 as a treatment for Lung-ARS, additional animal efficacy studies designed to optimize timing and duration of dosing and the continued development of large-scale GMP manufacturing capability to meet potential future demand. When combined with our ongoing studies in non-human primates and our completed work in GMP manufacturing development, these options will help Aeolus meet the requirements for a pre-EUA filing for AEOL-10150 in 2014.

As of September 30, 2013, the total contract value exercised by BARDA under the BARDA Contract is $25.5 million.

Collaborative and Licensing Arrangements

Duke Licenses

Pursuant to our license agreements with Duke, we have obtained exclusive worldwide rights from Duke to products using antioxidant technology and compounds developed by Dr. Irwin Fridovich and other scientists at Duke. The license from Duke covers, among other items, AEOL11203, AEOL11207 and some of the intellectual property related to 10150. We are obligated under the licenses to pay Duke royalties ranging in the low single digits of net product sales during the term of the Duke licenses, and we must make payments upon the occurrence of certain development milestones in an aggregate amount of up to $2,000,000. In addition, we are obligated under the Duke licenses to pay patent filing, prosecution, maintenance and defense costs. The Duke licenses are terminable by Duke in the event of breach by us and otherwise expire when the last licensed patent expires.

National Jewish Medical and Research Center and National Jewish Health

We have obtained an exclusive worldwide license from the National Jewish Medical and Research Center (“NJMRC”) to develop, make, use and sell products using proprietary information and technology developed under a previous Sponsored Research Agreement within the field of antioxidant compounds and related discoveries. The license from

NJMRC covers, among other items, the composition of matter for 10150 and some use patents related to alkylating and vesicant agents. We must make milestone payments to the NJMRC in an aggregate amount of up to $250,000 upon the occurrence of certain development milestones. Our royalty payment obligations to the NJMRC under this license agreement are in the low single digits of net product sales. We are also obligated to pay patent filing, prosecution, maintenance and defense costs. This NJMRC license agreement is terminable by the NJMRC in the event of breach and otherwise expires when the last licensed patent expires.

In 2009, we obtained an additional exclusive worldwide license from National Jewish Health to develop, make, use and sell products using proprietary information and technology developed at NJH related to certain compounds as an MCM against mustard gas exposure. Under this license agreement, we must make milestone payments to NJH in an aggregate amount of up to $500,000 upon the occurrence of certain development milestones. In addition, we must make royalty payments to NJH under this license agreement ranging in the low-single digits as a percentage of all sublicensing fees, milestone payments and sublicense royalties that we receive from sublicenses granted by us pursuant to this license agreement. We are also obligated to pay patent filing, prosecution, maintenance and defense costs. This NJH license agreement is terminable by NJH in the event of breach and otherwise expires when the last licensed patent expires.

Research and Development Expenditures

Expenditures for research and development activities were $3,360,000 and $6,468,000 during the years ended September 30, 2013 and 2012, respectively. Research and development expenses for fiscal 2013 and 2012 related primarily to the advancement of our lead compound, 10150.

Manufacturing

We currently do not have the capability to manufacture any of our drug candidates on a commercial scale. Materials for non-clinical and clinical studies are produced under contract with third parties. To date, we have partnered with JMPS for the manufacture of our active pharmaceutical ingredients. JMPS is a 200 year old company that is a global supplier of active pharmaceutical ingredients, fine chemicals and other specialty chemical products and services to a wide range of chemical and pharmaceutical industry customers and industrial and academic research organizations. JMPS is a leader in the manufacture of metal-based pharmaceutical products.

Commercialization

If BARDA elects to procure 10150 pursuant to an EUA, as described above, or after FDA approval, it may be possible for us to generate significant sales revenue without the need of raising significant funds to build a commercial organization. Depending on the size of those procurements, and assuming the successful development and FDA approval of our compounds in other, non-biodefense indications, we may have sufficient financial resources to internally fund the building of a commercial organization. However, in the event procurements from BARDA are not made, and assuming successful development and FDA approval of one or more of our compounds, to successfully commercialize our catalytic antioxidant programs, we must seek corporate partners with expertise in commercialization or develop this expertise internally. However, we may not be able to successfully commercialize our catalytic antioxidant technology, either internally or through collaboration with others.

Marketing

Our potential catalytic antioxidant products are being developed for large therapeutic markets. We believe these markets are best approached by partnering with established biotechnology or pharmaceutical companies that have broad sales and marketing capabilities. We are pursuing collaborations of this type as part of our search for development partners. However, we may not be able to enter into any marketing arrangements for any of our products on satisfactory terms or at all.

Biodefense Industry

Market Overview

The market for biodefense countermeasures has grown dramatically as a result of the increased awareness of the threat of global terror activity in the wake of the September 11, 2001 terrorist attacks. The U.S. government is the principal source of worldwide biodefense spending. Most U.S. government spending on biodefense programs is in the form of development funding from NIAID, BARDA and the Department of Defense ("DoD") and procurements of countermeasures by BARDA, the CDC and the DoD. The U.S. government is now the largest source of development and procurement funding for academic institutions and biotechnology companies conducting biodefense research or developing vaccines and immunotherapies directed at potential agents of bioterror or biowarfare.

We analyze the biodefense market in three segments; the United States civilian market, United States military market and non U.S. markets, with the U.S. government funding representing the vast majority of the worldwide market. According to the Center for Biosecurity at the University of Pittsburgh Medical Center the U.S. government's biodefense military and civilian spending approximated $8 billion in fiscal 2009 and has averaged around $5.5 billion from fiscal years 2001 to 2009.

- U.S. Civilian: The U.S. civilian market includes funds to protect the U.S. population from biological agents and is largely funded by the Project BioShield Act of 2004 ("Project BioShield"). Project BioShield is the U.S. government's largest biodefense initiative. Project BioShield was extended through the Pandemic All Hazards and Preparedness Reauthorization Act of 2013, which authorized BARDA to administer a Special Reserve Fund of $2.8 billion for MCM procurement.

- U.S. Military: The DoD is responsible for the development and procurements of countermeasures for the military segment, which focuses on providing protection for military personnel and civilians who are on active duty.

- Non-U.S. Markets: Non-U.S. markets address protection against biowarfare agents for both civilians and military personnel in foreign countries. We anticipate that foreign countries will want to procure biodefense products as they are developed and validated by procurements by the U.S. government.

Project BioShield and the Pandemic and All-Hazards Preparedness Act

Project BioShield became law in 2004 and authorizes procurements of countermeasures for chemical, biological, radiological and nuclear attacks for the SNS, which is a national repository of medical assets and countermeasures designed to provide federal, state and local public health agencies with medical supplies needed to treat those affected by terrorist attacks, natural disasters, industrial accidents and other public health emergencies. Project BioShield provided appropriations of $5.6 billion to be expended over ten years into a special reserve fund.

The Pandemic and All-Hazards Preparedness Act ("PAHPA"), passed in 2006, established BARDA as the agency responsible for awarding procurement contracts for biomedical countermeasures and providing development funding for advanced research and development in the biodefense arena, and supplements the funding available under Project BioShield for chemical, biological, radiological and nuclear countermeasures, and provides funding for infectious disease pandemics. Funding for BARDA is provided by annual appropriations by Congress. Congress also appropriates annual funding for the CDC for procurements of medical assets and countermeasures for the SNS and for NIAID to conduct biodefense research. This appropriation funding supplements amounts available under Project BioShield.

The Pandemic and All-Hazards Preparedness Reauthorization Act ("PAHPRA"), passed in 2013, extended the programs started under Project BioShield and PAHPA. PAHPRA authorized a $2.8 billion Special Reserve Fund to be administered by BARDA for the purpose of procuring MCMs for the SNS. Currently, the U.S. government may, at its discretion, purchase critical biodefense products for the SNS prior to FDA approval based on the EUA route enabled under the Project BioShield legislation.

On an ongoing basis we monitor notices for requests for proposal, grants and other potential sources of government funding that could potentially support the development of our drug candidates. Nevertheless, changes in government budgets, priorities and agendas as well as political pressures could result in a reduction in overall government financial support for the biodefense sector in general and/or specifically the drug candidates we are developing. Due to the current economic downturn, the accompanying fall in tax revenues and the U.S. government's efforts to stabilize

the economy, the U.S. government may be forced or choose to reduce or delay spending in the biodefense field, which could decrease the likelihood of future government contract awards, the likelihood that the government will exercise its right to extend any of its existing contracts and/or the likelihood that the government would procure products from us.(For further information, see “Risk Factors — Risks Related to Our Dependence on U.S. Government Grants and Contracts — Most of our immediately foreseeable future revenues are contingent upon grants and contracts from the U.S. government and we may not achieve sufficient, if any, revenues from these agreements to attain profitability.”) As a result, further development of our drug candidates and ultimate product sales to the government, if any, could be delayed or stopped altogether.

Legislation and Regulation Related to Bioterrorism Counteragents

Because some of our drug candidates are intended for the treatment of diseases that may result from acts of bioterrorism, they may be subject to the specific legislation and regulation described below.

Project BioShield

Project BioShield provides expedited procedures for bioterrorism related procurements and awarding of research grants, making it easier for HHS to quickly commit funds to countermeasure projects. Project BioShield relaxes procedures under the Federal Acquisition Regulation for procuring property or services used in performing, administering or supporting biomedical countermeasure research and development. In addition, if the Secretary of HHS deems that there is a pressing need, Project BioShield authorizes the Secretary to use an expedited award process, rather than the normal peer review process, for grants, contracts and cooperative agreements related to biomedical countermeasure research and development activity.

Under Project BioShield, the Secretary of HHS, with the concurrence of the Secretary of the Department of Homeland Security ("DHS"), and upon the approval of the President, can contract to purchase unapproved countermeasures for the SNS in specified circumstances. Congress is notified of a recommendation for a stockpile purchase after Presidential approval. Project BioShield specifies that a company supplying the countermeasure to the SNS is paid on delivery of a substantial portion of the countermeasure. To be eligible for purchase under these provisions, the Secretary of HHS must determine that there are sufficient and satisfactory clinical results or research data, including data, if available, from preclinical and clinical trials, to support a reasonable conclusion that the countermeasure will qualify for approval or licensing within eight years. Project BioShield also allows the Secretary of HHS to authorize the emergency use of medical products that have not yet been approved by the FDA. To exercise this authority, the Secretary of HHS must conclude that:

- the agent for which the countermeasure is designed can cause serious or life-threatening disease;
- the product may reasonably be believed to be effective in detecting, diagnosing, treating or preventing the disease;
- the known and potential benefits of the product outweigh its known and potential risks; and
- there is no adequate alternative to the product that is approved and available.

Although this provision permits the Secretary of HHS to circumvent the FDA approval process, its use would be limited to emergency circumstances.

Safety Act

The Support Anti-Terrorism by Fostering Effective Technologies Act enacted by the U.S. Congress in 2002 (the "Safety Act") creates product liability limitations for qualifying anti-terrorism technologies for claims arising from or related to an act of terrorism. In addition, the Safety Act provides a process by which an anti-terrorism technology may be certified as an "approved product" by the DHS and therefore entitled to a rebuttable presumption that the government contractor defense applies to sales of the product. The government contractor defense, under specified circumstances, extends the sovereign immunity of the United States to government contractors who manufacture a product for the government. Specifically, for the government contractor defense to apply, the government must approve reasonably precise specifications, the product must conform to those specifications and the supplier must warn the government about known dangers arising from the use of the product.

74

Public Readiness and Emergency Preparedness Act

The Public Readiness and Emergency Preparedness Act enacted by Congress in 2005 (the "PREP Act") provides immunity for manufacturers from all claims under state or federal law for "loss" arising out of the administration or use of a "covered countermeasure." However, injured persons may still bring a suit for "willful misconduct" against the manufacturer under some circumstances. "Covered countermeasures" include security countermeasures and "qualified pandemic or epidemic products." For these immunities to apply, the Secretary of HHS must issue a declaration in cases of public health emergency or "credible risk" of a future public health emergency. We cannot predict whether Congress will fund the relevant PREP Act compensation programs; or whether the necessary prerequisites for immunity would be triggered with respect to our drug candidates.

Competition

General

Competition in the pharmaceutical industry is intense and we expect it to increase. Technological developments in our field of research and development occur at a rapid rate and we expect competition to intensify as advances in this field are made. We will be required to continue to devote substantial resources and efforts to research and development activities. Our most significant competitors, among others, are fully integrated pharmaceutical companies and more established biotechnology companies, which have substantially greater financial, technical, sales, marketing and human resources than we do. These companies may succeed in developing and obtaining regulatory approval for competitive products more rapidly than we can for our drug candidates. In addition, competitors may develop technologies and products that are, or are perceived as being, cheaper, safer or more effective than those being developed by us or that would render our technology obsolete.

In addition, we face significant competition for U.S. government funding for both development and procurements of medical countermeasures for biological, chemical and nuclear threats, diagnostic testing systems and other emergency preparedness countermeasures. The U.S. federal government has currently allocated a significant amount of research funding to the development of countermeasures against the effects of radiation exposure. As a result, there are many drug candidates and products under development as a possible countermeasure against the effects of radiation exposure.

We expect that important competitive factors in our potential product markets will be the relative speed with which we and other companies can develop products, complete the clinical testing and approval processes, and supply commercial quantities of a competitive product to the market. With respect to clinical testing, competition might result in a scarcity of clinical investigators and patients available to test our potential products, which could delay development.

Antioxidants

Several companies have explored the therapeutic potential of antioxidant compounds in numerous indications. Historically, most of these companies have focused on engineered versions of naturally occurring antioxidant enzymes, but with limited success, perhaps because the large size of these molecules makes delivery into the cells difficult. Antioxidant drug research continues at a rapid pace despite previous clinical setbacks.

Patents and Proprietary Rights

We currently license rights to our potential products from third parties. We generally seek patent protection in the United States and other jurisdictions for the potential products and proprietary technology licensed from these third

parties. The process for preparing and prosecuting patents is lengthy, uncertain and costly. Patents may not issue on any of the pending patent applications owned by us or licensed by us from third parties. Even if patents issue, the claims allowed might not be sufficiently broad to protect our technology or provide us protection against competitive products or otherwise be commercially valuable. Patents issued to or licensed by us could be challenged, invalidated, infringed, circumvented or held unenforceable. Even if we successfully defend our patents for our products, the costs of defense can be significant.

As of December 20, 2013, our catalytic antioxidant small molecule technology base is described in 12 issued United States patents and five United States pending patent applications. These patents and patent applications belong in whole or in part to Duke or the NJH and are licensed to us. These patents and patent applications cover soluble manganic porphyrins as antioxidant molecules as well as targeted compounds obtained by coupling such antioxidant compounds to molecules that bind to specific extracellular elements. The pending U.S. patent applications and issued U.S. patents include composition of matter claims and method claims for several series of compounds. Corresponding international patent applications have been filed, 88 of which have issued, and one of which has been allowed as of December 20, 2013. Our 12 issued US patents will expire between 2015 and 2023.

On November 22, 2013, we filed a provisional patent application with the United States Patent and Trademark Office entitled "Synthesis and Formulation of Porphyrin Compounds." The filing was for brand new patents for synthesis, formulation and pharmaceutical composition of 10150 and other porphyrin compounds. If granted, these new patents could substantially extend the term of patent protection for 10150 beyond the current composition of matter claims.

In addition to patent protection, we rely upon trade secrets, proprietary know-how and technological advances that we seek to protect, in part, through confidentiality agreements with our collaborative partners, employees and consultants. Our employees and consultants are required to enter into agreements providing for confidentiality and the assignment of rights to inventions made by them while in our service. We also enter into non-disclosure agreements to protect our confidential information furnished to third parties for research and other purposes.

Government Regulation

Our research and development activities and the manufacturing and marketing of our future products are subject to regulation by numerous governmental agencies in the United States and in other countries. The FDA and comparable agencies in other countries impose mandatory procedures and standards for the conduct of clinical trials and the production and marketing of products for diagnostic and human therapeutic use. Before obtaining regulatory approvals for the commercial sale of any of our products under development, we must demonstrate through preclinical studies and clinical trials that the product is safe and efficacious for use in each target indication. The results from preclinical studies and early clinical trials might not be predictive of results that will be obtained in large-scale testing. Our clinical trials might not successfully demonstrate the safety and efficacy of any products or result in marketable products.

The United States system of drug approvals is considered to be the most rigorous in the world. It takes an average of 8.5 years for a drug candidate to move through the clinical and approval phases in the United States according to a November 2005 study by the Tufts Center for the Study of Drug Development. Only five in 5,000 drug candidates that enter preclinical testing make it to human testing and only one of those five is approved for commercialization. On average, it costs a company $897 million to get one new drug candidate from the laboratory to United States patients according to a May 2003 report by Tufts Center for the Study of Drug Development. A November 2006 study by Tufts Center for the Study of Drug Development reported that the average cost of developing a new biotechnology product was $1.2 billion and took on average slightly more than eight years to be approved by the FDA.

The steps required by the FDA before new drug products may be marketed in the United States include:

- completion of preclinical studies;

- the submission to the FDA of a request for authorization to conduct clinical trials on an IND, which must become effective before clinical trials may commence;

• adequate and well-controlled Phase I clinical trials, which typically involves normal, healthy volunteers. The tests study a drug candidate's safety profile, including the safe dosage range. The studies also determine how a drug is absorbed, distributed, metabolized and excreted as well as the duration of its action;

- adequate and well-controlled Phase II clinical trials which typically involve treating patients with the targeted disease with the drug candidate to assess a drug's effectiveness;

- adequate and well-controlled Phase III clinical trials involving a larger population of patients with the targeted disease are treated with the drug candidate to confirm efficacy of the drug candidate in the treatment of the targeted indication and to identify adverse events;

- submission to the FDA of an NDA; and

- review and approval of the NDA by the FDA before the product may be shipped or sold commercially.

In addition to obtaining FDA approval for each product, each product manufacturing establishment must be registered with the FDA and undergo an inspection prior to the approval of an NDA. Each manufacturing facility and its quality control and manufacturing procedures must also conform and adhere at all times to the FDA's current good manufacturing practices ("cGMP") regulations. In addition to preapproval inspections, the FDA and other government agencies regularly inspect manufacturing facilities for compliance with these requirements. Manufacturers must expend substantial time, money and effort in the area of production and quality control to ensure full technical compliance with these standards.

Preclinical testing includes laboratory evaluation and characterization of the safety and efficacy of a drug and its formulation. Preclinical testing results are submitted to the FDA as a part of an IND, which must become effective prior to commencement of clinical trials. Clinical trials are typically conducted in three sequential phases following submission of an IND. Phase I represents the initial administration of the drug to a small group of humans, either patients or healthy volunteers, typically to test for safety (adverse effects), dosage tolerance, absorption, distribution, metabolism, excretion and clinical pharmacology, and, if possible, to gain early evidence of effectiveness. Phase II involves studies in a small sample of the actual intended patient population to assess the efficacy of the drug for a specific indication, to determine dose tolerance and the optimal dose range and to gather additional information relating to safety and potential adverse effects. Once an investigational drug is found to have some efficacy and an acceptable safety profile in the targeted patient population, Phase III studies are initiated to further establish clinical safety and efficacy of the therapy in a broader sample of the general patient population, in order to determine the overall risk-benefit ratio of the drug and to provide an adequate basis for any physician labeling. During all clinical studies, we must adhere to good clinical practices ("GCPs") standards. The results of the research and product development, manufacturing, preclinical studies, clinical studies and related information are submitted in an NDA to the FDA.

The process of completing clinical testing and obtaining FDA approval for a new drug is likely to take a number of years and require the expenditure of substantial resources. If an application is submitted, there can be no assurance that the FDA will review and approve the NDA. Even after initial FDA approval has been obtained, further studies, including post-market studies, might be required to provide additional data on safety and will be required to gain approval for the use of a product as a treatment for clinical indications other than those for which the product was initially tested and approved. Also, the FDA will require post-market reporting and might require surveillance programs to monitor the side effects of the drug. Results of post-marketing programs might limit or expand the further marketing of the products. Further, if there are any modifications to the drug, including changes in indication, manufacturing process, labeling or a change in manufacturing facility, an NDA supplement might be required to be submitted to the FDA.

The rate of completion of any clinical trials will be dependent upon, among other factors, the rate of patient enrollment. Patient enrollment is a function of many factors, including the size of the patient population, the nature of the trial, the availability of alternative therapies and drugs, the proximity of patients to clinical sites and the eligibility

criteria for the study. Delays in planned patient enrollment might result in increased costs and delays, which could have a material adverse effect on us.

Failure to comply with applicable FDA requirements may result in a number of consequences that could materially and adversely affect us. Failure to adhere to approved trial standards and GCPs in conducting clinical trials could cause the FDA to place a clinical hold on one or more studies which would delay research and data collection necessary for product approval. Noncompliance with GCPs could also have a negative impact on the FDA's evaluation of an NDA. Failure to adhere to GMPs and other applicable requirements could result in FDA enforcement action and in civil and criminal sanctions, including but not limited to fines, seizure of product, refusal of the FDA to approve product approval applications, withdrawal of approved applications, and prosecution.

Whether or not FDA approval has been obtained, approval of a product by regulatory authorities in foreign countries must be obtained prior to the commencement of marketing of the product in those countries. The requirements governing the conduct of clinical trials and product approvals vary widely from country to country, and the time required for approval might be longer or shorter than that required for FDA approval. Although there are some procedures for unified filings for some European countries, in general, each country at this time has its own procedures and requirements. There can be no assurance that any foreign approvals would be obtained.

In addition to the regulatory framework for product approvals, we and our collaborative partners must comply with laws and regulations regarding occupational safety, laboratory practices, the use, handling and disposition of radioactive materials, environmental protection and hazardous substance control, and other local, state, federal and foreign regulation. The impact of such regulation upon us cannot be predicted and could be material and adverse.

In addition, because some of our drug candidates are intended for the treatment of diseases that may result from acts of bioterrorism, they may be subject to the specific legislation and regulation described above under “Project BioShield and the Pandemic and All-Hazards Preparedness Act” and “Legislation and Regulation Related to Bioterrorism Counteragents.”

Regulations Regarding Government Contracting

We are a government contractor in the United States and we may become a government contractor elsewhere which would mean that we would be subject to various statutes and regulations that govern procurements of goods and services by agencies of the United States and other countries, including the Federal Acquisition Regulation. These governing statutes and regulations can impose stricter penalties than those normally applicable to commercial contracts, such as criminal and civil damages liability and suspension and debarment from future government contracting. In addition, pursuant to various statutes and regulations, our government contracts may be subject to unilateral termination or modification by the government for convenience in the United States and elsewhere, detailed auditing requirements and accounting systems, statutorily controlled pricing, sourcing and subcontracting restrictions and statutorily mandated processes for adjudicating contract disputes.

Hazardous Materials and Select Agents

Our development and manufacturing processes involve the use of hazardous materials, including chemicals and radioactive materials, and produce waste products. Accordingly, we are subject to federal, state and local laws and regulations governing the use, manufacturing, storage, handling and disposal of these materials. In addition to complying with environmental and occupational health and safety laws, we must comply with special regulations relating to biosafety administered by the CDC, HHS and the DoD.

Other Regulations

In the United States and elsewhere, the research, manufacturing, distribution, sale and promotion of drug and biological products are subject to regulation by various federal, state and local authorities in addition to the FDA, including the Centers for Medicare and Medicaid Services; other divisions of HHS, such as the Office of Inspector General: the U.S. Department of Justice and individual U.S. Attorney offices within the Department of Justice and state and local governments. For example, sales, marketing and scientific and educational grant programs must comply with the anti-kickback and fraud and abuse provisions of the Social Security Act, the False Claims Act, the privacy provisions of the Health Insurance Portability and Accountability Act and similar state laws. Pricing and rebate programs must comply with the Medicaid rebate requirements of the Omnibus Budget Reconciliation Act of 1990 and the Veterans Health Care Act of 1992. All of these activities are also potentially subject to federal and state consumer protection and unfair competition laws.

78

CPEC, LLC

We were previously developing bucindolol for the treatment of heart failure, but development was discontinued in 1999. Commercial rights to bucindolol are owned by CPEC, LLC, a limited liability company (“CPEC”), of which we own 35% and Endo Pharmaceuticals (formerly Indevus Pharmaceuticals), Inc. owns 65%.

ARCA biopharma, Inc. is developing bucindolol under the trade name Gencaro as a beta-blocker and mild vasodilator for the treatment of atrial fibrillation in patients with heart failure and left ventricular dysfunction. ARCA biopharma, Inc. is headquartered in Broomfield, Colorado. The future development of Gencaro is uncertain. In the event that Gencaro is approved for sale, however, we may be owed royalties on sales. There can be no guarantees, however, that Gencaro will ever be approved or sold or achieve sufficient revenues to generate royalties.

Employees

At December 20, 2013, we had four full-time employees and no part time employees. None of our employees is represented by a labor union. In addition to our employees, we utilize a team of consultants and subcontractors to perform key functions for us.

MANAGEMENT

Information Regarding Directors

The following sets forth the names and ages (as of December 31, 2013) of our directors, and certain other information about them.

Name of Director	Age as of December 31, 2013	Director Since
David C. Cavalier	44	April 2004
John M. Farah, Jr., Ph.D.	61	October 2005
Amit Kumar, Ph.D.	49	June 2004
Chris A. Rallis	60	June 2004
John M. Clerici	43	May 2013
Mitchell D. Kaye, J.D.	45	May 2013
Jeffrey A. Scott, M.D.	55	May 2013

David C. Cavalier has been the Chairman of our Board since April 30, 2004, and became our full time employee in November 2009. In June 2013, he became Chief Financial Officer. Since 2001, he has been a Principal and the Chief Operating Officer of Xmark Opportunity Partners, LLC, a manager of a family of private investment funds. From 1995 to 1996, Mr. Cavalier worked for Tiger Real Estate, a $785 million private investment fund sponsored by Tiger Management Corporation. Mr. Cavalier began his career in 1994 in the Investment Banking Division of Goldman, Sachs & Co. working on debt and equity offerings for public and private real estate companies. He received a B.A. from Yale University and an M.Phil. from Oxford University.

John M. Farah, Jr., Ph.D. has been an independent director of ours since October 2005 and a member of our audit committee. He is founder and managing director of a private international consultancy serving branded biopharma clients in the US and abroad and currently serves as an independent director of the private biopharmaceutical company, Melior Discovery, Inc. From 2008 to 2010, Dr. Farah was an independent director of GenSpera, Inc. (GNSZ), a publicly-traded pharmaceutical development stage company. Dr. Farah was a vice president at Cephalon, Inc., a biopharmaceutical company, from October 1992 until December 2011 after the company was integrated into Teva Pharmaceuticals. At Cephalon, Dr. Farah led the headquarter team of an international business unit with oversight of strategic product registrations, operations and sales abroad; he was latterly responsible for key Asia Pacific markets coordinating corporate product support for third party distributors and licensees. Dr. Farah joined Cephalon in 1992 to manage scientific affairs in support of the company's R&D department. He gained increasing responsibilities in scientific affairs, and eventually, became a senior team member of worldwide business development promoting and negotiating R&D and commercial alliances with multinational and regional pharmaceutical firms. In 2003, Dr. Farah led worldwide product export with P&L responsibilities for third party product sales and support, and in 2006 focused on strategic growth and commercial success in Asia and the Americas ex-US. In addition to his responsibilities for business development and regional international revenues, Dr. Farah oversaw successful patent litigations in Europe and Latin America. From 2008 until the company's acquisition by Teva, he served as treasurer and a director of Cephalon's political action committee. Prior to joining Cephalon, Dr. Farah was a research investigator at GD Searle in nervous system and immunoinflammatory disease programs. His training included

postdoctoral neuroscience research at the National Institutes of Health (NIH, NINCDS) following his doctorate in physiology from the Uniformed Services University. He holds a B.S. in Zoology from the University of Maryland and a B.H.A. from New College of California. We believe that Dr. Farah should serve as a director of our Company because of his extensive career in the pharmaceutical industry and international experience. Dr. Farah's past experience negotiating research partnerships, product licensing and academic collaborations are a valuable contribution to our Board and his experience allows him to provide additional insight to our Board in considering and approving these types of partnerships for the Company.

Amit Kumar, Ph.D. is currently the Chairman of the Board of Ascent Solar Technologies, a publicly-held solar energy company. From September 2001 to June 2010, Dr. Kumar was President and Chief Executive Officer of CombiMatrix Corporation, a publicly-held biotechnology company. He has been a director of CombiMatrix since September 2000. Previously, Dr. Kumar was Vice President of Life Sciences of Acacia Research Corp. From January 1999 to February 2000, Dr. Kumar was the founding President and CEO of Signature BioSciences, Inc., a life science company developing technology for advanced research in genomics, proteomics and drug discovery. From January 1998 to December 1999, Dr. Kumar was an Entrepreneur in Residence with Oak Investment Partners, a venture capital firm. From October 1996 to January 1998, Dr. Kumar was a Senior Manager at Idexx Laboratories, Inc., a biotechnology company. From October 1993 to September 1996, he was Head of Research & Development for Idetek Corporation, which was later acquired by Idexx Laboratories, Inc. Dr. Kumar received his B.S. in Chemistry from Occidental College. After joint studies at Stanford University and the California Institute of Technology, he received his Ph.D. from the California Institute of Technology in 1991. He also completed a post-doctoral fellowship at Harvard University from 1991 to 1993. Dr. Kumar is also a member of the board of directors of Luechemix and Tacere Therapeutics, both private biotechnology companies. We believe that Dr. Kumar should serve as a director of our Company in light of his experience serving as an officer and on the board of directors of a number of publicly-held companies, as well as his past venture capital and capital-raising experience. Dr. Kumar's experience in scientific research and development is also a valuable contribution to our Board, particularly during deliberations and discussions relating to research and development matters.

Chris A. Rallis has been an executive-in-residence at Pappas Ventures, a life science venture capital firm since January 2008. Previously, Mr. Rallis was the President and Chief Executive Officer of ImmunoBiosciences, Inc. ("IBI"), a vaccine technology company located in Raleigh, North Carolina from April 2006 through June 2007. Prior to joining IBI, Mr. Rallis served as an executive in residence (part time) for Pappas Ventures, and as a consultant for Duke University and Panacos Pharmaceuticals, Inc. Mr. Rallis is the former President and Chief Operating Officer and director of Triangle Pharmaceuticals, Inc., which was acquired by Gilead Sciences in January 2003 for approximately $465 million. Prior to assuming the role of President and COO in March 2000, he was Executive Vice President, Business Development and General Counsel. While at Triangle, Mr. Rallis participated in 11 equity financings generating gross proceeds of approximately $500 million. He was also primarily responsible for all business development activities which included a worldwide alliance with Abbott Laboratories and the in-licensing of ten compounds. Before joining Triangle in 1995, Mr. Rallis served in various business development and legal management roles with Burroughs Wellcome Co. over a 13-year period, including Vice President of Strategic Planning and Business Development. Mr. Rallis also serves on the boards of Adherex Technologies, Inc., a publicly-held biopharmaceutical company located in Research Triangle Park, NC and Oxygen Biotherapeutics, Inc., a publicly-held biopharmaceutical company located in Morrisville, NC. Mr. Rallis serves on the audit committees of both boards and chairs the audit committee at Adherex. Mr. Rallis received his A.B. degree in economics from Harvard College and a J.D. from Duke University. We believe that Mr. Rallis should serve as a director of our Company in light of his experience serving as an executive officer of, and participating in a number of equity financings for, other pharmaceutical companies. Mr. Rallis' experiences in development activities and strategic alliances are valuable to Board deliberations. In addition, his venture capital consulting experience allows him to contribute additional insight to the Board in refining our Company's business strategies and commercial objectives.

John M. Clerici is a founding Principal of Tiber Creek Partners, LLC, a company focused on providing scientific and business counseling to biotechnology companies seeking to use non-dilutive capital from the U.S. and foreign governments and from non-governmental organizations. Mr. Clerici is also a Partner in the government contracts practice at McKenna Long & Aldridge LLP. For over 14 years, Mr. Clerici has been at the forefront of the creation of the public health preparedness sector, including helping large pharmaceutical and emerging biotechnology companies develop creative approaches to access non-dilutive capital to fund the development of biotechnology for emerging disease and engineered threats. Since 1999, Mr. Clerici has assisted over three dozen companies in obtaining nearly $4 billion in funding for research, development and procurement of public health countermeasures from the Federal

government, which includes the majority of the awards made under Project Bioshield, the U.S. Government's initiative for preparing the United States against a bioterrorist attack. Prior to joining McKenna Long & Aldridge LLP, Mr. Clerici was a judge advocate with the U.S. Air Force where, among other assignments, he advised the Air Force Research Laboratory on the procurement of technology from research institutions throughout the United States, Europe and Asia. Mr. Clerici earned his Juris Doctor from the University of North Carolina at Chapel Hill in 1995. He did his undergraduate work at the Catholic University of America, graduating summa cum laude. We believe that Mr. Clerici should serve as a director of our Company in light of his over 14 years of experience in working with the US Government in public health preparedness. We believe he will contribute significantly to our medical countermeasure development programs.

Mitchell D. Kaye, J.D. is the Founder of MedClaims Liaison, LLC and has served as its Chief Executive Officer since 2009. MedClaims is a consumer advocacy business which works on behalf of families in managing reimbursement disputes with medical providers and insurance companies. From 2008-2010, Mr. Kaye was a Managing Director with Navigant Capital Advisors, a financial and strategic advisory services firm, and Head of Navigant's Financial Institutions Restructuring Solutions Team (FIRST). While at Navigant, Mr. Kaye led numerous high profile engagements on behalf of investment funds and investors. Previously, as a successful entrepreneur in the asset management industry, Mr. Kaye launched two highly profitable asset management companies. Mr. Kaye was the founding member of Xmark Opportunity Partners, LLC, an investment fund exclusively focused on investments in publicly traded life sciences companies, and has served as a member of the management committee since 2001. Mr. Kaye established a venerable reputation as an activist investor, taking influential stakes in numerous companies, forcing changes at the boards of directors and management team levels, and guiding the sale of several of his portfolio companies to the benefit of shareholders. In 1996, Mr. Kaye began his career as a founding member of Brown Simpson Asset Management, LLC (Brown Simpson), an investment fund that was at the foreground of private placement investing in the public markets. Brown Simpson’s life sciences investment unit produced a value weighted cash-on-cash return in excess of 100% during the life of the fund. During his career, Mr. Kaye has consummated over 100 transactions as a lead investor, structured over a billion dollars in debt and equity-linked transactions, and taken an active role in the management of numerous portfolio companies. Mr. Kaye has served on the boards of several private and public companies, and also served on the board of the New York Alzheimer’s Association. From September 2007 until the company’s unwinding in June 2009, Mr. Kaye served on the board of directors of Genaera Corporation, a biopharmaceutical company that was listed on the Nasdaq Capital Market. Mr. Kaye received his BA from Wesleyan University, and his Juris Doctorate from Northwestern University School of Law. We believe that Mr. Kaye should serve as a director of our Company in light of his experience in business development and financing biotech companies, which we believe will be invaluable as we begin to generate efficacy data from our animal efficacy and cancer studies.

Jeffrey A. Scott, M.D., whose specialty is oncology, currently is General Manager/Senior Vice President for P4 Healthcare, a division of Cardinal Health Specialty Solutions, which is a division of Cardinal Health. He is also a member of Cardinal Health’s Operating Committee. Prior to the 2010 sale of P4 Healthcare to Cardinal Health, Dr. Scott was the Founder, President and Chief Executive Officer of P4 Healthcare, since its inception in 2006. P4 Healthcare was a multimedia Healthcare Marketing and Education Company with a focus in Oncology. From 1998 to 2002, Dr. Scott served as the National Medical Director and President of the International Oncology Network (ION), a network of more than 4,000 U.S. private practice oncologists headquartered in Baltimore, Maryland. In 2002, ION became a subsidiary of Amerisource Bergen Corporation upon its sale. Dr. Scott continued to serve as President and General Manager for ION until 2005. Dr. Scott was a practicing physician, Founding Partner and Chief Financial Officer of Georgia Cancer Specialists located in Atlanta, Georgia from 1990 to 2000. During Dr. Scott’s tenure as Chief Financial Officer of Georgia Cancer Specialists, the physician practice had over $100 million in revenue and Dr. Scott was responsible for development of financial programs of practice after the merger and corporate buyout by Phymatrix. Also at the Georgia Cancer Specialists, Dr. Scott took responsibility for the development of an extensive clinical research program. From 1998 to 2000, he also served as Medical Chief of Staff at Emory Northlake Regional Medical Center in Atlanta, Georgia. Dr. Scott’s biotechnology experience includes his role as a Consultant to NexStar Pharmaceuticals, Inc. (“NexStar”) of Boulder, Colorado. Prior to NexStar’s 1999 merger with Gilead Sciences, Inc., it was engaged in the discovery, development, manufacture and commercialization of products to treat serious and life-threatening illnesses. As a consultant to NexStar, Dr. Scott was responsible for assisting and educating the sales force in dealing with physician networks and consulting with investment advisors regarding potential investments in other biotechnology companies. Dr. Scott’s educational background includes a B.S. degree in Microbiology from the University of Michigan, Ann Arbor, Michigan, a medical education at Wayne State University, Detroit, Michigan, and a fellowship in Oncology at University of Texas Health Sciences, San Antonio, Texas. Dr. Scott has Board Certifications from the American Board of Internal Medicine, Internal Medicine, September 1987, and the American Board of Internal Medicine, Medical Oncology, November 1989. Dr. Scott has served on the board of directors of

Biovest International, Inc. (OTCQB: BVTI) since March 2004. We believe that Dr. Scott should serve as a director of our Company in light of his experience as an oncologist, drug developer and senior executive in one of the leading pharmaceutical distribution companies, which we believe will be invaluable as we begin to move forward with our AEOL 10150 oncology development program and begin to formulate our strategies for making our compound available in the most efficient and effective way for biodefense purposes.

Executive Officers

Our executive officers and their ages as of December 31, 2013 were as follows:

Name	Age	Position(s)
David Cavalier	44	Chairman of the Board
John L. McManus	49	President and Chief Executive Officer

David C. Cavalier has been the Chairman of our Board since April 30, 2004, and became our full time employee in November 2009. In June 2013, he became Chief Financial Officer. Since 2001, he has been a Principal and the Chief Operating Officer of Xmark Opportunity Partners, LLC, a manager of a family of private investment funds. From 1995 to 1996, Mr. Cavalier worked for Tiger Real Estate, a $785 million private investment fund sponsored by Tiger Management Corporation. Mr. Cavalier began his career in 1994 in the Investment Banking Division of Goldman, Sachs & Co. working on debt and equity offerings for public and private real estate companies. He received a B.A. from Yale University and an M.Phil. from Oxford University.

John L. McManus. Mr. McManus began as a consultant to Aeolus in June 2005 as President. He became employed as our President and Chief Operating Officer in July 2006 and was appointed President and Chief Executive Officer in March 2007. Mr. McManus, who received his degree in business administration from the University of Southern California in 1986, is the founder and president of McManus Financial Consultants, Inc. (“MFC”), which provides strategic, financial and investor relations advice to senior managements and boards of directors of public companies, including advice on mergers and acquisitions. These companies have a combined value of over $25 billion. He has served as president of MFC since 1997. In addition, Mr. McManus previously served as Vice President, Finance and Strategic Planning to Spectrum Pharmaceuticals, Inc. (NASDAQ: SPPI), where he had primary responsibility for restructuring Spectrum’s operations and finances, including the design of strategic and financial plans to enhance Spectrum’s corporate focus, and leading the successful implementation of these plans. The implementation of these plans led to an increase in Spectrum’s market value from $1 million to more than $125 million at the time of Mr. McManus’ departure.

Family Relationships and Orders, Judgments and Decrees

There is no family relationship between any of our officers or directors. There are no orders, judgments, or decrees of any governmental agency or administrator, or of any court of competent jurisdiction, revoking or suspending for cause any license, permit or other authority to engage in the securities business or in the sale of a particular security or temporarily or permanently restraining any of our officers or directors from engaging in or continuing any conduct, practice or employment in connection with the purchase or sale of securities, or convicting such person of any felony or misdemeanor involving a security, or any aspect of the securities business or of theft or of any felony. Nor are any of the officers or directors of any corporation or entity affiliated with us so enjoined.

Code of Ethics

We have adopted a code of ethics that applies to our principal executive officer, principal financial officer, principal accounting officer and persons performing similar functions. We have posted the text of Code of Ethics on our Internet website at www.aeoluspharma.com. A copy of the Code of Ethics can also be obtained free of charge by writing to David Cavalier, Aeolus Pharmaceuticals, Inc., 26361 Crown Valley Parkway, Suite 150 Mission Viejo, CA 92691.

83

Audit Committee

The Board has established an Audit Committee in accordance with section 3(a)(58)(A) of the Exchange Act.

COMPENSATION OF DIRECTORS

The following table sets forth information for the fiscal year ended September 30, 2013 regarding the compensation of our directors.

Director Compensation

Name	Fees Earned or Paid in Cash	Option Awards(1)	All Other Compensation	Total
David C. Cavalier	—$	—	—$	—
John M. Farah, Jr., Ph.D.	—	25,663	—	25,663
Joseph J. Krivulka	—	18,739	—	18,739
Amit Kumar, Ph.D.	—	25,663	—	25,663
Michael E. Lewis, Ph.D.	—	17,126	—	17,126
Chris A. Rallis	—	25,663	—	25,663
Peter D. Suzdak, Ph.D.	—	18,739	—	18,739
John M. Clerici	—	10,380	—	10,380
Mitchell D. Kaye	—	10,380	—	10,380
Jeffrey Scott	—	10,380	—	10,380

(1) The amounts in the "Option Awards" column reflect the aggregate grant date fair value of awards for grants of options to each listed director in fiscal 2013, computed in accordance with Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) Topic 718. These amounts do not represent the actual amounts paid to or realized by the directors during fiscal 2013. The fair value of the options was determined at the date of the grant using the Black-Scholes option pricing model with the following weighted average assumptions: (i) dividend yield: 0%; (ii) expected volatility: 157.94%; (iii) risk-free interest rate: 0.9%; and (v) expected option life after shares are vested: 5.27 years. We use a straight line method of amortization of stock-based compensation.

All directors are reimbursed for expenses incurred in connection with each board or committee meeting attended. In addition, the Board adopted the following compensation program for the outside members of the Board on December 11, 2008, effective beginning July 1, 2008:

- Each non-executive Board member shall be eligible to receive nonqualified stock options for up to an aggregate of 45,000 shares per year based upon the number of meetings attended by the non-executive Board member during the year. The option exercise prices shall be equal to the closing price of the Common Stock on the grant date. The options shall have 10-year terms and vest, as long as the director remains on the Board, on a monthly basis over a 12-month period beginning on the date of grant. Unvested options expire upon resignation or termination from the Board.

- In addition, each Audit Committee member shall be eligible to receive a nonqualified stock option for up to an aggregate of 15,000 shares per year based the number of Audit Committee meetings attended by the Audit Committee member during the year. The option exercise prices shall be equal to the closing price of the Common Stock on the grant date. The options shall have 10-year terms and vest, as long as the director remains on the Board, on a monthly basis over a 12-month period beginning on the date of grant. Unvested options expire upon resignation or termination from the Board.

Outstanding Equity Awards for Directors as of September 30, 2013

The following table sets forth information regarding unexercised stock options for each Director outstanding as of September 30, 2013. We have not awarded stock grants or other equity incentive awards and as such have not made any disclosures regarding such awards.

Name	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
David C. Cavalier	172,750	—	—
John M. Farah, Jr., Ph.D.	374,091	—	—
Joseph J. Krivulka	322,250	—	—
Amit Kumar, Ph.D.	446,250	—	—
Michael E. Lewis, Ph.D.	308,750	—	—
Chris A. Rallis	446,250	—	—
Peter D. Suzdak, Ph.D.	331,250	—	—

EXECUTIVE COMPENSATION

The following table sets forth all compensation earned for the fiscal year ended September 30, 2013 and 2012, by its principal executive officer, principal financial officer, and its one other executive officer who served in such capacity as of the end of fiscal 2013, collectively referred to as the "Named Executive Officers".

Summary Compensation Table

Name and Principal Position(s)	Fiscal Year	Annual Compensation Salary ($)	Bonus ($)	Option Awards ($) (1)	All Other Compensation ($)	Total ($)
John L. McManus	2013	$ 421,270	—	$ 740,600	$ —	$ 1,161,870
President and	2012	$ 409,000	—	$ 89,325	—	$ 498,325
Chief Executive Officer						
Russell Skibsted	2013	$ 174,885	—	$ 52,905	$ —	$ 227,790
Former Senior Vice President, Chief Financial Officer	2012	$ 255,625	—	$ 107,025	$ —	$ 362,650
and Secretary(2)						
David C. Cavalier	2013	$ 342,282	—	$ —	$ —	$ 342,282
Chairman of the Board and Chief Financial	2012	$ 332,313	—	$ —	$ —	$ 332,313
Officer						

(1) The amounts in the "Option Awards" column reflect the aggregate grant date fair value of awards for grants of options to each listed Named Executive Officer, computed in accordance with FASB ASC Topic 718. These amounts do not represent the actual amounts paid to or realized by any of the Named Executive Officers during fiscal 2013 or fiscal 2012. The fair value of the options was determined at the date of the grant using the Black-Scholes option pricing model with the following weighted average assumptions: (i) dividend yield: 0%; (ii) expected volatility: 154.71%; (iii) risk-free interest rate: 0.84%; and (v) expected option life after shares are vested: 5.27 years. We use a straight line method of amortization of stock-based compensation.

(2) Mr. Skibsted ceased employment with us on May 31, 2013.

Grants of Plan Based Awards During the Fiscal Year Ended September 30, 2013

The following table summarizes all option grants during the fiscal year ended September 30, 2013 to the Named Executive Officers. Each of these options was granted pursuant to the 2004 Plan.

Name	Grant Date	All Other Option Awards: Number of Securities	Exercise or Base Price of Option Awards	Grant Date Fair Value of Option Awards

		Underlying Options (#)(1)				(2)
John L. McManus President and Chief Executive Officer	3/4/2013	2,000,000	$	0.40	$	740,600
Russell Skibsted Senior Vice President, Chief Financial Officer and Secretary	3/8/2013	150,000	$	0.38	$	52,905

(1) The option grant vests on a monthly basis for twelve months with a ten-year term, subject to earlier termination upon certain events.

(2) The amounts in the “Grant Date Fair Value of Option Awards” column reflect the aggregate grant date fair value of awards for grants of options to Mr. McManus and Mr. Skibsted in fiscal 2013, computed in accordance with FASB ASC Topic 718. These amounts do not represent the actual amounts paid to or realized by Mr. McManus and Mr. Skibsted during fiscal 2013.

Outstanding Equity Awards as of September 30, 2013

The following table sets forth information regarding unexercised stock options for each of the Named Executive Officers outstanding as of September 30, 2013. We have not awarded stock grants or other equity incentive awards and as such have not made any disclosures regarding such awards.

Name	Number of Securities Underlying Unexercised Options Exercisable	Number of Securities Underlying Unexercised Options Unexercisable	Option Awards Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options	Option Exercise Price	Option Expiration Date
John L. McManus	10,000	—	—	$ 0.97	7/29/2015
	10,000	—	—	$ 0.91	8/31/2015
	10,000	—	—	$ 1.12	9/30/2015
	10,000	—	—	$ 1.15	10/31/2015
	10,000	—	—	$ 1.03	11/30/2015
	10,000	—	—	$ 0.95	12/30/2015
	10,000	—	—	$ 0.89	1/31/2016
	10,000	—	—	$ 0.90	2/28/2016
	10,000	—	—	$ 0.80	3/31/2016
	10,000	—	—	$ 0.75	4/28/2016
	10,000	—	—	$ 0.60	5/31/2016
	10,000	—	—	$ 0.81	6/30/2016
	250,000	—	—	$ 0.75	7/14/2016
	250,000	—	—	$ 0.90	7/13/2017
	250,000	—	—	$ 0.32	7/14/2013
	1,000,000	—	—	$ 0.30	5/6/2019
	250,000	—	—	$ 0.39	7/30/2019
	250,000	—	—	$ 0.40	7/14/2020
	1,500,000	—	—	$ 0.40	7/29/2020
	250,000	—	—	$ 0.40	7/14/2021
	250,000	—	—	$ 0.28	7/14/2022
	2,000,000	1,000,000 (1)	—	$ 0.40	3/4/2023
David Cavalier	20,000	—	—	$ 1.85	9/22/2014
	20,000	—	—	$ 0.90	9/7/2015
	30,000	—	—	$ 0.85	9/12/2016
	30,000	—	—	$ 0.55	7/27/2017
	27,750	—	—	$ 0.40	12/11/2013
	3,750	—	—	$ 0.29	2/5/2019
	11,250	—	—	$ 0.33	3/26/2019
	3,750	—	—	$ 0.38	4/30/2019
	11,250	—	—	$ 0.35	6/4/2019
	15,000	—	—	$ 0.39	7/30/2019

(1) Options vest at a rate of approximately 166,667 per month from the grant date for twelve months, provided that John McManus is an employee or consultant of the Company on the applicable vesting date. In the event of a sale of the Company, through a merger or otherwise, all of the options shall be fully vested and immediately exercisable.

Option Exercises and Stock Vested During the Fiscal Year Ended September 30, 2013

No stock options were exercised by any Named Executive Officer during the fiscal year ended September 30, 2013.

We had no stock awards outstanding as of or for the year ended September 30, 2013.

Employment Agreement with John McManus

On March 4, 2013, we and John McManus entered into an amended and restated employment agreement (the “Restated Agreement”). Under the Amended Employment Agreement, Mr. McManus continues to serve as President, Chief Executive Officer and Chief Operating Officer of the Company. Pursuant to the agreement, Mr. McManus is paid $ 35,363 per month.

Under the Amended Employment Agreement, Mr. McManus will be entitled to receive an option to purchase at least 250,000 shares of the Company's common stock with an exercise price equal to the closing price of the Company's common stock on the date of grant. In addition, the Amended Employment Agreement provides that, on the date of the agreement, Mr. McManus shall be granted an option to purchase 2,000,000 shares of the Company's common stock with an exercise price equal to the closing price of the Company's common stock on the date of grant. In each case, the options shall vest at a monthly rate of 8.33% following the date of grant, subject to Mr. McManus remaining employed with the Company. The Amended Employment Agreement also provides that, upon a Change in Control of the Company (as defined in the Amended Employment Agreement), all of the stock options granted to Mr. McManus will fully vest and become immediately exercisable.

The current term of the Amended Employment Agreement is through March 4, 2014 unless terminated earlier. Pursuant to the Amended Employment Agreement, if (A) the Company terminates Mr. McManus' employment without "Cause" (as defined in the Amended Employment Agreement), and the Company has not provided Mr. McManus with a Non-Renewal Notice, or (B) Mr. McManus terminates his employment for "Good Reason" (as defined in the Amended Employment Agreement), in either case subject to Mr. McManus' agreement to release any claims against the Company, Mr. McManus will be entitled to receive a cash severance, payable over12 months, equal to: (i) Mr. McManus' effective base salary at the time of termination, plus (ii) the average of the annual bonus(es) paid to Mr. McManus, if any, during the two full years immediately preceding the year in which the termination occurs. If the Company provides Mr. McManus with a Non-Renewal Notice, other than as a result of Mr. McManus' death, disability or termination for "Cause", subject to Mr. McManus' agreement to release any claims against the Company, Mr. McManus will be entitled to receive a cash severance equal to: (x) Mr. McManus' effective base salary at the time of termination, plus (y) the average of the annual bonus(es) paid to Mr. McManus, if any, during the two full years immediately preceding the year in which the termination occurs, less (z) the salary payable to Mr. McManus under the Amended Employment Agreement for the remainder of his employment term, which amount will be payable in equal monthly installments following the end of the employment term until the one-year anniversary of the date of the Non-Renewal Notice

Separation Agreements

We did not enter into any separation agreements during fiscal 2013.

Payments Upon Termination or Change of Control

We have an employment with Mr. John McManus, which provides for payments to Mr. McManus upon termination of employment or a change of control of Aeolus under specified circumstances. For information regarding the specific circumstances that would trigger payments and the provision of benefits, the manner in which payments and benefits would be provided and conditions applicable to the receipt of payments and benefits, see "—Employment Agreement with John McManus."

The following tables set forth information regarding potential payments and benefits that each Named Executive Officer who was serving as an executive officer on September 30, 2013 would receive upon termination of employment or consulting arrangement or a change of control of Aeolus under specified circumstances, assuming that the triggering event occurred on September 30, 2013.

Summary of Potential Payments Upon Termination or Change of Control

Name	Termination without Cause			Voluntary Resignation
	Cash Payments(1)	Value of Benefits(2)	Value of Options with Accelerated Vesting	Cash Payments
John L. McManus	$ 421,270	$ 18,117	$ —(3)	—

(1) This amount reflects a lump sum payment equal to the remaining term of the Named Executive Officer's employment agreement with the Company, assuming notice of termination was given on September 30, 2013.

(2) The amounts in this column reflect the estimated value of health, dental, life and disability insurance that would be provided to the Named Executive Officer pursuant to his employment agreement with the Company for the period from March 4, 2013 to March 4, 2014.

(3) Pursuant to the Named Executive Officer's employment agreement with the Company, in the event the Named Executive Officer was terminated without cause on September 30, 2013, options to purchase 1,000,000 shares would have vested. The amounts in this column are calculated based on the difference between $0.28, the closing market price per share of the Common Stock on September 30, 2013, the last trading day of fiscal year 2013, and the exercise price per share of $0.40 for the options subject to accelerated vesting.

Name	Immediately upon a Change of Control		Termination without Cause in Connection with a Change of Control		
	Cash Payments(4)	Value of Options with Accelerated Vesting	Cash Payments(6)	Value of Benefits(7)	Value of Options with Accelerated Vesting
John L. McManus	$ 250,000	$ —(5)	$ 671,270	$ 18,117	$ —(5)

(4) The amounts in this column reflect the lump sum payment payable upon a change of control pursuant to the Named Executive Officer's employment agreement with the Company in effect on September 30, 2013 assuming a change of control of the Company occurred on September 30, 2013.

(5) Pursuant to the 2004 Plan, all outstanding options shall vest in connection with a change of control of the Company. The amounts in this column are calculated based on the difference between $0.28, the closing market price per share of the Common Stock on September 28, 2013, the last trading day of fiscal year 2013, and the $0.40 exercise price per share of the 1,000,000 options subject to accelerated vesting.

(6) The amounts in this column reflect the lump sum payment payable pursuant to a termination upon a change of control pursuant to the Named Executive Officer's employment agreement with the Company in effect on September 30, 2013 assuming a change of control of the Company occurred on September 30, 2013.

(7) The amounts in this column reflect the estimated value of health, dental, life and disability insurance that would be provided to the Named Executive Officer pursuant to his employment agreement with the Company for the period from March 4, 2013 to March 4, 2014.

Summary of Actual Payments Upon Termination of Employment

No payments were made to any Named Executive Officer in connection with a termination of employment during fiscal 2013.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Aeolus has adopted a policy that all transactions between Aeolus and its executive officers, directors and other affiliates must be approved by a majority of the members of the Board and by a majority of the disinterested members of the Board, and must be on terms no less favorable to Aeolus than could be obtained from unaffiliated third parties.

March and April 2012 Financing

On March 30, 2012 and April 4, 2012, we entered into a Securities Purchase Agreement with certain accredited investors (the "2012 Purchasers") to sell and issue to the 2012 Purchasers an aggregate of approximately 2,200,166 units (the "2012 Units") at a purchase price of $0.30 per unit, resulting in aggregate gross proceeds to us of approximately $660,049.90 (the "2012 Private Placement"). Each 2012 Unit consisted of (i) one share of Common Stock and (ii) a five year warrant to purchase 0.75 shares of Common Stock. The warrants have an initial exercise price of $0.40 per share. One of the purchasers in the April 4, 2012 closing was Joseph Krivulka, who served as a member of our Board from 2004 to December 31, 2013, who purchased 333,333 2012 Units, resulting in aggregate proceeds to us of $99,999.90. In connection with the 2012 Private Placement, we also entered into a Registration Rights Agreement with the 2012 Purchasers, pursuant to which we agreed, among other things, to file a registration statement with the SEC to register the resale of: (1) the shares of Common Stock issued pursuant to the 2012 Private Placement, and (2) the shares of Common Stock issuable upon exercise of the warrants that comprised the 2012 Units.

2013 Private Placement

One of the investors who participated in the February 19, 2013 closing of the 2013 private placement was JAK Investments, LLC whose manager is Joseph Krivulka, who served as a member of our Board from 2004 to December 31, 2013. JAK Investments, LLC purchased 400,000 of the 2013 Units, resulting in aggregate proceeds of $100,000 to us. In connection with the 2013 Private Placement, we also entered into a Registration Rights Agreement with the purchasers in the 2013 private placement, pursuant to which we agreed, among other things, to file a registration statement with the SEC to register the resale of: (1) the shares of Common Stock issued pursuant to the 2013 private placement, and (2) the shares of common stock issuable upon exercise of the warrants issued pursuant to the 2013 private placement.

2013 Warrant Repricing, Exercise and Lockup Agreement

Effective February 15, 2013, Aeolus and each of Xmark JV Investment Partners ("JV Partners"), Xmark Opportunity Fund, Ltd. ("Opportunity Ltd.") and Xmark Opportunity Fund, L.P. ("Opportunity LP" and, together with JV Partners and Opportunity Ltd., the "Xmark Entities") entered into a Warrant Repricing, Exercise and Lockup Agreement (the "Xmark Warrant Agreement") pursuant to which the Company agreed to reduce the exercise price of outstanding warrants to purchase an aggregate of up to 59,149,000 shares of our common stock held by the Xmark Entities (the "Xmark Warrants") to $0.01 per share. Prior to the entry into the Xmark Warrant Agreement, the exercise price of the Xmark Warrants covering an aggregate of 55.4 million shares of Aeolus' common stock was $0.28 per share, and the exercise price covering an aggregate of 3.8 million shares of Aeolus' common stock was $0.50 per share. In consideration for the reduction of the exercise price of the Xmark Warrants, each of the Xmark Entities agreed to immediately exercise all of the Xmark Warrants by cashless exercise. The Xmark Warrant Agreement also provides that the Xmark Entities will not transfer the shares issuable upon exercise of the Xmark Warrants (the "Xmark Warrant Shares") until the Company either (i) declares a cash dividend on its common stock or otherwise makes a cash distribution or (ii) effects a Change of Control, subject in each case to the terms of the Xmark Warrant Agreement. Xmark Opportunity Partners, LLC ("Opportunity Partners") is the investment manager of JV Partners and the sole member of the investment manager of each of Opportunity Ltd. and Opportunity LP, and, as such, possesses the sole power to vote and the sole power to direct the disposition of all securities of the Company held by each of the Xmark Entities. Mitchell Kaye and David C.

Cavalier, the Co-Managing Members of Xmark Capital Partners, LLC, a Delaware limited liability company, the Managing Member of Opportunity Partners, share voting and dispositive power with respect to all securities of the Company beneficially owned by Opportunity Partners. The foregoing description of the Xmark Warrant Agreement (and the transactions effected thereunder) does not purport to be complete and is qualified in its entirety by reference to the Xmark Warrant Agreement, a copy of which is attached as Exhibit 10.4 to Form 8-K filed with the SEC on February 19, 2013.

Director Independence

After review of all relevant transactions or relationships between each director, or any of his family members, and the Company, our senior management and its independent registered public accounting firm, the Board of Directors has affirmatively determined that all of our directors are independent directors within the meaning of the applicable Nasdaq Stock Market, LLC (“Nasdaq”) listing standards, as currently in effect, excluding Mr. Cavalier.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

Security Ownership of Certain Beneficial Owners and Management

The following tables set forth certain information regarding the ownership of shares of Aeolus' Common Stock and Series B Preferred as of the close of business on December 31, 2013, by:

- each person known by Aeolus to beneficially own more than 5% of the outstanding shares of each class of our stock;
- each of our directors;
- each of our Named Executive Officers (as defined under "Executive Compensation" below); and
- all of our directors and executive officers as a group

	Preferred Stock		Common Stock	
Identity of Owner or Group (1)(2)	Beneficially Owned	Percentage Owned	Beneficially Owned(4)	Percentage Owned(5)
Directors:				
David C. Cavalier	-	-	98,104,694 (6)	72.9%
John M. Farah, Jr., Ph.D. (7)	-	-	374,091	*
Mitchell D. Kaye, J.D. (8)	-	-	97,988,194	72.8%
Amit Kumar, Ph.D. (7)	-	-	446,250	*
John M. Clerici (7)	-	-	56,250	*
Chris A. Rallis (7)	-	-	446,250	*
Jeffrey A. Scott, M.D. (7)	-	-	56,250	*
Named Executive Officers:				
John L. McManus (9)	-	-	6,283,633	4.5%
David C. Cavalier (6)	-	-	97,104,694	*
All directors and executive officers as a group (8 persons)	-	-	104,803,358 (10)	73.6%
Greater than 5% Stockholders:				
Elan Corporation, plc	526,080	100.0%(3)	526,080 (11)	*
Lincoln House				
Lincoln Place				
Dublin 2, Ireland				
BVF Partners, L.P. and its affiliates			17,147,178 (12)	9.98% (13)
900 N. Michigan Avenue,				
Suite 1100				
Chicago, IL 60611				
Xmark Opportunity Partners, LLC and its affiliates	-	-	98,160,944 (14)	73.0%
90 Grove Street				
Ridgefield, CT 06877				

* Less than one percent

(1) Unless otherwise indicated, the address of all the owners is: c/o Aeolus Pharmaceuticals, Inc., 26361 Crown Valley Parkway, Suite 150, Mission Viejo, California 92691.

(2) This table is based upon information supplied by our executive officers, directors and principal stockholders and Schedule 13Ds and 13Gs, as amended, filed with the SEC. Unless otherwise indicated in the footnotes to this table and subject to community property laws where applicable, we believe that each of the stockholders named in this table has sole voting and investment power with respect to the shares indicated as beneficially owned.

(3) Percent of shares beneficially owned by any person is calculated by dividing the number of shares of preferred stock beneficially owned by that person by 526,080, the number of shares of preferred stock outstanding as of the close of business on the Record Date, and the number of shares of preferred stock as to which that person has the right to acquire voting or investment power within 60 days of the Record Date.

(4) The number of shares of common stock beneficially owned includes any shares issuable pursuant to stock options or warrants that are currently exercisable or may be exercised within 60 days after December 31, 2013 as well as shares of preferred stock convertible into common stock. Shares issuable pursuant to such options or warrants and shares issuable upon conversion of such preferred stock are deemed outstanding for computing the ownership percentage of the person holding such options but are not deemed to be outstanding for computing the ownership percentage of any other person.

(5) Applicable percentages are based on 134,550,068 shares outstanding on December 31, 2013, plus the number of shares such stockholder can acquire within 60 days after December 31, 2013. All percentages are rounded.

(6) Consists of 172,750 shares of Common Stock issuable upon exercise of options held by David C. Cavalier; 29,095,831 shares of Common Stock owned by Xmark Opportunity Fund, L.P., a Delaware limited partnership ("Opportunity LP"); 63,680,083 shares of Common Stock owned by Xmark Opportunity Fund, Ltd., a Cayman Islands exempted company ("Opportunity Ltd"); 1,508,567 shares of Common Stock owned by Xmark JV Investment Partners, LLC, a Delaware limited liability company ("JV Partners"); and 2,647,463 shares of Common Stock owned by Goodnow Capital, L.L.C. ("Goodnow"), a Delaware limited liability company. Mr. Cavalier shares voting and dispositive power over these shares with Mr. Kaye. In addition, Mr. Cavalier and Mr. Kaye have voting power but not dispositive power over 1,000,000 shares held in GPP Voting Trust.

(7) Consists solely of shares of Common Stock issuable upon exercise of options.

(8) Consists of 56,250 shares of Common Stock issuable upon exercise of options held by Mitchell D. Kaye; 29,095,831 shares of Common Stock owned by Opportunity LP; 63,680,083 shares of Common Stock owned by Opportunity Ltd; 1,508,567 shares of Common Stock owned by JV Partners; and 2,647,463 shares of Common Stock owned by Goodnow. Mr. Kaye shares voting and dispositive power over these shares with Mr. Cavalier.

(9) Consists of 70,300 shares owned directly, 10,000 shares owned directly by Mr. McManus' spouse and 6,203,333 shares issuable upon exercise of options.

(10) Consists of shares of Common Stock beneficially owned by our directors and the following executive officers: Mr. McManus and Mr. Cavalier. See footnotes (5), (6), (7), and (9) above, the shares held by Opportunity LP, Opportunity Ltd, JV Partners and Goodnow, which are deemed to be beneficially owned by Mssrs. Cavalier and Kaye have been counted only once for purposes of this calculation. Consists of 7,698,664 shares subject to options.

(11) Consists of 526,080 shares of Common Stock which were issuable upon conversion of an aggregate of 526,080 shares of Series B Preferred Stock as of the close of business on the Record Date.

(12) Consists of (i) 8,912,219 shares of Common Stock, including 4,241,308 shares of Common Stock issuable upon the exercise of certain warrants held by Biotechnology Value Fund, L.P. ("BVF"), (ii) 5,036,834 shares of Common Stock, including 2,371,924 shares of Common Stock issuable upon the exercise of certain warrants held by Biotechnology Value Fund II, L.P. ("BVF2"), (iii) 352,980 shares of Common Stock held by BVF Investments, L.L.C. ("BVLLC"), and (iv) 2,845,145 shares of Common Stock, including 1,386,768 shares of Common Stock issuable upon the exercise of certain warrants held by Investment 10, L.L.C. ("ILL10").

BVF Partners L.P. ("Partners"), as the general partner of BVF and BVF2, the manager of BVLLC and the investment adviser of ILL10, may be deemed to beneficially own 17,440,552 shares of Common Stock, including 8,000,000 shares of Common Stock currently issuable upon the exercise of certain warrants, beneficially owned in the aggregate by BVF, BVF2, BVLLC and ILL10. BVF Inc., as the general partner of Partners, may be deemed to beneficially own the 17,440,552 shares of Common Stock, including 8,000,000 shares of Common Stock currently issuable upon the

exercise of certain warrants, beneficially owned by Partners. Mark N. Lampert, as a director and officer of BVF Inc., may be deemed to beneficially own the 17,147,178 shares of Common Stock, including 8,000,000 shares of Common Stock currently issuable upon the exercise of certain warrants, beneficially owned by BVF Inc.

The foregoing should not be construed in and of itself as an admission by any of Partners, BVF Inc. or Mark N. Lampert as to beneficial ownership of any shares of Common Stock owned by BVF, BVF2, BVLLC and ILL10. Each of Partners, BVF Inc. and Mr. Lampert disclaims beneficial ownership of the shares of Common Stock beneficially owned by BVF, BVF2, BVLLC and ILL10 and this filing shall not be construed as an admission that any such person or entity is the beneficial owner of any such securities.

(13) The terms of the warrants held by BVF, BVF2 and ILL10 each contain an issuance limitation prohibiting the holder from exercising such warrants to the extent that, after giving effect to such exercise of the warrants, the holder would beneficially own more than 9.98% of the Common Stock of the Company then issued and outstanding, which prohibition cannot be modified by the holder before the sixty-first day after such holder's notice to the Company of its election to modify such prohibition.

(14) Consists of 172,750 shares of Common Stock issuable upon exercise of options held by David C. Cavalier; 56,250 shares of Common Stock issuable upon exercise of options held by Mitchell D. Kaye; 29,095,831 shares of Common Stock owned by Xmark Opportunity Fund, L.P., a Delaware limited partnership ("Opportunity LP"); 63,680,083 shares of Common Stock owned by Xmark Opportunity Fund, Ltd., a Cayman Islands exempted company ("Opportunity Ltd"); 1,508,567 shares of Common Stock owned by Xmark JV Investment Partners, LLC, a Delaware limited liability company ("JV Partners"); and 2,647,463 shares of Common Stock owned by Goodnow Capital, L.L.C. ("Goodnow"), a Delaware limited liability company. Mr. Cavalier shares voting and dispositive power over these shares with Mr. Kaye. In addition, Mr. Cavalier and Mr. Kaye have voting power but not dispositive power over 1,000,000 shares held in GPP Voting Trust.

SELLING STOCKHOLDERS

We are registering the shares of common stock identified in the table below in order to permit the selling stockholders to offer the shares for resale from time to time. All 86,920,683 shares were issued in the 2012 private placement, the 2010 private placement and the 2009 private placement and conversion. In total we issued to the Selling Stockholders 27,914,452 shares of common stock and warrants to purchase 60,800,125 shares of our common stock and warrants were exercised after such issuance to purchase 59,149,000 shares of common stock. The private placements were made in reliance on Section 4(2) of the Securities Act, and Rule 506 promulgated thereunder. For additional information regarding the private placement, please see "Description of Private Placements Concerning Securities Covered by This Prospectus" beginning on page 30 of this prospectus.

Except for the ownership of our common stock, the selling stockholders, other than JJK Partners, LLC and the Xmark entities, have not had any material relationship with us within the past three years. JJK Partners, LLC's managing partner is Joseph Krivulka who served as a member of our Board of Directors from 2004 through December 31, 2013. The three Xmark entities, Xmark Opportunity Fund, L.P., Xmark Opportunity Fund, Ltd. and Xmark JV Investment Partners, LLC are affiliates of Xmark. Xmark in turn is the sole manager of Goodnow and possess sole power to vote and direct the disposition of all securities of the Company held by Goodnow. Goodnow has the right to designate up to two directors for election to the Company's Board of Directors pursuant to the terms of a purchase agreement between Goodnow and the Company. David C. Cavalier, a current executive officer and director of the Company, is President of Goodnow.

The following table sets forth, as of the date of this prospectus: (1) the name of the stockholder for whom we are registering shares under this registration statement; (2) the number of shares of our common stock owned by the stockholder prior to this offering; (3) the number of shares of our common stock being offered pursuant to this prospectus; and (4) the amount and the percentage (if 1% or more) of the class to be owned by such stockholder after completion of the offering. The percentage of outstanding common stock owned upon completion of the offering is calculated based on 134,550,068 shares of common stock issued and outstanding as of December 31, 2013. We prepared this table based on the information supplied to us by the selling stockholders named in the table and we have not sought to verify such information.

Name and Address of Selling Stockholder	Common Stock Owned Prior to Offering(1)	Common Stock Being Offered Pursuant to this Prospectus	Common Stock Owned Upon Completion of Offering (1)(2)	Percentage of Common Stock Owned Upon Completion of Offering
James K. Broder 343 Carrel Road New Canaan, CT06840	175,000(3)	175,000	0	*
Christopher Kapsch 492 West Shore Trail Sparta, NJ 07871	175,000(3)	175,000	0	*
FTN Investments, LTD 44081 Pipeline Plaza, Suite 320 Ashburn, CA 20147	583,333(4)	583,333	0	*
JJK Partners, LLC 3 Buscks Hill Lane Holmdel, NJ 07733	797,771(5)	583,333	214,438	*

Paola M. Luptak IRRV Trust 2201 N.W. corporate Blvd., Suite 100 Boca Raton, FL 33431	583,333(4)	583,333	0	*

MAPA, LLC 2201 N.W. corporate Blvd., Suite 100 Boca Raton, FL 33431	583,333(4)	583,333	0	*
Lincoln Park Capital Fund, LLC 440 N. Wells St. Suite 410 Chicago, IL 60654	583,335(6)	583,335	0	*
D. Roger B. Liddell Revocable Trust c/o Clear Harbor Asset Mgt. 420 Lexington Ave., Suite 2006 New York, NY 10170	1,129,625(7)	583,625	546,000	*
Xmark Opportunity Fund, L.P. (10) c/o Xmark Opportunity Partners, LLC 90 Grove Street, Suite 201 Ridgefield, CT 06877	29,095,831(8)	25,852,853	3,242,978	2.4%
Xmark Opportunity Fund, Ltd. (10) c/o Xmark Opportunity Partners, LLC 90 Grove Street, Suite 201 Ridgefield, CT 06877	63,680,083(9)	56,732,702	6,947,381	5.2%
Xmark JV Investment Partners, LLC (10) c/o Xmark Opportunity Partners, LLC 90 Grove Street, Suite 201 Ridgefield, CT 06877	1,508,567	484,836	1,023,731	0.8%
TOTAL		86,920,683		

* Less than one percent

(1) Includes shares of common stock issuable upon exercise of warrants. For the purposes hereof, we assume the issuance of all shares issuable upon exercise of warrants and disregard any limitations on the exercise of warrants.

(2) Assumes the sale by the selling stockholders of all of the shares of common stock available for resale under this prospectus and disregards any limitations on the exercise of warrants.

(3) Consists of 100,000 shares of common stock and 75,000 shares of common stock issuable upon exercise of warrants issued in the 2012 private placement.

(4) Consists of 333,333 shares of common stock and 250,000 shares of common stock issuable upon exercise of warrants issued in the 2012 private placement.

(5) Consists of 214,438 shares of common stock issuable upon exercise of options held by Joseph Krivulka, and 333,333 shares of common stock and 250,000 shares of common stock issuable upon exercise of warrants purchased by JJK Partners, LLC in the 2012 private placement. Joseph Krivulka, Managing Director for JJK Partners, LLC, may be deemed to have voting and investment power with respect to such shares.

(6) Consists of 333,334 shares of common stock held directly and 250,001 shares of common stock Issuable upon warrants issued in the 2012 private placement. Josh Scheinfeld and Jonathan Cope, the principals of Lincoln Park Capital Fund, LLC, are deemed to be beneficial owners of all of the shares of common stock owned by Lincoln Park Capital Fund, LLC. Messrs. Scheinfeld and Cope have shared voting and disposition power over the shares being offered.

(7) Consists of (i) 532,500 shares of common stock held directly, (ii) 250,125 shares of common stock Issuable upon warrants issued in the 2012 private placement, (iii) 297,000 shares of common stock held by D. Roger B. Liddell, trustee of the D. Roger B. Liddell Revocable Trust and (iv) 50,000 shares held by D. Roger B. Liddell's spouse. D. Roger B. Liddell, trustee for the D. Roger B. Liddell Revocable Trust, may be deemed to have voting and investment power with respect to such shares.

(8) Consists of 29,095,831 shares of common stock, which includes 957,326 shares held by Goodnow

(9) Consists of 63,680,083 shares of common stock, which includes 2,475,490 shares held by Goodnow.

(10) Xmark Opportunity Partners, LLC ("Opportunity Partners") is the sole member of the investment manager of Xmark Opportunity Fund, L.P., a Delaware limited partnership ("Opportunity LP"), and Xmark Opportunity Fund, Ltd., a Cayman Islands exempted company ("Opportunity Ltd"), and, as such, possesses the sole power to vote and the sole power to direct the disposition of all securities of the Company, held by Opportunity LP and Opportunity Ltd. Opportunity Partners is the investment manager of Xmark JV Investment Partners, LLC, a Delaware limited liability company ("JV Partners"), and, as such, possesses the sole power to vote and the sole power to direct the disposition of all securities of the Company held by JV Partners. Mitchell D. Kaye and David C. Cavalier, the Co-Managing Members of Xmark Capital Partners, LLC, a Delaware limited liability company, the Managing Member of Opportunity Partners, share voting and dispositive power with respect to all securities of the Company beneficially owned by Opportunity Partners. Collectively, Opportunity LP and Opportunity Ltd hold a majority of the membership interests in Goodnow Capital, L.L.C., a Delaware limited liability company ("Goodnow"). Opportunity Partners possesses the sole power to vote and the sole power to direct the disposition of all securities of the Company held by Goodnow.

DESCRIPTION OF CAPITAL STOCK

As of December 31, 2013, we were authorized to issue up to 200,000,000 shares of common stock and 10,000,000 shares of preferred stock under our Amended and Restated Certificate of Incorporation. The preferred stock is divided into two series: 1,250,000 shares of preferred stock are designated "Series A Convertible Preferred Stock," and 1,600,000 shares of preferred stock are designated "Series B Convertible Preferred Stock."

Common Stock

As of December 31, 2013, we had 134,550,068 shares of common stock outstanding. As of December 31, 2013, there were 11,152,042 shares of common stock issuable upon the exercise of outstanding stock options and 17,879,627 shares of common stock issuable upon the exercise of warrants to purchase common stock.

Holders of shares of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders and are not entitled to cumulate votes for the election of directors. Subject to preferences that may be applicable to any outstanding shares of preferred stock, including our Series B Convertible Preferred Stock, holders of shares of common stock are entitled to receive ratably such dividends, if any, as may be declared from time to time by our board of directors out of funds legally available therefor. In the event of liquidation, dissolution or winding up of our company, the holders of shares of common stock are entitled to share ratably in all assets remaining after payment of liabilities, subject to prior distributions rights applicable to any outstanding shares of preferred stock. Shares of common stock have no preemptive, conversion or other subscription rights, and there are no redemption or sinking fund provisions applicable to the common stock.

Preferred Stock

As of December 31, 2013, there were issued and outstanding 526,080 shares of Series B Convertible Preferred Stock and 896,037 shares of Series B Convertible Preferred stock issuable upon the exercise of warrants to purchase Series B Convertible Preferred Stock. As of December 31, 2013, no shares of Series A Convertible Preferred Stock were issued and outstanding.

Under our Amended and Restated Certificate of Incorporation, our board of directors has the authority to issue preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions, including the dividend, conversion, voting, redemption (including sinking fund provisions), and other rights, liquidation preferences, and the number of shares constituting any series and the designations of such series, without any further vote or action by our stockholders.

Because the terms of the preferred stock may be fixed by our board of directors without stockholder action, the preferred stock could be issued quickly with terms calculated to defeat a proposed takeover of our company or to make the removal of our management more difficult. Under certain circumstances this could have the effect of decreasing the market price of our common stock.

Series B Convertible Preferred Stock

All shares of Series B Convertible Preferred Stock and warrants to purchase shares of Series B Convertible Preferred Stock currently are owned by Elan Corporation plc. The Series B Convertible Preferred Stock is non-voting stock. Each share of Series B Convertible Preferred Stock is convertible into one shares of our common stock, provided that no conversion may be effected that would result in the holders of Series B Convertible Preferred Stock owning more than 9.9% of our common stock on a fully converted to common stock basis. If we pay a cash dividend on our common stock, we also must pay the same dividend on an as converted basis on the Series B Convertible Preferred

Stock.

Warrants

Effective February 15, 2013, the Company and each of Xmark JV Investment Partners, LLC, Xmark Opportunity Fund, Ltd. and Xmark Opportunity Fund, L.P. (collectively, the "Xmark Entities") entered into a Warrant Repricing, Exercise and Lockup Agreement (the "Xmark Warrant Agreement") pursuant to which the Company agreed to reduce the exercise price of outstanding warrants to purchase an aggregate of up to 59,149,999 shares of Common Stock held by the Xmark Entities (the "Xmark Warrants") to $0.01 per share. In consideration for the reduction of the exercise price of the Xmark Warrants, each of the Xmark Entities agreed to immediately exercise all of the Xmark Warrants. The Xmark Warrant Agreement also provides that the Xmark Entities will not transfer the shares issuable upon exercise of the Xmark Warrants (the "Xmark Warrant Shares") until the Company either (i) declares a cash dividend on its common stock or otherwise makes a cash distribution or (ii) effects a Change of Control, subject in each case to the terms of the Xmark Warrant Agreement.

As of December 31, 2013, warrants to purchase an aggregate of 17,879,627 shares of common stock were outstanding with a weighted average exercise price of $0.29 per share. Details of the warrants for common stock outstanding at December 31, 2013 are as follows:

Number of Shares	Exercise Price	Expiration Date
100,000	$ 0.50	May 2014
100,000	$ 1.00	May 2014
100,000	$ 1.50	May 2014
125,000	$ 0.65	June 2014
125,000	$ 1.00	June 2014
20,000	$ 0.39	September 2014
15,000	$ 0.50	September 2014
15,000	$ 0.60	September 2014
50,000	$ 0.38	April 2015
50,000	$ 0.50	May 2016
50,000	$ 0.50	July 2016
50,000	$ 1.00	July 2016
50,000	$ 1.50	July 2016
50,000	$ 2.00	July 2016
50,000	$ 2.50	July 2016
1,337,627	$ 0.40	March 2017
325,000	$ 0.40	April 2017
300,000	$ 0.258	June 2017
140,000	$ 0.35	October 2017
13,085,000	$ 0.25	February 2018
1,742,000	$ 0.44	March 2018
17,879,627		

As of March 31, 2013, one warrant to purchase an aggregate of 896,037 shares of preferred stock was outstanding. The warrant has an exercise price of $0.01 per share and expires in February 2016.

Section 203 of the Delaware Corporation Law

Section 203 of the General Corporation Law of the State of Delaware (the “DGCL”) prevents an “interested stockholder” (defined in Section 203 of the DGCL, generally, as a person owning 15% or more of a corporation’s outstanding voting stock), from engaging in a “business combination” (as defined in Section 203 of the DGCL) with a publicly-held Delaware corporation for three years following the date such person became an interested stockholder, unless:

- before such person became an interested stockholder, the board of directors of the corporation approved the transaction in which the interested stockholder became an interested stockholder or approved the business combination;

- upon consummation of the transaction that resulted in the interested stockholder’s becoming an interested stockholder, the interested stockholder owns at least 85% of the voting stock of the corporation outstanding at the

time the transaction commenced (excluding stock held by directors who are also officers of the corporation and by employee stock plans that do not provide employees with the rights to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer); or

- following the transaction in which such person became an interested stockholder, the business combination is approved by the board of directors of the corporation and authorized at a meeting of stockholders by the affirmative vote of the holders of two-thirds of the outstanding voting stock of the corporation not owned by the interested stockholder.

Our certificate of incorporation expressly provides that the provisions of Section 203 of the DGCL do not apply. Consequently, a person or entity wishing to acquire control of our company would not have to comply with the director or stockholder approvals required by Section 203. This could make a takeover of our company easier even if the takeover were not approved by the board of directors or opposed by the stockholders as not being in their best interests.

Limitation of Liability

Section 145 of the DGCL provides a detailed statutory framework covering indemnification of officers and directors against liabilities and expenses arising out of legal proceedings brought against them by reason of their being or having been directors or officers. Section 145 generally provides that a director or officer of a corporation:

- shall be indemnified by the corporation for all expenses of such legal proceedings when he is successful on the merits;

- may be indemnified by the corporation for the expenses, judgments, fines and amounts paid in settlement of such proceedings (other than a derivative suit), even if he is not successful on the merits, if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful; and

- may be indemnified by the corporation for the expenses of a derivative suit (a suit by a stockholder alleging a breach by a director or officer of a duty owed to the corporation), even if he is not successful on the merits, if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation.

The indemnification discussed in clauses two and three above may be made only upon a determination that indemnification is proper because the applicable standard of conduct has been met. Such a determination may be made by a majority of a quorum of disinterested directors, independent legal counsel, the stockholders or a court of competent jurisdiction. The indemnification discussed in clause three above may not apply, however, if the director or officer is adjudged liable for negligence or misconduct in the performance of his duties to the corporation, unless a corporation determines that despite such adjudication, but in view of all the circumstances, he is entitled to indemnification.

Article Sixth of our certificate of incorporation provides in substance that, to the fullest extent permitted by the DGCL as it now exists or as amended, each director and officer shall be indemnified against reasonable costs and expenses, including attorney’s fees, and any liabilities which he may incur in connection with any action to which he may be made a party by reason of his being or having been a director or officer of our company. The indemnification provided by our certificate of incorporation is not deemed exclusive of or intended in any way to limit any other rights to which any person seeking indemnification may be entitled. Section 102(b)(7) of the DGCL permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability

- for any breach of the director’s duty of loyalty to the corporation or its stockholders,

100

- for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law,
- under Section 174 of the DGCL, or
- for any transaction from which the director derived an improper personal benefit.

Article Eighth of our certificate of incorporation provides for the elimination of personal liability of a director for breach of fiduciary duty, as permitted by Section 102(b)(7) of the DGCL. We maintain liability insurance on our officers and directors against liabilities that they may incur in such capacities. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling our company pursuant to the foregoing provisions, we have been informed 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.

Anti-Takeover Effects

Bylaws

Our Bylaws are designed to make it difficult for a third party to acquire control of us, even if a change of control would be beneficial to stockholders. Our Bylaws do not permit any person other than the board of directors or certain executive officers to call special meetings of the stockholders. In addition, we must receive a stockholders' proposal for an annual meeting within a specified period for that proposal to be included on the agenda. Because stockholders do not have the power to call meetings and are subject to timing requirements in submitting stockholder proposals for consideration at an annual or special meeting, any third-party takeover not supported by the board of directors would be subject to significant delays and difficulties.

No Cumulative Voting

The DGCL provides that stockholders are denied the right to cumulate votes in the election of directors unless our amended and restated certificate of incorporation provides otherwise. Our amended and restated certificate of incorporation does not provide for cumulative voting.

Undesignated Preferred Stock

The authority that is possessed by our Board of Directors to issue preferred stock could potentially be used to discourage attempts by third parties to obtain control of our company through a merger, tender offer, proxy contest or otherwise by making such attempts more difficult or more costly. Our Board of Directors may issue preferred stock with voting rights or conversion rights that, if exercised, could adversely affect the voting power of the holders of common stock.

Authorized but Unissued Shares

Our authorized but unissued shares of common stock and preferred stock will be available for future issuance without stockholder approval. We may use additional shares for a variety of purposes, including future offerings to raise additional capital, to fund acquisitions and as employee compensation. The existence of authorized but unissued shares of common stock and preferred stock could render more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

The combination of the provisions summarized above will make it more difficult for our stockholders to replace our Board of Directors as well as for another party to obtain control of us by replacing our Board of Directors. Therefore,

these provisions may have the effect of deterring hostile takeovers or delaying changes in our control or management. These provisions are intended to enhance the likelihood of continued stability in the composition of our Board of Directors and in the policies they implement, and to discourage certain types of transactions that may involve an actual or threatened change of our control. These provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal. The provisions also are intended to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and, as a consequence, they also may inhibit fluctuations in the market price of our shares that could result from actual or rumored takeover attempts. Such provisions may also have the effect of preventing changes in our management.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer and Trust Company.

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 Commission;
- 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.

Each selling stockholder has advised us that they have not entered into any written or oral agreements, understandings or arrangements with any underwriter or broker-dealer regarding the sale of the resale shares. There is no underwriter or coordinating broker acting in connection with the proposed sale of the resale shares by the selling stockholders.

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 certain 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 the shares may be sold without volume restrictions pursuant to Rule 144 of the Securities Act.

LEGAL MATTERS

K&L Gates LLP, Irvine, California, passed upon certain legal matters for us in connection with the offered securities.

EXPERTS

The audited financial statements in this prospectus and elsewhere in the registration statement have been so included in reliance up the report of Grant Thornton LLP, independent registered public accountants, upon the authority of said firm as experts in accounting and auditing.

ADDITIONAL INFORMATION

We have filed with the SEC a Registration Statement on Form S-1 under the Securities Act with respect to the securities offered in this prospectus. This prospectus, which forms a part of such registration statement, does not contain all of the information set forth in the registration statement or the exhibits and schedules filed with it. When we make references in this prospectus to any of our agreements or other documents, the references are not necessarily complete and you should refer to the exhibits filed with the registration statement for copies of the actual agreements or other documents.

We are subject to the information and periodic reporting requirements of the Securities Exchange Act of 1934 and in accordance therewith file reports, proxy statements and other information with the SEC. Such reports, proxy statements, other information, and a copy of the registration statement and its exhibits may be inspected by anyone without charge and copies of these materials may be obtained upon the payment of the fees prescribed by the SEC, at the Public Reference Room maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549, on official business days during the hours of 10 a.m. to 3 p.m. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The registration statement and the reports, proxy statements and other information filed by us are also available through the SEC’s website on the World Wide Web at www.sec.gov, as well as on our website at www.aeoluspharma.com.

INDEX TO FINANCIAL STATEMENTS

UNAUDITED INTERIM FINANCIAL STATEMENTS

AEOLUS PHARMACEUTICALS, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited)
(In thousands, except share and per share data)

	March 31, 2014	September 30, 2013
ASSETS		
Current assets:		
Cash and cash equivalents	$ 520	$ 869
Accounts receivable	1,839	370
Deferred subcontractor cost	1,402	656
Prepaids and other current assets	96	39
Total current assets	3,857	1,935
Investment in CPEC LLC	32	32
Total assets	$ 3,889	$ 1,966
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and accrued expenses	$ 2,394	$ 579
Deferred revenue	1,458	682
Total current liabilities	3,852	1,261
Total liabilities	3,852	1,261
Commitments and Contingencies (Note F)		
Stockholders' equity:		
Preferred stock, $.01 par value per share, 10,000,000 shares authorized:		
Series A nonredeemable convertible preferred stock, 1,250,000 shares authorized as of March 31, 2014 and September 30, 2013, respectively; no shares issued and outstanding as of March 31, 2014 and September 30, 2013, respectively	—	—
Series B nonredeemable convertible preferred stock, 1,600,000 and 1,600,000 shares authorized as of March 31, 2014 and September 30, 2013, respectively; 526,080 and 526,080 shares issued and outstanding as of March 31, 2014 and September 30, 2013, respectively	5	5
Common stock, $.01 par value per share, 200,000,000 shares authorized; 134,550,068 shares issued and outstanding as of March 31, 2014 and September 30, 2013, respectively	1,346	1,346
Additional paid-in capital	183,739	183,276
Accumulated deficit	(185,053)	(183,922)
Total stockholders' equity	37	705
Total liabilities and stockholders' equity	$ 3,889	$ 1,966

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

F-2

AEOLUS PHARMACEUTICALS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)
(In thousands, except per share data)

	Three months Ended March 31,		Six Months Ended March 31,	
	2014	2013	2014	2013
Revenue:				
Contract Revenue	$1,438	$859	$2,231	$2,201
Costs and expenses:				
Research and development	1,173	618	1,880	1,787
General and administrative	702	1,003	1,483	1,659
Total costs and expenses	1,875	1,621	3,363	3,446
Loss from operations	(437)	(762)	(1,132)	(1,245)
Non-cash financing charges and change in fair value of warrants (Note B)	—	(5,020)	—	(510)
Net loss	$(437)	$(5,782)	$(1,132)	$(1,755)
Net loss per weighted share attributable to common stockholders:				
Basic (Note D)	$0.00	$(0.06)	$(0.01)	$(0.03)
Diluted (Note D)	$0.00	$(0.06)	$(0.01)	$(0.03)
Weighted average common shares outstanding:				
Basic	134,550	94,425	134,550	69,664
Diluted	134,550	94,425	134,550	69,664

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

AEOLUS PHARMACEUTICALS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)
(In thousands)

	Six Months Ended March 31,	
	2014	2013
Cash flows from operating activities:		
Net loss	$(1,132)	$(1,755)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation	463	309
Change in fair value of warrants	—	510
Change in assets and liabilities:		
Accounts receivable	(1,468)	(738)
Deferred subcontractor cost	(746)	(1,005)
Prepaid and other assets	(57)	(31)
Accounts payable and accrued expenses	1,815	(249)
Deferred revenue	776	1,046
Net cash used in operating activities	(349)	(1,913)
Cash flows provided by financing activities:		
Proceeds from issuance of common stock and warrants	—	3,616
Costs related to the issuance of common stock and warrants	—	(58)
Net cash provided by financing activities	—	3,558
Net decrease in cash and cash equivalents	(349)	1,645
Cash and cash equivalents at beginning of period	869	281
Cash and cash equivalents at end of period	$520	$1,926
Supplemental disclosure of cash flow information:		
State income taxes	$—	$—

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

AEOLUS PHARMACEUTICALS, INC.
Notes to Condensed Consolidated Financial Statements
(Unaudited)

A. Organization, Business and Summary of Significant Accounting Policies

Organization

The accompanying unaudited condensed consolidated financial statements include the accounts of Aeolus Pharmaceuticals, Inc. and its wholly-owned subsidiary, Aeolus Sciences, Inc. (collectively, "we," "us," "Company" or "Aeolus"). All significant intercompany accounts and transactions have been eliminated in consolidation. Aeolus is a Delaware corporation. The Company's primary operations are located in Mission Viejo, California.

Business

Aeolus is a biopharmaceutical company developing a platform of a new class of broad-spectrum, catalytic antioxidant compounds that protect healthy tissue from the damaging effects of oxidative stress. The principal endeavor of the Company is protecting against damaging effects of oxidative stress induced by radiation. Its first compound, AEOL 10150 (or "10150"), is being developed as a medical countermeasure against the pulmonary effects of radiation exposure under a contract ("BARDA Contract") with the Biomedical Advanced Research and Development Authority ("BARDA"), a division of the Department of Health and Human Services ("HHS"). If all of the options are exercised by BARDA, the total value of the contract would be approximately $118.4 million. Aeolus is in its fourth year under the BARDA Contract. Aeolus also receives development support from the National Institutes of Health ("NIH") for development of the compound as a medical countermeasure against radiation and exposure to chemical and nerve agents. Additionally, Aeolus is developing AEOL 10150 for oncology indications, where it is used in combination with radiation and chemotherapy. Aeolus' strategy is to leverage the substantial investment in toxicology, manufacturing, and preclinical and clinical studies made by U.S. government agencies in AEOL 10150, including the BARDA Contract, to develop the compound efficiently for use in oncology.

Basis of Presentation

All significant intercompany activity has been eliminated in the preparation of the unaudited condensed consolidated financial statements. The unaudited condensed consolidated financial statements have been prepared in accordance with the requirements of Form 10-Q and Rule 10-01 of Regulation S-X. Some information and footnote disclosures normally included in financial statements prepared in accordance with generally accepted accounting principles have been condensed or omitted pursuant to those rules and regulations. In the opinion of management, the accompanying unaudited condensed consolidated financial statements include all adjustments (consisting only of normal recurring adjustments) necessary to present fairly the consolidated financial position, results of operations and cash flows of the Company. The condensed balance sheet at September 30, 2013 was derived from the Company's audited financial statements included in the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2013, filed with the Securities and Exchange Commission (the "SEC") on December 20, 2013.

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 revenues and expenses during the reporting period. Actual results could differ from those estimates.

Cash and Cash Equivalents

The Company invests available cash in short-term bank deposits. Cash and cash equivalents include investments with maturities of six months or less at the date of purchase. The carrying value of cash and cash equivalents approximate their fair market value at March 31, 2014 and September 30, 2013 due to their short-term nature.

Significant customers and accounts receivable

For the six months ended March 31, 2014, the Company's primary customer was BARDA. For the six months ended March 31, 2014, revenues from BARDA comprised 100% of total revenues. As of March 31, 2014, the Company's receivable balances were comprised 100% from this customer. There was $195,000 of unbilled accounts receivable, included in accounts receivable, as of March 31, 2014. Unbilled accounts receivable relates to work that has been performed, though invoicing has not yet occurred. All of the unbilled receivables are expected to be billed and collected within the next 12 months. Accounts receivable are stated at invoice amounts and consist primarily of amounts due from BARDA as well as amounts due under reimbursement contracts with other government entities and non-government and philanthropic organizations. If necessary, the Company records a provision for doubtful receivables to allow for any amounts which may be unrecoverable. This provision is based upon an analysis of the Company's prior collection experience, customer creditworthiness and current economic trends. As of March 31, 2014 and September 30, 2013, an allowance for doubtful accounts was not recorded as the collection history from the Company's customer indicated that collection was probable.

Concentrations of credit risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents and accounts receivable. The Company places its cash and cash equivalents with high quality financial institutions. Management believes that the financial risks associated with its cash and cash equivalents and investments are minimal. Because accounts receivable consist primarily of amounts due from the U.S. federal government agencies, management deems there to be minimal credit risk.

Revenue Recognition

Aeolus recognizes revenue in accordance with the authoritative guidance for revenue recognition. Revenue is recognized when all of the following criteria are met: (i) persuasive evidence of an arrangement exists, (ii) delivery (or passage of title) has occurred or services have been rendered, (iii) the seller's price to the buyer is fixed or determinable, and (iv) collectability is reasonably assured.

The BARDA Contract is classified as a "cost-plus-fixed-fee" contract. Aeolus recognizes government contract revenue in accordance with the authoritative guidance for revenue recognition including the authoritative guidance specific to federal government contracts. Reimbursable costs under the contract primarily include direct labor, subcontract costs, materials, equipment, travel, and indirect costs. In addition, we receive a fixed fee under the BARDA Contract, which is unconditionally earned as allowable costs are incurred and is not contingent on success factors. Reimbursable costs under the BARDA Contract, including the fixed fee, are generally recognized as revenue in the period the reimbursable costs are incurred and become billable.

Fair Value of Financial Instruments

The carrying amounts of Aeolus' short-term financial instruments, which include cash and cash equivalents, accounts receivable, accounts payable, and accrued liabilities approximate their fair values due to their short maturities.

Fair Value Measurements

The Company adopted Accounting Standards Codification ("ASC") Topic 820, Fair Value Measurements and Disclosures, for financial and non-financial assets and liabilities.

ASC Topic 820 discusses valuation techniques, such as the market approach (comparable market prices), the income approach (present value of future income or cash flow) and the cost approach (cost to replace the service capacity of an asset or replacement cost). The statement utilizes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. The following is a brief description of those three levels:

- Level 1: Observable inputs such as quoted prices (unadjusted) in active markets for identical assets or liabilities.

- Level 2: Inputs other than quoted prices that are observable for the asset or liability, either directly or indirectly. These include quoted prices for similar assets or liabilities in active markets and quoted prices for identical or similar assets or liabilities in markets that are not active.
- Level 3: Unobservable inputs that reflect the reporting entity's own assumptions.

Research and Development

Research and development costs are expensed in the period incurred.

Leases

The Company leases office space and office equipment under month to month operating lease agreements. For the six months ended March 31, 2014 and 2013, total rent expense was approximately $21,000 and $20,000, respectively.

Income Taxes

The Company recognizes liabilities or assets for the deferred tax consequences of temporary differences between the tax bases of assets or liabilities and their reported amounts in the financial statements. These temporary differences will result in taxable or deductible amounts in future years when the reported amounts of the assets or liabilities are recovered or settled. A valuation allowance is established when management determines that is more likely than not that all or a portion of a deferred tax asset will not be realized. Management evaluates the Company's ability to realize its net deferred tax assets on a quarterly basis and valuation allowances are provided, as necessary. During this evaluation, management reviews its forecasts of income in conjunction with other positive and negative evidence surrounding the Company's ability to realize its deferred tax assets to determine if a valuation allowance is required. Adjustments to the valuation allowance will increase or decrease the Company's income tax provision or benefit. Management also applies the relevant guidance to determine the amount of income tax expense or benefit to be allocated among continuing operations, discontinued operations, and items charged or credited directly to stockholders' equity.

A tax position must meet a minimum probability threshold before a financial statement benefit is recognized. The minimum threshold is a tax position that is more likely than not to be sustained upon examination by the applicable taxing authority, including resolution of any related appeals or litigation process, based on the technical merits of the position. The Company recognizes interest and penalties related to uncertain tax positions in income tax expense.

Net Income (Loss) Per Common Share

The Company computes net income attributable to common stockholders using the two-class method required for participating securities. Under the two-class method, securities that participate in dividends, such as the Company's outstanding preferred shares, preferred warrants, and most common stock warrants, are considered "participating securities." Our preferred shares, preferred warrants and common stock warrants are considered "participating securities" because they include non-forfeitable rights to dividends.

In applying the two-class method, (i) basic net income (loss) per share is computed by dividing net income (less any dividends paid on participating securities) by the weighted average number of shares of common stock and participating securities outstanding for the period and (ii) diluted earnings per share may include the additional effect of other securities, if dilutive, in which case the dilutive effect of such securities is calculated using the treasury stock method. The Company does have other securities with a dilutive effect outstanding, so the Company's basic net income (loss) per share uses the two-class method and diluted net income (loss) per share uses the treasury stock method.

Accounting for Stock-Based Compensation

The Company recognizes stock based compensation expense in the statement of operations based upon the fair value of the equity award amortized over the vesting period.

Segment Reporting

The Company currently operates in one segment.

B. Stockholders' Equity

Preferred Stock

The Certificate of Incorporation of Aeolus authorizes the issuance of up to 10,000,000 shares of Preferred Stock, at a par value of $.01 per share. The Board of Directors has the authority to issue Preferred Stock in one or more series, to fix the designation and number of shares of each such series, and to determine or change the designation, relative rights, preferences, and limitations of any series of Preferred Stock, without any further vote or action by the stockholders of the Company.

Of the 10,000,000 shares of total authorized shares of Preferred Stock, 1,250,000 shares are designated as Series A Convertible Preferred Stock and 1,600,000 shares are designated as Series B Stock. The Series B Stock is not entitled to vote on any matter submitted to the vote of holders of the common stock except that the Company must obtain the approval of a majority of the outstanding shares of Series B Stock to either amend the Company's Certificate of Incorporation in a manner that would adversely affect the Series B Stock (including by creating an additional class or series of stock with rights that are senior or pari passu to the Series B Stock) or change the rights of the holders of the Series B Stock in any other respect. Each share of Series B Stock is convertible at any time by the holder thereof into one share of the Company's common stock, provided that no conversion may be effected that would result in the holders of Series B Stock owning more than 9.9% of the Company's common stock on a fully converted to common stock basis. If the Company pays a cash dividend on its common stock, it must also pay the same dividend on an as converted basis on the Series B Stock. Upon a liquidation, dissolution, bankruptcy or winding up of the Company or the sale of all or substantially all of the Company's assets, the holders of Series B Stock will be entitled to receive, together with the holders of common stock, the assets of the Company in proportion to the number of shares of common stock held (assuming conversion of the Series B Stock into shares of common stock).

As of March 31, 2014, 526,080 shares of Series B Stock were outstanding, all of which were held by Elan. Each share of Series B Stock was convertible into one share of common stock as of March 31, 2014.

There were no shares of Series A Convertible Preferred Stock issued or outstanding as of March 31, 2014.

Common Stock

February/March 2013 Financing

On February 19, 2013 and March 4, 2013, the Company entered into Securities Purchase Agreements (the "Purchase Agreements") with certain accredited investors (the "Purchasers"). Under the terms of the agreements, the Company received approximately $3,616,000 in gross proceeds in exchange for the issuance of an aggregate of 14,462,000 units (the "Units"), consisting of 14,462,000 shares of common stock and 14,462,000 warrants, at a purchase price of $0.25 per unit. Each Unit consists of (i) one share of common stock (the "Common Shares") and (ii) a five-year warrant to purchase one share of the Company's common stock (the "Warrants"). The Warrants have an initial exercise price of

$0.25 per share.

On February 19, 2013, the Company received $3,225,000 in gross proceeds in exchange for the issuance of an aggregate of 12,900,000 Units, which consisted of 12,900,000 shares of common stock and 12,900,000 warrants.

On March 4, 2013, the Company received approximately $390,000 in gross proceeds in exchange for the issuance of an aggregate of 1,562,000 Units, which consisted of 1,562,000 shares of common stock and 1,562,000 warrants.

Net cash proceeds from the February/March 2013 Financing, after deducting for expenses, were approximately $3,558,000. The Company also incurred non-cash expenses in the form of 365,000 warrants issued to consultants, at similar terms as the financing Warrants, for services provided. The Company issued a total of 14,827,000 warrants in connection with the February/March 2013 Financing.

The fair value of the February/March 2013 Financing warrants was estimated to be $4,791,000 using the Black-Scholes option pricing model with the following assumptions: dividend yield of 0%, expected volatility of 154.84%, risk free interest rate of 0.87% and an expected life of five years. The proceeds from the February/March 2013 Financing were allocated based upon the relative fair values of the February/March 2013 Financing Warrants and the February/March 2013 Common Shares.

The February/March 2013 Financing contains a registration rights agreement with an arrangement for liquidated damages in the event of a failure to maintain the effectiveness with the SEC of a registration statement covering the February/March 2013 Financing Units. The Company must use its commercially reasonable efforts to maintain the registration statement continuously effective until the earlier to occur of (i) the date on which all securities covered by such registration statement have been sold, and (ii) the date on which all securities covered by such registration statement may be sold without volume restrictions pursuant to Rule 144 under the Securities Act of 1933, as amended. In the event the Company fails to meet this obligation, subject to certain exceptions, the Company will be required to make a cash payment of 0.5% of the aggregate amount invested to the Purchasers of the February/March 2013 Financing Units. The 0.5% payment equaling $18,000 would be due for every 30-day period in which the registration statement is not continuously effective. The maximum liability would be $108,000 and no damages would accrue after August 19, 2013, the date that is six months from the closing of the February/March 2013 Financing. The registration statement was declared effective by the SEC as of June 13, 2013. No liability was recorded as the registration statement was continuously effective through March 31, 2014.

Modification to rights of Security Holders

Effective February 19, 2013, the Company and each of Xmark JV Investment Partners, LLC, Xmark Opportunity Fund, Ltd. and Xmark Opportunity Fund, L.P. (collectively, the “Xmark Entities”) entered into a Warrant Repricing, Exercise and Lockup Agreement (the “Xmark Warrant Agreement”) pursuant to which the Company agreed to reduce the exercise price of outstanding warrants to purchase an aggregate of up to 59,149,999 shares of Common Stock held by the Xmark Entities (the “Xmark Warrants”) to $0.01 per share. In consideration for the reduction of the exercise price of the Xmark Warrants, each of the Xmark Entities agreed to immediately exercise all of the Xmark Warrants by cashless exercise. The Xmark Warrant Agreement also provides that the Xmark Entities will not transfer the shares issuable upon exercise of the Xmark Warrants (the “Xmark Warrant Shares”) until the Company either (i) declares a cash dividend on its common stock or otherwise makes a cash distribution or (ii) effects a Change of Control, subject in each case to the terms of the Xmark Warrant Agreement.

Modifying the exercise price of the warrants to a fixed amount of $0.01 eliminated the requirement for warrant liability accounting treatment and resulted in a charge of $2,084,000.

March 2012 Financing

On March 30, 2012 and April 4, 2012, the Company entered into Securities Purchase Agreements (the “Purchase Agreements”) with certain accredited investors (the “Purchasers”) and completed a financing (the “March 2012 Financing”). Under the terms of the Purchase Agreements, the Company received $660,000 in gross proceeds in

exchange for the issuance of an aggregate of 2,200,166 units (the “March 2012 Units”), consisting of 2,200,166 shares of common stock and 1,650,126 warrants, at a purchase price of $0.30 per Unit. Each Unit consisted of (i) one share of common stock (the “March 2012 Common Shares”) and (ii) a five-year warrant to purchase 0.75 of a share of the Company’s common stock (the “March 2012 Warrants”). The March 2012 Warrants have an initial exercise price of $0.40 per share.

On March 30, 2012, the Company received $530,000 in gross proceeds in exchange for the issuance of an aggregate of 1,766,833 March 2012 Units, which consisted of 1,766,833 shares of common stock and 1,325,126 warrants.

On April 4, 2012, the Company received $130,000 in gross proceeds in exchange for the issuance of an aggregate of approximately 433,333 March 2012 Units, which consisted of 433,333 shares of common stock and 325,000 warrants.

Net cash proceeds from the March 2012 Financing, after deducting for expenses, were $642,000. The Company also incurred non-cash expenses in the form of 12,501 warrants issued to consultants, at similar terms as the March 2012 Warrants, for services provided. Pursuant to the warrants, the Company is obligated to issue up to a total of 1,662,627 shares of common stock as of September 30, 2012 in connection with the March 2012 Financing.

The fair value of the March 2012 Warrants issued on March 30, 2012 was estimated to be $363,000 using the Black-Scholes option pricing model with the following assumptions: dividend yield of 0%, expected volatility of 150.74%, risk free interest rate of 1.04% and an expected life of five years. The proceeds from the March 2012 Financing were allocated based upon the relative fair values of the March 2012 Warrants and the March 2012 Common Shares.

The fair value of the March 2012 Warrants issued on April 4, 2012 was estimated to be $84,000 using the Black-Scholes option pricing model with the following assumptions: dividend yield of 0%, expected volatility of 149.36%, risk free interest rate of 1.05% and an expected life of five years. The proceeds from the March 2012 Financing were allocated based upon the relative fair values of the March 2012 Warrants and the March 2012 Common Shares.

Dividends

The Company has never paid a cash dividend on its common stock and does not anticipate paying cash dividends on its common stock in the foreseeable future. If the Company pays a cash dividend on its common stock, it also must pay the same dividend on an as converted basis on its outstanding Series B Stock.

Warrants

As of March 31, 2014, warrants to purchase an aggregate of 17,879,627 shares of common stock were outstanding with a weighted average exercise price of $0.30 per share. Details of the warrants for common stock outstanding at March 31, 2014 are as follows:

Number of Shares	Exercise Price	Expiration Date
100,000	$ 0.50	May 2014
100,000	$ 1.00	May 2014
100,000	$ 1.50	May 2014
125,000	$ 0.51	June 2014
125,000	$ 1.00	June 2014
20,000	$ 0.39	September 2014
15,000	$ 0.50	September 2014
15,000	$ 0.60	September 2014
50,000	$ 0.38	April 2015

50,000	$	0.50	May 2016
50,000	$	0.50	July 2016
50,000	$	1.00	July 2016
50,000	$	1.50	July 2016
50,000	$	2.00	July 2016
50,000	$	2.50	July 2016
1,337,627	$	0.40	March 2017
325,000	$	0.40	April 2017
300,000	$	0.258	June 2017
140,000	$	0.35	October 2017
13,085,000	$	0.25	February 2018
1,742,000	$	0.25	March 2018
17,879,627			

As of March 31, 2014, one warrant to purchase an aggregate of 896,037 shares of preferred stock was outstanding. The warrant has an exercise price of $0.01 per share and expires in February 2016.

Below is a summary of warrant activity (“common and preferred”) for the six months ended March 31, 2014:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Outstanding at 9/30/2013	18,775,664	$0.29	4.05	$693,340
Granted	-	$-	-	$-
Exercised	-	$-	-	$-
Expired or Canceled	-	$-	-	$-
Forfeited	-	$-	-	$-
Vested	-	$-	-	$-
Outstanding at 3/31/2014	18,775,664	$0.29	3.55	$215,048

Below is a summary of warrant activity (“common and preferred”) for the six months ended March 31, 2013:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Outstanding at 9/30/2012	62,993,663	$0.30	4.2	$5,344,623
Granted	14,932,000	$0.25	4.89	$1,039,373
Exercised	(59,149,999)	$0.01	3.75	$19,519,500
Expired or Canceled	-	$-	-	$-
Forfeited	-	$-	-	$-
Vested	-	$-	-	$-
Outstanding at 3/31/2013	18,775,664	$0.29	4.55	$1,335,864

C. Stock-Based Compensation

Below is a summary of stock option activity for the six months ended March 31, 2014:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Outstanding at 9/30/2013	11,214,898	$0.52	6.67	$3,825
Granted	-	$-	-	$-
Exercised	-	$-	-	$-
Expired or Canceled	(62,890)	$2.93	-	$-
Forfeited	-	$-	-	$-
Vested (RSAs)	-	$-	-	$-
Outstanding at 3/31/2014	11,152,008	$0.51	6.21	$1,463

For the six months ended March 31, 2014, all stock options were granted with an exercise price at or above the fair market value of the Company's common stock on the date of grant.

Below is a summary of stock option activity for the six months ended March 31, 2013:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Outstanding at 9/30/2012	9,473,661	$0.70	5.81	$153,850
Granted	2,745,000	$0.39	9.92	$901
Exercised	-	$-	-	$-
Expired or Canceled	(72,744)	$0.85	-	$-
Forfeited	-	$-	-	$-
Vested (RSAs)	-	$-	-	$-
Outstanding at 3/31/2013	12,145,917	$0.63	6.38	$45,084

The details of stock options for the six months ended March 31, 2014 were as follows:

	Options Outstanding			Options Exercisable		
Range of Exercise Prices	Number Outstanding at March 31, 2014	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in years)	Number Exercisable At March 31, 2014	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in years)
$0.23-$0.30	1,612,500	$ 0.29	5.81	1,612,500	$ 0.29	5.81
$0.31-$0.40	6,501,500	$ 0.39	7.32	6,501,500	$ 0.39	7.32
$0.41-$0.50	502,000	$ 0.45	7.75	447,833	$ 0.45	7.58
$0.51-$0.60	963,750	$ 0.59	5.14	963,750	$ 0.59	5.14
$0.61-$0.70	66,500	$ 0.68	2.38	66,500	$ 0.68	2.38
$0.71-$0.80	382,250	$ 0.75	3.17	382,250	$ 0.75	3.17
$0.81-$0.90	697,091	$ 0.88	2.51	697,091	$ 0.88	2.51
$0.91-$1.00	44,500	$ 0.94	1.49	44,500	$ 0.94	1.49
$1.01-$1.50	81,500	$ 1.13	1.06	81,500	$ 1.13	1.06
$1.51-$5.00	300,417	$ 2.73	0.40	300,417	$ 2.73	0.40

Stock-based compensation expense recognized in the statement of operations is as follows (in thousands):

	For the three months ended March 31,		For the six months ended March 31,	
	2014	2013	2014	2013
Research and Development Expenses	$ 5	$ 5	$ 11	$ 9
General and Administrative Expenses	190	232	452	300
	$ 195	$ 237	$ 463	$ 309

The total unrecognized compensation expense for outstanding and unvested stock options for the six months ended March 31, 2014 was $15,000. The weighted average remaining recognition period for the total deferred compensation expense is approximately one month. The fair value of options was determined at the date of the grant using the Black-Scholes option pricing model with the following weighted average assumptions:

	For the three months ended March 31,		For the six months ended March 31,	
	2014	2013	2014	2013
Dividend yield	—	* 0 %	—	* 0 %
Expected volatility	—	* 154.91 %	—	* 154.61 %
Risk-free interest rate	—	* 0.86 %	—	* 0.86 %
Expected term	—	* 5.27 years	—	* 5.27 years

* No stock options were granted for the three and six months ended March 31, 2014

D. Net Income (Loss) Per Common Share

The Company computes basic net income (loss) per weighted average share attributable to common stockholders using the weighted average number of shares of common stock outstanding during the period. The Company computes diluted net income (loss) per weighted average share attributable to common stockholders using the weighted average number of shares of common and dilutive potential common shares outstanding during the period. Potential common shares outstanding consist of stock options, convertible debt, warrants and convertible preferred stock using the treasury stock method and are excluded if their effect is anti-dilutive. Diluted weighted average common shares did not include any incremental shares for the six months ended March 31, 2014 and 2013 issuable upon the exercise or conversion of convertible debt, stock options to purchase common stock, convertible preferred stock and warrants to purchase common stock. Diluted weighted average common shares excluded incremental shares of approximately 2,294,000 and 5,069,000, respectively, for the six months ended 2014 and 2013, due to their anti-dilutive effect.

	For the three months ended March 31,		For the six months ended March 31,	
	2014	2013	2014	2013
	(in thousands, except per share data)			
Numerator:				
Net income (loss)	$(437)	$(5,782)	$(1,132)	$(1,755)
Less net income (loss) attributable to participating securities	-	-	-	-
Net income (loss) attributable to common stockholders – basic	$(437)	$(5,782)	$(1,132)	$(1,755)
Net income (loss)	$(437)	$(5,782)	$(1,132)	$(1,755)
Less gain (loss) on warrant liability for participating				
common warrants	-	-	-	-
Net loss attributable to common stockholders – diluted	$(437)	$(5,782)	$(1,132)	$(1,755)
Denominator:				
Weighted-average shares used in computing net income per share attributable to common stockholders – basic	134,550	94,425	134,550	69,664

Effect of potentially dilutive securities:				
Common stock warrants	-	-	-	-
Convertible preferred warrants	-	-	-	-
Convertible preferred stock	-	-	-	-
Common stock options	-	-	-	-
Non-participating common stock warrants	-	-	-	-
Weighted-average shares used in computing net income (loss) per share attributable to common stockholders - diluted	134,550	94,425	134,550	69,664
Basic net income per common share	$0.00	$(0.06)	$(0.01)	$(0.03)
Diluted net income (loss) per common share	$0.00	$(0.06)	$(0.01)	$(0.03)

E. Subsequent Event

On May 5, 2014, the Company executed a Modification of Contract (the "Modification") with BARDA. The purpose of the Modification is to (1) make available $1,778,000 to reimburse the Company for actual costs incurred under the first three years of the BARDA Contract, (2) establish an increased provisional indirect billing rate for fiscal year 2014 and the rest of the BARDA Contract period of performance, and (3) establish a cap on the indirect billing rate for the remaining contract period of performance.

The effect of the Modification will be (a) to increase the cash balance of the Company and (b) to increase the billing rate for indirect costs under the contract, in each case subsequent to the period ended March 31, 2014.

F. Commitments and Contingencies

The Company acquires assets still in development and enters 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, the Company 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 payments, they are not included in the table of contractual obligations. No milestones have been met, nor have any payments been paid, as of March 31, 2014.

The Company is also obligated to pay patent filing, prosecution, maintenance and defense costs, if any, for the intellectual property it has licensed from National Jewish Health, National Jewish Medical and Research Center and Duke University.

These arrangements may be material individually, and in the unlikely 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 Aeolus the discretion to unilaterally terminate development of the product, which would allow Aeolus to avoid making the contingent payments; however, Aeolus is unlikely to cease development if the compound successfully achieves clinical testing objectives.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Shareholders
Aeolus Pharmaceuticals Inc.

We have audited the accompanying consolidated balance sheets of Aeolus Pharmaceuticals, Inc. (the "Company") as of September 30, 2013 and 2012, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the two years in the period ended September 30, 2013. 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. The Company is not required to have, nor were we engaged to perform an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, 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 consolidated financial statements referred to above present fairly, in all material respects, the financial position of Aeolus Pharmaceuticals, Inc. as of September 30, 2013 and 2012, and the results of their operations and their cash flows for each of the two years in the period ended September 30, 2013 in conformity with accounting principles generally accepted in the United States of America.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note C to the financial statements, the Company has incurred recurring losses and negative cash flows from operations, and management believes the Company does not currently possess sufficient working capital to fund its operations through fiscal 2014. These conditions, along with other matters as set forth in Note C, raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note C. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ GRANT THORNTON LLP
San Diego, California
December 20, 2013

AEOLUS PHARMACEUTICALS, INC.
CONSOLIDATED BALANCE SHEETS
(DOLLARS IN THOUSANDS)

	September 30, 2013	2012
ASSETS		
Current assets:		
Cash and cash equivalents	$ 869	$ 281
Accounts receivable	370	781
Deferred subcontractor cost	656	101
Prepaids and other current assets	39	61
Total current assets	1,935	1,224
Investment in CPEC LLC	32	32
Total assets	$ 1,966	$ 1,256
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current liabilities:		
Accounts payable and accrued expenses	$ 579	$ 2,167
Deferred revenue	682	105
Total current liabilities	1,261	2,272
Warrant liability	—	19,319
Total liabilities	1,261	21,591
Commitments and Contingencies (Notes E and I)		
Stockholders' equity (deficit):		
Preferred stock, $.01 par value per share, 10,000,000 shares authorized:		
Series A nonredeemable convertible preferred stock, 1,250,000 shares authorized as of September 30, 2013 and 2012, respectively; no shares issued and outstanding as of September 30, 2013 and 2012, respectively	—	—
Series B nonredeemable convertible preferred stock, 1,600,000 and 600,000 shares authorized as of September 30, 2013 and 2012, respectively; 526,080 and 526,080 shares issued and outstanding as of September 30, 2013 and 2012, respectively	5	5
Common stock, $.01 par value per share, 200,000,000 shares authorized; 134,550,068 and 62,731,963 shares issued and outstanding at September 30, 2013 and 2012, respectively	1,346	627
Additional paid-in capital	183,276	159,747
Accumulated deficit	(183,922)	(180,714)
Total stockholders' equity (deficit)	705	(20,335)
Total liabilities and stockholders' equity (deficit)	$ 1,966	$ 1,256

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

AEOLUS PHARMACEUTICALS, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(IN THOUSANDS, EXCEPT PER SHARE DATA)

	Fiscal Year Ended September 30,	
	2013	2012
Revenue:		
Contract revenue	$ 3,928	$ 7,293
Costs and expenses:		
Research and development	3,360	6,468
General and administrative	3,266	3,196
Total costs and expenses	6,626	9,664
Loss from operations	(2,698)	(2,371)
Warrant liability gain (charges)	(510)	4,069
Net income (loss)	$ (3,208)	$ 1,698
Net income (loss) attributable to common stockholders – basic	$ (3,208)	$ 856
Net income (loss) attributable to common stockholders – diluted	$ (3,208)	$ (2,161)
Basic net income (loss) per common share	$ (0.03)	$ 0.01
Diluted net income (loss) per common share	$ (0.03)	$ (0.03)
Weighted average common shares outstanding:		
Basic	106,554	61,593
Diluted	106,554	71,041

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

AEOLUS PHARMACEUTICALS, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)
(Dollars in thousands)

	Series B Preferred Stock		Common Stock		Additional	Accumulated	Total Stockholders' Equity
	Shares	Par Value	Shares	Par Value	Paid-in Capital	Deficit	(Deficit)
Balance at September 30, 2011	526,080	$ 5	60,470,718	$ 605	$ 158,543	$ (182,412)	$ (23,259)
Common stock sales, net of issuance costs of $18,000	—	—	2,200,166	22	620	—	642
Exercise of warrants	—	—	61,079	—	16	—	16
Issuance of warrants to consultants	—	—	—	—	199	—	199
Stock-based compensation	—	—	—	—	369	—	369
Net income for the fiscal year ended September 30, 2012	—	—	—	—	—	1,698	1,698
Balance at September 30, 2012	526,080	5	62,731,963	627	159,747	(180,714)	(20,335)
Common stock sales, net of issuance costs of $58,000	—	—	14,462,000	145	3,413	—	3,558
Exercise of warrants	—	—	57,356,105	574	19,255	—	19,829
Issuance of warrants to consultants	—	—	—	—	169	—	169
Stock-based compensation	—	—	—	—	692	—	692
Net loss for the fiscal year end September 30, 2013	—	—	—	—	—	(3,208)	(3,208)
Balance at September 30, 2013	526,080	$ 5	134,550,068	$ 1,346	$ 183,276	$ (183,922)	$ 705

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

AEOLUS PHARMACEUTICALS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(IN THOUSANDS)

	Fiscal Year Ended September 30,	
	2013	2012
Cash flows from operating activities:		
Net income (loss)	$ (3,208)	$ 1,698
Adjustments to reconcile net income (loss) to net cash used in operating activities:		
Depreciation	6	7
Noncash compensation	861	568
Noncash interest and financing costs	—	17
Change in fair value of warrants	510	(4,086)
Change in assets and liabilities:		
Accounts receivable	411	896
Deferred subcontractor cost	(555)	(101)
Prepaid expenses and other assets	16	(6)
Accounts payable and accrued expenses	(1,588)	23
Deferred revenue	577	105
Net cash used in operating activities	(2,970)	(879)
Cash flows from investing activities:		
Purchase of equipment	—	—
Net cash used in investing activities	—	—
Cash flows from financing activities:		
Proceeds from issuance of common stock and warrants	3,616	660
Costs related to the issuance of common stock and warrants	(58)	(18)
Net cash provided by financing activities	3,558	642
Net increase (decrease) in cash and cash equivalents	588	(237)
Cash and cash equivalents at beginning of year	281	518
Cash and cash equivalents at end of year	$ 869	$ 281

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

AEOLUS PHARMACEUTICALS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
SEPTEMBER 30, 2013 and 2012

A. Organization, Business and Summary of Significant Accounting Policies

Organization

The accompanying audited consolidated financial statements include the accounts of Aeolus Pharmaceuticals, Inc. and its wholly-owned subsidiary, Aeolus Sciences, Inc. (collectively "we," "us," "Company" or "Aeolus"). All significant intercompany accounts and transactions have been eliminated in consolidation. Aeolus is a Delaware corporation. The Company's primary operations are located in Mission Viejo, California.

Business

Aeolus is developing a new class of broad-spectrum, catalytic antioxidant compounds based on technology discovered at Duke University and National Jewish Health. The Company's lead compound, 10150, is a metalloporphyrin specifically designed to neutralize reactive oxygen and nitrogen species. The Company is developing 10150 as a medical countermeasure against the pulmonary effects of radiation exposure under a contract ("BARDA Contract") valued at up to $118.4 million with the Biomedical Advanced Research and Development Authority ("BARDA"), a division of the Department of Health and Human Services ("HHS"). Additionally, Aeolus receives development support from the National Institutes of Health ("NIH") for development of the compound as a medical countermeasure against radiation and chemical exposure.

B. Summary of Significant Accounting Policies

Basis of Presentation

The consolidated financial statements include the accounts of Aeolus and its wholly owned subsidiary. All significant intercompany accounts and transactions have been eliminated. The Company uses the equity method to account for its 35.0% ownership interest in CPEC.

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 revenues and expenses during the reporting period. Such estimates include revenue recognition, warrant liability, allowance for doubtful accounts, stock-based compensation and warrant expense. Actual results could differ from those estimates.

Cash and Cash Equivalents

The Company invests available cash in short-term bank deposits. Cash and cash equivalents include investments with maturities of three months or less at the date of purchase. The carrying value of cash and cash equivalents approximate their fair market value at September 30, 2013 and 2012 due to their short-term nature. Also, the Company maintains cash balances with financial institutions in excess of federally insured limits. The Company does not anticipate any losses with such cash balances.

Significant customers and accounts receivable

For the year ended September 30, 2013, the Company's primary customer was BARDA. For the year ended September 30, 2013, revenues from BARDA comprised 100% of total revenues. As of September 30, 2013, the Company's receivable balances were comprised 100% from this customer. Unbilled accounts receivable, included in accounts receivable, totaling $165,000 as of September 30, 2013 relate to work that has been performed, though invoicing has not yet occurred. All of the unbilled receivables are expected to be billed and collected within the next 12 months. Accounts receivable are stated at invoice amounts and consist primarily of amounts due from HHS as well as amounts due under reimbursement contracts with other government entities and non-government and philanthropic organizations. If necessary, the Company records a provision for doubtful receivables to allow for any amounts which may be unrecoverable. This provision is based upon an analysis of the Company's prior collection experience, customer creditworthiness and current economic trends. As of September 30, 2013 and 2012, an allowance for doubtful accounts was not recorded as the collection history from the Company's customers indicated that collection was probable.

Concentrations of credit risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents and accounts receivable. The Company places its cash and cash equivalents with high quality financial institutions. Management believes that the financial risks associated with its cash and cash equivalents and investments are minimal. Because accounts receivable consist primarily of amounts due from the U.S. federal government agencies, management deems there to be minimal credit risk.

Revenue Recognition

Aeolus recognizes revenue in accordance with the authoritative guidance for revenue recognition. Revenue is recognized when all of the following criteria are met: (i) persuasive evidence of an arrangement exists, (ii) delivery (or passage of title) has occurred or services have been rendered, (iii) the seller's price to the buyer is fixed or determinable, and (iv) collectability is reasonably assured.

The BARDA Contract is classified as a "cost-plus-fixed-fee" contract. Aeolus recognizes government contract revenue in accordance with the authoritative guidance for revenue recognition including the authoritative guidance specific to federal government contracts. Reimbursable costs under the contract primarily include direct labor, subcontract costs, materials, equipment, travel, and indirect costs. In addition, we receive a fixed fee under the BARDA Contract, which is unconditionally earned as allowable costs are incurred and is not contingent on success factors. Reimbursable costs under this BARDA Contract, including the fixed fee, are generally recognized as revenue in the period the reimbursable costs are incurred and become billable.

Fair Value of Financial Instruments

The carrying amounts of our short-term financial instruments, which include cash and cash equivalents, accounts receivable, accounts payable, and accrued liabilities approximate their fair values due to their short maturities.

Fair Value Measurements

The Company adopted Accounting Standards Codification ("ASC") Topic 820, Fair Value Measurements and Disclosures, for financial and non-financial assets and liabilities.

ASC 820 discusses valuation techniques, such as the market approach (comparable market prices), the income approach (present value of future income or cash flow) and the cost approach (cost to replace the service capacity of an asset or replacement cost). The Company utilizes the market approach. The statement utilizes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. The following is a brief description of those three levels:

- Level 1: Observable inputs such as quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: Inputs other than quoted prices that are observable for the asset or liability, either directly or indirectly. These include quoted prices for similar assets or liabilities in active markets and quoted prices for identical or similar assets or liabilities in markets that are not active.
- Level 3: Unobservable inputs that reflect the reporting entity's own assumptions.

The warrant liability is measured at fair market value on a recurring basis as of September 30, 2013 and 2012 and is summarized below (in thousands):

Fair value at September 30, 2013			Fair value at September 30, 2012		
Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
$ —$	—$	—$	—	$ —	$ 19,319

The following table summarizes, as of September 30, 2013, the warrant activity subject to Level 3 inputs which are measured on a recurring basis:

	Fair value measurements of warrants using significant unobservable inputs (Level 3)
Balance at September 30, 2012	$ 19,319
Change in fair value of warrant liability	(1,574)
Warrant repricing modification charge	2,084
Exercised	(19,829)
Balance at September 30, 2013	$ -

Research and Development

Research and development costs are expensed in the period incurred.

Leases

The Company leases office space and office equipment under month to month operating lease agreements. For the years ended September 30, 2013 and 2012, total rent expense was approximately $41,000 and $36,000, respectively.

Income Taxes

The Company recognizes liabilities or assets for the deferred tax consequences of temporary differences between the tax bases of assets or liabilities and their reported amounts in the financial statements. These temporary differences will result in taxable or deductible amounts in future years when the reported amounts of the assets or liabilities are recovered or settled. A valuation allowance is established when management determines that is more likely than not that all or a portion of a deferred tax asset will not be realized. Management evaluates the Company’s ability to realize its net deferred tax assets on a quarterly basis and valuation allowances are provided, as necessary. During this evaluation, management reviews its forecasts of income in conjunction with other positive and negative evidence surrounding the Company’s ability to realize its deferred tax assets to determine if a valuation allowance is required. Adjustments to the valuation allowance will increase or decrease the Company’s income tax provision or benefit. Management also applies the relevant guidance to determine the amount of income tax expense or benefit to be allocated among continuing operations, discontinued operations, and items charged or credited directly to stockholders’ equity (deficit).

A tax position must meet a minimum probability threshold before a financial statement benefit is recognized. The minimum threshold is a tax position that is more likely than not to be sustained upon examination by the applicable taxing authority, including resolution of any related appeals or litigation process, based on the technical merits of the position. The Company recognizes interest and penalties related to uncertain tax positions in income tax expense.

Net Income (Loss) Per Common Share

The Company computes basic net income (loss) per weighted average share attributable to common stockholders using the weighted average number of shares of common stock outstanding during the period. The Company computes diluted net income (loss) per weighted average share attributable to common stockholders using the weighted average number of shares of common and dilutive potential common shares outstanding during the period. Potential common shares outstanding consist of stock options, convertible debt, warrants and convertible preferred stock using the treasury stock method and are excluded if their effect is anti-dilutive. Diluted weighted average common shares did not include any incremental shares for the fiscal year ended September 30, 2013 and included incremental shares of approximately 9,448,000 shares for the fiscal year ended September 30, 2012 issuable upon the exercise or conversion of convertible debt, stock options to purchase common stock, convertible preferred stock and warrants to purchase common stock. Diluted weighted average common shares excluded incremental shares of approximately 2,586,000 and 51,364,000, respectively, for the fiscal year 2013 and 2012, due to their anti-dilutive effect.

	Fiscal Year Ended September 30,	
	2013	2012
Numerator:		
Net income (loss)	$ (3,208)	$ 1,698
Net income attributable to participating securities	—	(842)
Net income (loss) attributable to common stockholders – basic	$ (3,208)	$ 856
Net income (loss)	$ (3,208)	$ 1,698
Less gain (loss) on warrant liability for participating common warrants	—	3,859
Net income (loss) attributable to common stockholders – diluted	$ (3,208)	$ (2,161)
Denominator:		
Weighted-average shares used in computing net income (loss) per share attributable to common stockholders – basic	106,554	61,593
Effect of potentially dilutive securities:		
Common stock warrants	—	9,448
Convertible preferred warrants	—	—
Convertible preferred stock	—	—
Common stock options	—	—
Non-participating common stock warrants	—	—
Weighted-average shares used in computing net income (loss) per share attributable to common stockholders – diluted	106,554	71,041
Basic net income (loss) per common share	$ (0.03)	$ 0.01
Diluted net income (loss) per common share	$ (0.03)	$ (0.03)

Accounting for Stock-Based Compensation

The Company recognizes stock based compensation expense in the statement of operations based upon the fair value of the equity award amortized over the vesting period.

Segment Reporting

The Company currently operates in one segment.

Warrant Liability

Increases or decreases in fair value of the warrants are included as a component of other income (expense) in the accompanying statement of operations for the respective period. As of September 30, 2013, the liability for warrants decreased to $0 from approximately $19,319,000 as of September 30, 2012, due to the exercise of the related warrants (see note F) resulting in a loss to statement of operations of $510,000. The warrant liability and revaluations have not had any impact on the Company’s working capital, liquidity or business operations. The Company previously had warrants with an embedded feature that met the requirements of derivative accounting per ASC Topic 815, Derivatives and Hedging. The Company recorded these warrants at their fair value in accordance with ASC Topic 820 and was required to revalue its liability for these warrants on a quarterly basis. All the warrants subject to this accounting treatment were exercised in full on February 19, 2013 in connection with the financing. See note F below for additional information.

C. Liquidity

The accompanying financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America, assuming the Company will continue as a going concern, which contemplates the realization of assets and the liquidation of liabilities in the normal course of business.

The Company has incurred significant cash outflows from operations of approximately 2,970,000 and $879,000 for the fiscal years ended September 30, 2013 and 2012, respectively. The Company had net income of $3,208,000 (including a non-cash loss for increases in valuation of warrants of approximately $510,000) for the year ended September 30, 2013. In 2012, the Company had net income of $1,698,000 (including a non-cash gain for decreases in valuation of warrants of $4,069,000). The Company expects to incur additional losses and cash outflows from operations for several more years.

The Company has historically raised capital through the sale of its common shares and preferred shares; said financing transactions are more thoroughly discussed at note F – Stockholders' Equity. Management expects they will need to continue to finance the Company's operations through equity financing for several more years.

If the Company is unable to obtain additional funding for its operations, it will need to eliminate or substantially limit some or all of its activities, merge with another company, sell, lease or license some or all of its assets, or cease operations entirely. There is no assurance that the Company will be able to obtain additional financing on acceptable terms, or at all, or that the Company will be able to merge with another Company or sell, lease or license any or all of its assets. This raises substantial doubt about the Company's ability to continue as a going concern. These financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or amounts and classifications of liabilities that might result from this uncertainty.

D. Investments

Investment in CPEC LLC

The Company uses the equity method to account for its 35% ownership interest in CPEC. CPEC had $91,000 of net assets at each of September 30, 2013 and 2012. Aeolus' 35% share of CPEC's net assets, which is approximately $32,000, is included in other assets and the Company has no operations or activities unrelated to the out licensing of bucindolol. The other 65% is owned by Endo Pharmaceuticals.

E. Commitments

The Company acquires assets still in development and enters into license and 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, the Company may also be required to make royalty payments based upon a percentage of the net sales of the pharmaceutical product in the event that regulatory approval for marketing is obtained. Because of the contingent nature of these payments, they are not included in the table of contractual obligations. No milestones have been met, nor have any payments been made, as of September 30, 2013.

We are also obligated to pay patent filing, prosecution, maintenance and defense costs, if any, for the intellectual property the Company has licensed from National Jewish Health ("NJH"), National Jewish Medical and Research Center (the "NJMRC") and Duke University.

These arrangements may be material individually, and in the unlikely 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 Aeolus the discretion to unilaterally terminate development of the product, which would allow Aeolus to avoid making the contingent payments; however, Aeolus is unlikely to cease development if the compound successfully achieves clinical testing objectives.

F. Stockholders' Equity (Deficit)

Basis of Presentation

Preferred Stock

The Certificate of Incorporation of the Company authorizes the issuance of up to 10,000,000 shares of Preferred Stock, at a par value of $0.01 per share, of which 1,250,000 shares are designated Series A Convertible Preferred Stock and 1,600,000 shares are designated Series B Convertible Preferred Stock. The Board of Directors has the authority to issue Preferred Stock in one or more series, to fix the designation and number of shares of each such series, and to determine or change the designation, relative rights, preferences, and limitations of any series of Preferred Stock, without any further vote or action by the stockholders of the Company.

As of September 30, 2013 and 2012, 526,080 shares of Series B Stock were outstanding, respectively. There are no shares of Series A Convertible Preferred Stock issued or outstanding.

With respect to dividend rights and rights upon liquidation, winding up and dissolution, the Series B Stock ranks pari passu with the common stock. Subject to any rights of senior stock, holders of Series B Stock are entitled to receive dividends or distributions as, when and if declared by the Board of Directors. In the event the Board of Directors declares a dividend or distribution with respect to the outstanding common stock, the holders of Series B Stock are entitled to receive the amount of dividends per share in the same form payable on the common stock based on the largest number of shares of common stock issuable upon conversion of the outstanding Series B Stock. In the event of a liquidation, winding up or dissolution of the Company, subject to any rights of senior stock, the holders of Series B Stock are entitled to receive, pari passu with the holders of the common stock, the assets of the Company based on the largest number of shares of common stock issuable upon conversion of the outstanding Series B Stock.

Each share of Series B Stock is convertible into one share of common stock. The Series B Stock can be converted into common stock at any time upon the election of the holders of the Series B Stock except to the extent such conversion would result in the holders of Series B Stock owning in the aggregate more than 9.99% of the outstanding common stock.

The Series B Stock is not entitled to vote on any matter submitted to the vote of holders of the common stock except that the Company must obtain the approval of a majority of the outstanding shares of Series B Stock to either amend the Company's Certificate of Incorporation in a manner that would adversely affect the Series B Stock (including by creating an additional class or series of stock with rights that are senior or pari passu to the Series B Stock) or change the rights of the holders of the Series B Stock in any other respect.

Common Stock

February/March 2013 Financing

On February 19, 2013 and March 4, 2013, the Company entered into Securities Purchase Agreements (the “Purchase Agreements”) with certain accredited investors (the “Purchasers”). Under the terms of the agreements, the Company received approximately $3,616,000 in gross proceeds in exchange for the issuance of an aggregate of 14,462,000 units (the “Units”), consisting of 14,462,000 shares of common stock and 14,462,000 warrants, at a purchase price of $0.25 per unit. Each Unit consists of (i) one share of common stock (the “Common Shares”) and (ii) a five -year warrant to purchase one share of the Company’s common stock (the “Warrants”). The Warrants have an initial exercise price of $0.25 per share.

Net cash proceeds from the February/March 2013 Financing, after deducting for $58,000 of expenses, were approximately $3,558,000. The Company also incurred non-cash expenses in the form of 365,000 warrants issued to consultants, at similar terms as the financing Warrants, for services provided. The Company issued a total of 14,827,000 warrants in connection with the February/March 2013 Financing.

The fair value of the February/March 2013 Financing warrants was estimated to be $4,791,000 using the Black-Scholes option pricing model with the following assumptions: dividend yield of 0%, expected volatility of 154.84%, risk free interest rate of 0.87% and an expected life of five years. The proceeds from the February/March 2013 Financing were allocated based upon the relative fair values of the February/March 2013 Financing Warrants and the February/March 2013 Common Shares.

The February/March 2013 Financing contains a registration rights agreement with an arrangement for liquidated damages in the event of a failure to maintain the effectiveness with the SEC of a registration statement covering the February/March 2013 Financing Units. The Company must use its commercially reasonable to maintain the registration statement continuously effective until the earlier to occur of (i) the date on which all securities covered by such registration statement have been sold, and (ii) the date on which all securities covered by such registration statement may be sold without volume restrictions pursuant to Rule 144 under the Securities Act of 1933, as amended. In the event the Company fails to meet this obligation, subject to certain exceptions, the Company will be required to make a cash payment of 0.5% of the aggregate amount invested to the Purchasers of the February/March 2013 Financing Units. The 0.5% payment equaling $18,000 would be due for every 30-day period in which the registration statement is not continuously effective. The maximum liability would be $108,000 and no damages would accrue after August 19, 2013, the date that is six months from the closing of the February/March 2013 Financing. The registration statement was declared effective by the SEC as of June 13, 2013. As of June 30, 2013, no liability was recorded as the Company expects that the registration statement will remain continuously effective through August 19, 2013.

Modification to rights of Security Holders

Effective February 19, 2013, the Company and each of Xmark JV Investment Partners, LLC, Xmark Opportunity Fund, Ltd. and Xmark Opportunity Fund, L.P. (collectively, the “Xmark Entities”) entered into a Warrant Repricing, Exercise and Lockup Agreement (the “Xmark Warrant Agreement”) pursuant to which the Company agreed to reduce the exercise price of outstanding warrants to purchase an aggregate of up to 59,149,999 shares of Common Stock held by the Xmark Entities (the “Xmark Warrants”) to $0.01 per share. In consideration for the reduction of the exercise price of the Xmark Warrants, each of the Xmark Entities agreed to immediately exercise all of the Xmark Warrants by cashless exercise. The Xmark Warrant Agreement also provides that the Xmark Entities will not transfer the shares issuable upon exercise of the Xmark Warrants (the “Xmark Warrant Shares”) until the Company either (i) declares a cash dividend on its common stock or otherwise makes a cash distribution or (ii) effects a Change of Control, subject in each case to the terms of the Xmark Warrant Agreement.

Modifying the exercise price of the warrants to a fixed amount of $0.01 eliminated the requirement for warrant liability accounting treatment and resulted in a charge of $2,084,000, as described under “Warrant Liability” in Note A above.

March 2012 Financing

On March 30, 2012 and April 4, 2012, the Company entered into Securities Purchase Agreements (the “Purchase Agreements”) with certain accredited investors (the “Purchasers”) and completed a financing (the “March 2012 Financing”). Under the terms of the Purchase Agreements, the Company received $660,000 in gross proceeds in exchange for the issuance of an aggregate of 2,200,166 units (the “March 2012 Units”), consisting of 2,200,166 shares of common stock and 1,650,126 warrants, at a purchase price of $0.30 per Unit. Each Unit consisted of (i) one share

of common stock (the “March 2012 Common Shares”) and (ii) a five year warrant to purchase 0.75 of a share of the Company’s common stock (the “March 2012 Warrants”). The March 2012 Warrants have an initial exercise price of $0.40 per share.

On March 30, 2012, the Company received $530,000 in gross proceeds in exchange for the issuance of an aggregate of 1,766,833 March 2012 Units, which consisted of 1,766,833 shares of common stock and 1,325,126 warrants.

On April 4, 2012, the Company received $130,000 in gross proceeds in exchange for the issuance of an aggregate of approximately 433,333 March 2012 Units, which consisted of 433,333 shares of common stock and 325,000 warrants.

Net cash proceeds from the March 2012 Financing, after deducting for $18,000 of expenses, were $642,000. The Company also incurred non-cash expenses in the form of 12,501 warrants issued to consultants, at similar terms as the March 2012 Warrants, for services provided. Pursuant to the warrants, the Company is obligated to issue up to a total of 1,662,627 shares of common stock as of September 30, 2012 in connection with the March 2012 Financing.

The fair value of the March 2012 Warrants issued on March 30, 2012 was estimated to be $363,000 using the Black-Scholes option pricing model with the following assumptions: dividend yield of 0%, expected volatility of 150.74%, risk free interest rate of 1.04% and an expected life of five years. The proceeds from the March 2012 Financing were allocated based upon the relative fair values of the March 2012 Financing Warrants and the March 2012 Common Shares.

The fair value of the March 2012 Warrants issued on April 4, 2012 was estimated to be $84,000 using the Black-Scholes option pricing model with the following assumptions: dividend yield of 0%, expected volatility of 149.36%, risk free interest rate of 1.05% and an expected life of five years. The proceeds from the March 2012 Financing were allocated based upon the relative fair values of the March 2012 Financing Warrants and the March 2012 Common Shares.

Dividends

The Company has never paid a cash dividend on its common stock and does not anticipate paying cash dividends on its common stock in the foreseeable future. If we pay a cash dividend on our common stock, we also must pay the same dividend on an as converted basis on our Series B preferred stock.

Warrants

As of September 30, 2013, warrants to purchase an aggregate of 17,879,627 shares of common stock were outstanding. Details of the warrants for common stock outstanding at September 30, 2013 were as follows:

Number of Shares		Exercise Price	Expiration Date
100,000	$	0.50	May 2014
100,000	$	1.00	May 2014
100,000	$	1.50	May 2014
125,000	$	0.51	June 2014
125,000	$	1.00	June 2014
20,000	$	0.39	September 2014
15,000	$	0.50	September 2014
15,000	$	0.60	September 2014
50,000	$	0.38	April 2015
50,000	$	0.50	May 2016
50,000	$	0.50	July 2016
50,000	$	1.00	July 2016
50,000	$	1.50	July 2016
50,000	$	2.00	July 2016
50,000	$	2.50	July 2016
1,337,627	$	0.40	March 2017
325,000	$	0.40	April 2017
300,000	$	0.258	June 2017
140,000	$	0.35	October 2017
13,085,000	$	0.25	February 2018
1,742,000	$	0.25	March 2018
17,879,627			

As of September 30, 2013, one warrant to purchase an aggregate of 896,037 shares of preferred stock was outstanding. Details of the warrant for preferred stock outstanding at September 30, 2013 were as follows:

Number of Shares		Exercise Price	Expiration Date
896,037	$	0.01	February 2016
896,037			

As of September 30, 2012, warrants to purchase an aggregate of 62,132,626 shares of common stock were outstanding. Details of the warrants for common stock outstanding at September 30, 2012 were as follows:

Number of Shares		Exercise Price	Expiration Date
100,000	$	0.50	May 2014

100,000	$	1.00	May 2014
100,000	$	1.50	May 2014
125,000	$	0.65	June 2014
125,000	$	1.00	June 2014
20,000	$	0.39	September 2014
15,000	$	0.50	September 2014
15,000	$	0.60	September 2014
50,000	$	0.38	April 2015
50,000	$	0.50	May 2016
50,000	$	0.50	July 2016
50,000	$	1.00	July 2016
50,000	$	1.50	July 2016
50,000	$	2.00	July 2016
50,000	$	2.50	July 2016
43,614,285	$	0.28	October 2016
1,337,627	$	0.40	March 2017
325,000	$	0.40	April 2017
300,000	$	0.258	June 2017
11,785,714	$	0.28	July 2017
35,000	$	0.30	August 2017
1,875,000	$	0.50	August 2017
35,000	$	0.44	September 2017
1,875,000	$	0.50	December 2017
62,132,626			

As of September 30, 2012, one warrant to purchase an aggregate of 896,037 shares of preferred stock was outstanding. Details of the warrant for preferred stock outstanding at September 30, 2012 were as follows:

Number of Shares	Exercise Price	Expiration Date
896,037	$ 0.01	February 2016
896,037		

Below is a summary of warrant activity for the last three fiscal years ended September 30:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Outstanding at 9/30/2011	61,936,036	$ 0.30	5.2 years	$ 8,258
Granted	1,997,627	$ 0.38	4.5 years	$ 35
Exercised	(940,000)	$ 0.28		$ -
Cancelled	-	$ -		$ -
Forfeited	-	$ -		$ -
Outstanding at 9/30/2012	62,993,663	$ 0.30	4.2 years	$ 5,344
Granted	14,932,000	$ 0.25	4.4 years	$ 444,810
Exercised	(59,149,999)	$ 0.01		$ 19,519,500
Cancelled	-	$ -		$ -
Forfeited	-	$ -		$ -
Outstanding at 9/30/2013	18,775,664	$ 0.29	4.1 years	$ 693,340
Exercisable at 9/30/2013	18,775,664	$ 0.29	4.1 years	$ 693,340

G. Stock-Based Compensation

As an integral component of a management and employee retention program designed to motivate, retain and provide incentive to the Company's management, employees and key consultants, the Board of Directors approved the 2004 Stock Incentive Plan (the "2004 Plan") and reserved 25,000,000 shares of common stock for issuance under the 2004 Plan. As of September 30, 2013, 14,180,909 shares were available to be granted under the 2004 Plan. The exercise price of the incentive stock options ("ISOs") granted under the 2004 Plan must not be less than the fair market value of the common stock as determined on the date of the grant. The options may have a term up to 10 years. Options typically vest immediately or up to one year following the date of the grant.

Under the Company's 1994 Stock Option Plan (the "1994 Plan"), incentive stock options or non-qualified stock options to purchase 2,500,000 shares of Aeolus' common stock may be granted to employees, directors and consultants of the Company. As of September 30, 2013, there were no shares available to be granted under the 1994 Plan. The exercise price of the ISOs granted under the 1994 Plan must not be less than the fair market value of the common stock as determined on the date of the grant. The options may have a term up to 10 years. Options typically vest over one to three years following the date of the grant.

Below is a summary of stock option activity for the last three fiscal years ended September 30:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Outstanding at 9/30/2011	8,942,628	$ 0.82	6.5 years	$ 259
Granted	691,250	$ 0.30	9.6 years	$ 49
Exercised	-	$ -		$ -
Cancelled	(85,217)	$ 10.77		$ -
Forfeited	(75,000)	$ 0.41		$ 3
Outstanding at 9/30/2012	9,473,661	$ 0.70	5.8 years	$ 154
Granted	3,070,000	$ 0.40	9.4 years	$ -
Exercised	-	$ -		$ -
Cancelled	(1,328,763)	$ 1.46		$ -
Forfeited	-	$ -		$ -
Outstanding at 9/30/2013	11,214,898	$ 0.52	6.7 years	$ 4
Exercisable at 9/30/2013	9,732,612	$ 0.54	6.2 years	$ 4

Stock options granted to consultants during fiscal year 2013 and 2012 were fully vested when issued or vested over a twelve month period. Stock option expense for stock options granted to consultants was $20,000 and $14,000 for fiscal year 2013 and 2012, respectively. For the fiscal years 2013 and 2012, all stock options were issued at or above fair market value of a share of common stock. The weighted-average grant-date fair value of options granted during fiscal years 2013 and 2012 was $0.40 and $0.30, respectively.

A summary of the status of non-vested shares for the fiscal years ended September 30 was:

	Number of Shares	Weighted Average Grant-Date Fair Value
Nonvested at September 30, 2011	592,907	$295,461
Granted	691,250	190,660
Vested	(839,891)	(369,320)
Forfeited	(37,500)	(10,607)
Nonvested at September 30, 2012	406,766	106,194
Granted	3,070,000	1,135,070
Vested	(1,994,480)	(687,327)
Forfeited	-	-
Nonvested at September 30, 2013	1,482,286	$553,937

The total unrecognized compensation expense for outstanding stock options was $477,000 as of September 30, 2013, which will be recognized over a weighted average period of five months. The total fair value of shares vested during fiscal years 2013 and 2012 was $687,000 and $369,000, respectively.

The details of stock options for the fiscal year ended September 30, 2013 are as follows:

	Options Outstanding			Options Exercisable		
Range of Exercise Prices	Number Outstanding at September 30, 2013	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in years)	Number Exercisable at September 30, 2013	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in years)
$ 0.23-$0.30	1,612,500	$ 0.29	6.30	1,609,689	$ 0.29	6.30
$ 0.31-$0.40	6,501,500	$ 0.39	7.82	5,238,692	$ 0.39	7.44
$ 0.41-$0.50	502,000	$ 0.45	8.25	285,333	$ 0.45	7.21
$ 0.51-$0.60	963,750	$ 0.59	5.64	963,750	$ 0.59	5.64
$ 0.61-$0.70	66,500	$ 0.68	2.88	66,500	$ 0.68	2.88
$ 0.71-$0.80	382,250	$ 0.75	3.66	382,250	$ 0.75	3.66
$ 0.81-$0.90	697,091	$ 0.88	3.01	697,091	$ 0.88	3.01
$ 0.91-$1.00	44,500	$ 0.94	1.99	44,500	$ 0.94	1.99
$ 1.01-$1.50	81,500	$ 1.13	1.56	81,500	$ 1.13	1.56
$ 1.51-$5.00	363,307	$ 2.77	0.75	363,307	$ 2.77	0.75

Stock-based compensation expense recognized in the statement of operations is as follows (in thousands):

	For the fiscal year ended September 30,	
	2013	2012
Research and Development Expenses	$ 20	$ 14
General and Administrative Expenses	841	554
Total Stock-based Compensation Expense	$ 861	$ 568

The fair value of the options associated with the above compensation expense was determined at the date of the grant using the Black-Scholes option pricing model with the following weighted average assumptions:

	For the fiscal year ended September 30,	
	2013	2012
Dividend yield	0%	0%
Expected volatility	156%	146%
Risk-free interest rate	0.86%	0.90%
Expected option life after shares are vested	5.27 years	5.23 years

H. Income Taxes

As of September 30, 2013 and 2012, the Company had federal net operating loss ("NOL") carry-forwards of $113,091,000 and $110,986,000, respectively and state operating loss carry-forwards of $35,016,000 and $32,912,000, respectively. The use of these federal and state NOL carry-forwards might be subject to limitation under the rules regarding a change in stock ownership as determined by the Internal Revenue Code (the "Code"). The Company may have had a change of control under Section 382 of the Code during fiscal 2004 and 2006; however, a complete analysis of the limitation of the NOL carry-forwards will not be completed until the time the Company projects it will be able to utilize such NOLs. The federal net operating and the state net operating losses began to expire in 2010. Additionally, the Company had federal research and development carry-forwards as of September 30, 2013 and 2012 of $3,714,000 and $3,587,000, respectively. The Company had state research and development carry-forwards as of September 30, 2013 and 2012 of $1,033,000 and $892,000, respectively.

Significant components of the Company's deferred tax assets at September 30, 2013 and 2012 consisted of the following (in thousands):

	2013	2012
Accrued payroll related liabilities	$ 915	$ 2,802
Depreciation and amortization	823	939
State Taxes	(121)	(1,554)
Total deferred tax assets	1,617	2,187
Deferred tax liabilities	—	—
Valuation allowance for deferred assets	(1,617)	(2,187)
Net deferred tax asset	$ —	$ —

Due to the uncertainty surrounding the realization of the favorable tax attributes in future tax returns, all of the deferred tax assets have been fully offset by a valuation allowance. The change in the valuation allowance is primarily a result of the net operating loss carry-forwards.

Taxes computed at the statutory federal income tax rate of 34% are reconciled to the provision for income taxes as follows (dollars in thousands):

	2013	2012
Effective income tax rate	0%	0%
United States Federal income tax at statutory rate	$ (1,091)	$ 577
State income taxes (net of federal benefit)	5	99
Warrant expense	173	(1,621)
Prior year deferred true up	(1,684)	(365)

Change in valuation reserves	(1,863)	1,119
FIN 48	4,396	—
Other	66	193
Provision for income taxes	$ 2	$ 2

At September 30, 2013, we had unrecognized tax benefits of $4,397,000, all of which would impact the effective tax rate if recognized, however a valuation allowance would be recorded against this amount. During Fiscal 2013, unrecognized tax benefits increased by $4,397,000 as a result of the tax positions taken in prior years and current year. No interest and penalties have been provided for with respect to the unrecognized tax benefits.

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

	Amount (in thousands)
Unrecognized tax benefits at October 1, 2012	$ -
Additions for tax positions related to current year	212
Additions/reductions for tax positions taken in prior years	4,185
Settlements	-
Lapse of Limitations	-
Unrecognized tax benefits at September 30, 2013	$ 4,397

The Company's federal income tax returns for the tax years 2009 to 2011 remain open to examination. The Company's California income tax returns for the tax years 2008 to 2011 remain open to examination.

I. Agreements

Duke Licenses

The Company has obtained exclusive worldwide licenses (the "Duke Licenses") from Duke University ("Duke") to develop, make, have made, use and sell products using certain technology in the field of free radical and antioxidant research, developed by certain scientists at Duke. Future discoveries in the field of antioxidant research from these scientists' laboratories at Duke are also covered by the Duke Licenses. The Duke Licenses require the Company to use its best efforts to pursue development of products using the licensed technology and compounds. These efforts are to include the manufacture or production of products for testing, development and sale. Aeolus is also obligated to use its best efforts to have the licensed technology cleared for marketing in the United States by the U.S. Food and Drug Administration and in other countries in which Aeolus intends to sell products using the licensed technology. Aeolus will pay royalties to Duke on net product sales during the terms of the Duke Licenses, and milestone payments upon certain regulatory approvals and annual sales levels. In addition, Aeolus is obligated under the Duke Licenses to pay all or a portion of patent prosecution, maintenance and defense costs. Unless earlier terminated, the Duke Licenses continue until the expiration of the last to expire issued patent on the licensed technology.

National Jewish Medical and Research Center Agreements

Aeolus has an exclusive worldwide license ("NJH License") from National Jewish Health to develop, make, have made, use and sell products using certain technology developed by certain scientists at NJH. The NJH License requires Aeolus to use commercially reasonable efforts to diligently pursue the development and government approval of products using the licensed technology. Aeolus will be obligated to pay royalties to NJH on net product sales during the term of the NJH License and a milestone payment upon regulatory approval, if obtained. In addition, Aeolus is obligated under the NJH License to pay all or a portion of patent prosecution, maintenance and defense costs. Unless earlier terminated, the NJH License continues until the expiration of the last to expire issued patent on the licensed technology.

Elan Corporation, plc

In May 2002, the Company entered into a collaboration transaction with affiliates of Elan Corporation, plc for the development of the Company's catalytic antioxidant compounds as a treatment for tissue damage from cancer radiation and chemotherapy. Although Elan and the Company terminated this collaboration in January 2003, the Company will pay Elan a royalty on net sales of its catalytic antioxidant products sold, if any, for the prevention and treatment of radiation-induced and chemotherapy-induced tissue damage.

J. Quarterly Financial Data (unaudited)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
	(in thousands, except per share amounts)				
Fiscal 2013					
Total revenue	$ 1,342	$ 859	$ 844	$ 883	$ 3,928
Net income (loss)	$ 4,028	$ (5,782)	$ (786)	$ (668)	$ (3,208)
Net income available to stockholders – Basic	$ 2,049	$ (5,782)	$ (786)	$ (668)	$ (3,208)
Net income available to stockholders – Diluted	$ (200)	$ (5,782)	$ (786)	$ (668)	$ (3,208)
Basic net income (loss) per common share attributable to common stockholders	$ 0.03	$ (0.06)	$ (0.01)	$ 0.00	$ (0.03)
Diluted net income (loss) per common share attributable to common stockholders	$ 0.00	$ (0.06)	$ (0.01)	$ 0.00	$ (0.03)
Fiscal 2012					
Total revenue	$ 2,215	$ 2,231	$ 1,448	$ 1,399	$ 7,293
Net income (loss)	$ 2,977	$ 2,763	$ 3,064	$ (7,106)	$ 1,698
Net income available to stockholders – Basic	$ 1,487	$ 1,381	$ 1,558	$ (7,106)	$ 856
Net income available to stockholders – Diluted	$ 415	$ (283)	$ (307)	$ (7,106)	$ (2,161)
Basic net income (loss) per common share attributable to common stockholders	$ 0.02	$ 0.02	$ 0.02	$ (0.11)	$ 0.01
Diluted net income (loss) per common share attributable to common stockholders	$ (0.01)	$ 0.00	$ 0.00	$ (0.11)	$ (0.03)

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth the costs and expenses to be paid in connection with the sale of shares being registered, all of which we will pay. All amounts, other than the SEC registration fee are estimates.

SEC registration fee	$	1,492.88
Legal fees and expenses		10,000.00
Accounting fees and expenses		12,000.00
Total	$	23,492.88

Item 14. Indemnification of Directors and Officers

Section 145 of the Delaware General Corporation Law (the "DGCL") generally provides that a director or officer of a corporation (i) shall be indemnified by the corporation for all expenses of such legal proceedings when he or she is successful on the merits, (ii) may be indemnified by the corporation for the expenses, judgments, fines and amounts paid in settlement of such proceedings (other than a derivative suit), even if he or she is not successful on the merits, if he or she acts in good faith and in a manner he or she reasonably believes to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceedings, had no reasonable cause to believe his or her conduct was unlawful, and (iii) may be indemnified by the corporation for the expenses of a derivative suit (a suit by a stockholder alleging a breach by a director or officer of a duty owed to the corporation), even if he or she is not successful on the merits, if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interest of the corporation. No indemnification may be made under clause (iii) above, however, if the director or officer is adjudged liable for negligence or misconduct in the performance of his or her duties to the corporation, unless a corporation determines that, despite such adjudication, but in view of all the circumstances, he or she is entitled to indemnification. The indemnification described in clauses (ii) and (iii) above may be made upon a determination that indemnification is proper because the applicable standard of conduct has been met. Such a determination may be made by a majority of a quorum of disinterested directors, independent legal counsel, the stockholders or a court of competent jurisdiction.

The registrant's certificate of incorporation and Bylaws provide in substance that, to the fullest extent permitted by Delaware law as it now exists or as amended, each director and officer shall be indemnified against reasonable costs and expenses, including attorneys' fees and any liabilities which he or she may incur in connection with any action to which he or she may be made a party by reason or his or her being or having been a director or officer of the registrant or any of its affiliated enterprises. The indemnification provided by the registrant's Bylaws is not deemed exclusive of or intended in any way to limit any other rights to which any person seeking indemnification may be entitled.

Section 102(b)(7) of the DGCL permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the DGCL, or (iv) for any transaction from which the director derived an improper personal benefit. The registrant's Certificate of Incorporation provides for the elimination of personal liability of a director for breach of fiduciary duty, as permitted by Section 102(b)(7) of the DGCL.

We have directors' and officers' liability insurance which provides, subject to certain policy limits, deductible amounts and exclusions, coverage for all persons who have been, are or may in the future be, directors or officers of Aeolus Pharmaceuticals, Inc., against amounts which such persons may pay resulting from claims against them by reason of their being such directors or officers during the policy period for certain breaches of duty, omissions or other acts done or wrongfully attempted or alleged. Such policies provide coverage in certain situations where we cannot directly provide indemnification under the DGCL.

Item 15. Recent Sales of Unregistered Securities

The following is a summary of transactions by us from January 1, 2009 through the date of this registration statement involving sales of our securities that were not registered under the Securities Act of 1933, as amended, or the Securities Act.

1. On January 31, 2009, we issued to two accredited investors an aggregate of 79,838 shares of its common stock for payment of interest in accordance with the terms of the certain convertible notes issued to such investors in 2008 (the "2008 Notes").

2. On March 30, 2009, Aeolus entered into a Securities Purchase Agreement (the "Purchase Agreement") with two accredited institutional investors (the "March 2009 Investors") pursuant to which the Company sold and issued to the March 2009 Investors in a private placement an aggregate of 5,357,143 units (the "March 2009 Units"), comprised of an aggregate of 5,357,143 shares of common stock of the Company and warrants to purchase up to an aggregate of 13,392,857 additional shares of common stock (the "March 2009 Warrants"), with an initial exercise price of $0.35 per share, subject to adjustment as provided in the March 2009 Warrants, with each March 2009 Unit representing one share of common stock and a March 2009 Warrant to purchase two-and-one-half shares of common stock, at a purchase price of $0.28 per March 2009 Unit for aggregate gross proceeds of $1,500,000 (collectively, the "March 2009 Financing"). Offering costs of the March 2009 Financing were $91,000 resulting in net proceeds to the Company of approximately $1,400,000. The Company has used, and intends to continue to use, the net proceeds from the March 2009 Financing to finance the development of AEOL 10150 and to fund ongoing operations of the Company.

3. On October 6, 2009, the Company entered into the October 2009 Purchase Agreement with several accredited institutional investors (the "October 2009 Investors") pursuant to which the Company sold and issued to the October 2009 Investors in a private placement an aggregate of 5,892,857 units (the "October 2009 Units"), comprised of an aggregate of 5,892,857 shares of common stock (the "October 2009 Shares") and warrants to purchase up to an aggregate of 11,785,714 additional shares of common stock (the "October 2009 Warrants"), with an initial exercise price of $0.28 per share, subject to adjustment as provided in the October 2009 Warrants, with each October 2009 Unit representing one share of common stock and a October 2009 Warrant to purchase two shares of common stock, at a purchase price of $0.28 per October 2009 Unit for aggregate gross proceeds of $1,650,000 (collectively, the "October 2009 Financing").

The Company also granted to the October 2009 Investors the option to acquire, collectively, up to an additional 5,892,857 October 2009 Units (the "Additional Units"), comprised of an aggregate of 5,892,857 shares of common stock and warrants to purchase up to an aggregate of 11,785,714 additional shares of common stock at the per Additional Unit purchase price of $0.28 (the "October 2009 Call Option"). In addition, the October 2009 Investors granted to the Company the option to require these October 2009 Investors, severally and not jointly, to acquire up to 5,892,857 Additional Units, less any Additional Units acquired under the October 2009 Call Option, at the per Additional Unit purchase price of $0.28 (the "October 2009 Put Option"). The October 2009 Call Option was exercisable at any time, and from time to time, on or prior to June 30, 2010. The October 2009 Put Option was exercisable at any time from June 30, 2010 to July 30, 2010. On July 30, 2010, the Company exercised the October 2009 Put Option in full for $1,650,000 in gross cash proceeds and issued 5,892,857 shares of common stock and 11,785,714 warrants to the October 2009 Investors.

In addition, the October 2009 Investors agreed to convert all $1,000,000 in principal amount of certain the 2008 Notes into common stock of the Company at a conversion rate of $0.35 per share (the "Conversion Shares"), which was subsequently lowered to $0.28 as discussed below, and to exchange their remaining option to purchase an additional $4,000,000 in 2008 Notes for warrants to purchase up to 14,285,714 shares of common stock in substantially the same of form and terms of the October 2009 Warrants issued in the October 2009 Financing, including an initial exercise

price of $0.28 per share, subject to adjustment as provided in the warrants (the “Note Warrants”). As consideration for the October 2009 Investors to convert the 2008 Notes, the Company agreed to exchange warrants to purchase up to 2,000,000 shares of common stock issued to the October 2009 Investors in connection with the sale of the 2008 Notes, warrants to purchase up to 2,150,000 shares of common stock issued to the October 2009 Investors and one of their affiliates in connection with a financing completed in November 2005 and warrants to purchase up to 13,392,857 shares of common stock issued to the October 2009 Investors in connection with a financing completed in March 2009 (collectively, the “Prior Warrants”) for warrants to purchase up to an aggregate of 17,542,857 shares of common stock in substantially the same form and terms of the October 2009 Warrants issued in the October 2009 Financing, including an initial exercise price of $0.28 per share, subject to adjustment pursuant to the warrants (the “Exchange Warrants”) (collectively, the “Conversion”).

The net proceeds to the Company from the October 2009 Financing, after deducting for expenses, were approximately $1,600,000. The Company has used, and intends to continue to use, the net proceeds from the October 2009 Financing to finance animal efficacy studies in Acute Radiation Syndrome, the development of AEOL 10150 and ongoing operations of the Company.

On December 24, 2009, the Company entered into an amendment (the "Amendment") to the October 2009 Purchase Agreement pursuant to which the Company agreed to lower the conversion price of the 2008 Notes from $0.35 per share to $0.28 per share and as a result, issued to the investors in the Company's October 2009 Financing an additional 714,286 shares of the Company's common stock upon conversion of the 2008 Notes (the "Issuance"). The Agreement was executed to resolve a misunderstanding regarding one of the financing terms between the Company and the October 2009 Investors. The Company did not receive any proceeds from the Issuance. The fair value of the common stock on the date of issuance was $343,000 and was charged to the Statement of Operations as interest expense.

On July 30, 2010, the Company exercised the October 2009 Put Option. As a result of the exercise, the Company received $1.65 million in gross proceeds from the investors in exchange for 5,892,857 additional Units (the "Additional Units"), comprised of an aggregate of 5,892,857 shares of common stock and warrants to purchase up to an aggregate of 11,785,714 additional shares of common stock at a purchase price of $0.28 per share.

Net cash proceeds from the exercise of the October 2009 Put Option were approximately $1.6 million after legal costs associated with the exercise and subsequent issuance of stock and warrants.

4. On August 12, 2010, the Company announced an additional financing with certain existing investors (the "August 2010 Investors"). Under the terms of the agreement, the Company received $1,000,000 in gross proceeds in exchange for the issuance of 2,500,000 shares of common stock and warrants to purchase up to 1,875,000 shares at an exercise price of $0.50 per share. The Company also granted to the August 2010 Investors the option to acquire, collectively, up to an additional 2,500,000 units, comprised of an aggregate of 2,500,000 shares of common stock and warrants to purchase up to an aggregate of 1,875,000 additional shares of common stock at an exercise price of $0.50 (the "August 2010 Call Option"). In addition, the August 2010 Investors granted to the Company the option to require these August 2010 Investors, severally and not jointly, to acquire up to 2,500,000 additional units, less any additional units acquired under the August 2010 Call Option, at the per additional unit purchase price of $0.40 (the "August 2010 Put Option"). On December 28, 2010, the investors exercised their Call Option and the Company received $1 million in proceeds in exchange for 2,500,000 common shares and 1,875,000 warrants.

Net cash proceeds from the August 2010 Financing, after deducting for expenses, were approximately $900,000. The Company has used, and continues to use the proceeds from the August 2010 Financing to fund the manufacture of AEOL 10150, studies of the efficacy of AEOL 10150 in cancer patients, the pre-clinical development of other Aeolus compounds and ongoing operations of the Company

5 On December 28, 2010, the investors exercised their Call Option and the Company received $1,000,000 in proceeds in exchange for 2,500,000 common shares and 1,875,000 warrants, with an initial exercise price of $0.50 per share, subject to adjustment as provided in the warrants (the "Additional Warrants"). The Additional Warrants are exercisable for a seven-year period from their date of issuance; contain a "cashless exercise" feature that allows the holder to exercise the Additional Warrants without a cash payment to the Company under certain circumstances; contain a dividend participation right which allows the holder to receive any cash dividends paid on the common stock without exercising the Additional Warrant; contain a provision that provides for the reduction of the exercise price to $0.01 in the event of any such payment of cash dividends by the Company or upon a change of control; and contain anti-dilution provisions in the event of a stock dividend or split, dividend payment or other issuance, reorganization, recapitalization or similar event.

The net cash proceeds to the Company from the December 2010 financing, after deducting for expenses, were approximately $990,000.

6. In consideration for services provided by Dan Delmonico to us, we issued three warrants each to purchase up to 20,000, 15,000 and 15,000 shares of our common stock with an exercise price of $0.39, $.50 and $0.60, respectively. The warrants are exercisable for five years from the date of grant and contain standard adjustment provisions in the event we declare a stock dividend or engage in a recapitalization, reclassification or reorganization of our capital stock.

7. In January 2010, we entered into an agreement with National Securities Corporation ("NSC") pursuant to which we retained NSC as a non-exclusive financial advisor for the period from January 6, 2010 through January 6, 2011. For these services, we issued a warrant to purchase up to 50,000 shares of our common stock with an exercise price of $0.38. The warrant is exercisable for five years from the date of grant and contains standard adjustment provisions in the event we declare a stock dividend or engage in a recapitalization, reclassification or reorganization of our capital stock.

8. In May 2011, we entered into an agreement with Michael Kruger as a consultant to assist us with investor relations for a one-year period. For these services, on May 10, 2011, we issued five warrants, each to purchase up to 50,000 shares of our common stock with an exercise price of $0.50, $1.00, $1.50, $2.00 and $2.50 and vesting dates of May 10, 2011, August 8, 2011, November 6, 2011, February 4, 2012 and May 4, 2012, respectively. The warrants are exercisable for five years from the date of grant and contain standard adjustment provisions in the event we declare a stock dividend or engage in a recapitalization, reclassification or reorganization of our capital stock. In addition, we are required to give Kruger advance notice of a change in control of Aeolus during the term of the warrants. We terminated the agreement with Kruger on July 29, 2011, and the warrants to purchase shares of our common stock with the exercise prices of $1.00, $1.50, $2.00 and $2.50 were cancelled concurrently with the termination of our agreement with Kruger.

9. In May 2011, we entered into an agreement with Noble International Investments, Inc. ("Noble") to provide us with financial advisory services in connection our strategic initiatives for a one-year period. For these services, on May 18, 2011, we issued three warrants each to purchase up to 100,000 shares of our common stock with an exercise price of $0.50, $1.00 and $1.50, respectively, and vesting at a rate of 8,333 shares of our common stock per month. The warrants are exercisable for three years from the date of grant and contain standard adjustment provisions in the event we declare a stock dividend or engage in a recapitalization, reclassification or reorganization of our capital stock. In addition, we are required to give Noble advance notice of a change in control of Aeolus during the term of the warrants.

10. In June 2011, we entered into a consulting agreement with CEOcast to provide us with investor relations services for a one-year period. For these services, on June 1, 2011, we issued two warrants each to purchase up to 125,000 shares of our common stock with an exercise price of $0.51 and $1.00, respectively, and vesting at a rate of 10,416.67 shares of our common stock per month. The warrants are exercisable for three years from the date of grant and contain standard adjustment provisions in the event we declare a stock dividend or engage in a recapitalization, reclassification or reorganization of our capital stock. In addition, we are required to give CEOcast advance notice of a change in control of Aeolus during the term of the warrants.

11. In July 2011, we entered into an agreement with Market Pathways to assist us with investor relations for a one-year period. For these services, on July 22, 2011, we issued five warrants each to purchase up to 50,000 shares of our common stock with an exercise price of $0.50, $1.00, $1.50, $2.00 and $2.50 and vesting dates of July 22, 2011, October 20, 2011, January 18, 2012, April 17, 2012 and July 16, 2012, respectively. The warrants are exercisable for five years from the date of grant and contain standard adjustment provisions in the event we declare a stock dividend

or engage in a recapitalization, reclassification or reorganization of our capital stock. In addition, we are required to give Market Pathways advance notice of a change in control of Aeolus during the term of the warrants.

12. On February 7, 2011, the maturity date of a promissory note held by Elan Corporation, plc, ("Elan"), the Company elected to exercise its right to repay the note, with a maturity value of $663,000, by issuing 50,993 shares of Series B Stock and a warrant to purchase an aggregate of 896,037 shares of Series B Stock at an exercise price of $0.01 per share. The warrant has a term of five years, a cashless exercise provision and customary anti-dilution adjustments in the event of stock splits, stock combination, reorganizations and similar events. The transactions were deemed to be exempt from registration under the Securities Act in reliance upon Section 4(2) of the Securities Act or Regulation D promulgated thereunder as transactions by an issuer not involving any public offering. Elan represented its intention to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed upon the securities issued in these transactions. In addition, Elan had adequate information about the Company, or had adequate access, through its relationships with the Company, to information about the Company.

13. In March and April 2012, we entered into securities purchase agreements with certain accredited investors in which we issued t to the selling stockholders named in this prospectus units consisting of an aggregate of (i) 2,200,166 shares of common stock and (ii) warrants to purchase up to 1,650,126 shares of common stock. Each of the warrants is exercisable at an exercise price of $0.40 per share of common stock. In connection with the private placement, we paid a cash fee of 7% and issued a warrant equal to 5% of the number of units purchased by Lincoln Park Capital Fund, LLC to co-placement agents.

14. In June 2012, we entered into an advisory agreement with Roberts Mitani, LLC whereby we engaged Roberts Mitani, LLC to serve as an advisor to provide strategic advisory services to us on a non-exclusive basis. For these services, on June 26, 2012, we issued a warrant to purchase up to 300,000 shares of our Common Stock with a per share exercise price of $0.258. The warrant is exercisable for seven years from the date of grant and contains standard adjustment provisions in the event we declare a stock dividend or engage in a recapitalization, reclassification or reorganization of our capital stock.

15. In August 2012, we entered into an advisory agreement with Columbia Capital Securities, Inc. and Monarch Bay Associates, LLC whereby we engaged them to serve as an advisor to provide strategic advisory services to us on a non-exclusive basis. For these services, we have agreed to pay each of Columbia Capital Securities, Inc. and Monarch Bay Associates, LLC a monthly retainer in the form of a warrant to purchase up to an aggregate of 17,500 shares of Common Stock, commencing on August 17, 2012 and continuing monthly thereafter during the term of their engagement under the advisory agreement. Each of these warrants has an exercise price equal to the closing price of the Common Stock on the date of issuance, is deemed fully vested upon issuance, is exercisable at any time on or before the five year anniversary of the date of issuance and contains standard adjustment provisions in the event we declare a stock dividend or engage in a recapitalization, reclassification or reorganization of our capital stock. On August 17, 2012, we issued a warrant to purchase up to an aggregate of 17,500 shares of Common Stock with a per share exercise price of $0.30 to each of Columbia Capital Securities, Inc. and Monarch Bay Associates, LLC. On September 17, 2012, we issued a warrant to purchase up to an aggregate of 17,500 shares of Common Stock with a per share exercise price of $0.44 to each of Columbia Capital Securities, Inc. and Monarch Bay Associates, LLC.

16. On February 19, 2013 and March 4, 2013, we entered into a Securities Purchase Agreement, which we refer to as the Purchase Agreement, with certain accredited investors to sell and issue to such investors an aggregate of approximately 14,462,000, which we refer to as the Units, at a purchase price of $0.25 per unit, resulting in aggregate gross proceeds to us of approximately $3.6 million, we refer to this transaction throughout the prospectus as the 2013 private placement. Each Unit consists of (i) one share of common stock and (ii) a five year warrant to purchase one share of our common stock. The warrants in the 2013 private placement have an initial exercise price of $0.25 per share. In addition, we paid a cash fee of 7% and issued a warrant equal to 5% of the number of units purchased by certain investors to Ladenburg Thalmann & Co. Inc., as co-placement agent, and we paid a cash fee of 13% and issued a warrant equal to 10% of the number of units purchased by certain investors to Neidiger, Tucker, Bruner, Inc., as

co-placement agents.

Unless otherwise disclosed above, the offerings of the securities above were exempt from registration under Section 4(2) of the Securities Act, and Regulation D promulgated thereunder. In each instance, we had a reasonable belief that, among other things, the purchasers had access to information concerning our operations and financial condition, that the purchasers acquired the securities for their own account and not with a view to the distribution thereof, and that each purchaser was an "accredited investor" as such term is defined in Regulation D promulgated under the Securities Act. In addition, there was no general solicitation or general advertising related to any of such offerings.

Other than as disclosed above, we did not employ any underwriters, placement agents, brokers, finders or financial advisors in connection with any of the transactions set forth above.

Item 16. Exhibits and Financial Statement Schedules

(a) Exhibits

The exhibits set forth commencing on page II-8 are incorporated herein by reference.

(b) Financial Statement Schedules

All schedules have been omitted because the information required to be presented in them is not applicable or is shown in the financial statements or related notes.

Item 17. Undertakings

(a) 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:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

(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 Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(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 of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(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.

(b) Insofar as indemnification for liabilities arising under the Securities Act of 1933 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 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 Act and will be governed by the final adjudication of such issue.

(c) The undersigned registrant hereby undertakes that:

(1) That for purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this Registration Statement as of the time it was declared effective.

(2) That for the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this post-effective amendment to the registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Mission Viejo, California, on the 30th day of May, 2014.

AEOLUS PHARMACEUTICALS, INC.

By: /s/ John McManus
John McManus
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement on Form S-1 has been signed below by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ John L. McManus John L. McManus	President and Chief Executive Officer (principal executive officer)	June 2, 2014
/s/ David C. Cavalier David C. Cavalier	Chief Financial Officer and Director (Chairman)	June 2, 2014
* John M. Farah, Jr., Ph.D.	Director	June 2, 2014
John M. Clerici	Director	June 2, 2014
* Amit Kumar, Ph.D.	Director	June 2, 2014
Mitchell D. Kaye, J.D.	Director	June 2, 2014
* Chris A. Rallis	Director	June 2, 2014
Jeffrey A. Scott, M.D.	Director	June 2, 2014
*By: /s/ John L. McManus John L. McManus,		June 2, 2014

Attorney-in-Fact

EXHIBIT INDEX

		Incorporated by Reference To			
Exhibit Number	Description of Document	Registrant's Form	Date Filed with the SEC	Exhibit Number	Filed Herewith
2.1	Agreement and Plan of Merger and Reorganization dated September 16, 2003 between Incara, Inc. and Incara Pharmaceuticals Corporation	S-4	09/19/03	2.1	
	Amended and Restated Certificate of Incorporation	10-K	12/31/12	3.1	
	Form of Common Stock Certificate	10-Q	08/11/04	4.1	
	Form of Series B Preferred Stock Certificate	S-4	09/19/03	4.8	
	Form of Warrant to Purchase Common Stock dated June 5, 2006.	8-K	06/06/06	10.3	
	Registration Rights Agreement dated May 22, 2007 by and among the Company and each of the Purchasers whose names appear on the Schedule attached thereto.	8-K	5/23/07	4.1	
	Registration Rights Agreement dated October 6, 2009 by and among the Company and the investors whose names appear on the signature pages thereof.	8-K	10/06/09	4.1	
	Form of Warrant to Purchase Common Stock dated May 22, 2007.	8-K	5/23/07	10.2	
	Form of Warrant to Purchase Common Stock	8-K	10/06/09	10.2	
	Registration Rights Agreement dated September 16, 2003 among Incara Pharmaceuticals Corporation, Incara, Inc.	S-4	09/19/03	10.101	

		and Goodnow Capital, L.L.C.			
		Registration Rights Agreement dated August 11, 2010 by and among Aeolus Pharmaceuticals, Inc. and the investors listed therein	8-K	8/12/10	4.1
4.10		Registration Rights Agreement dated March 4, 2013 by and among Aeolus Pharmaceuticals, Inc. and the investors listed therein	8-K	03/06/13	10.2
4.11		Form of Warrant to Purchase Common Stock dated March 4, 2013.	8-K	03/06/13	10.3
4.12		Warrant Repricing, Exercise and Lockup Agreement dated February 19, 2013 by and among the Company, Xmark JV Investment Partners, LLC and affiliates	8-K	02/19/13	10.4
		Opinion of K&L Gates LLP	S-1	5/16/13	5.1
	*	License Agreement between Duke University and Aeolus Pharmaceuticals, Inc., dated July 21, 1995	S-1	12/08/95	10.4
		Amended and Restated Limited Liability Company Agreement of CPEC LLC dated July 15, 1999, among CPEC LLC, Intercardia, Inc. and Interneuron Pharmaceuticals, Inc.	8-K	07/23/99	10.42
		Assignment, Assumption and License Agreement dated July 15, 1999, between CPEC LLC and Intercardia, Inc.	8-K	07/23/99	10.43
	*	License Agreement dated January 19, 2001 between Incara Pharmaceuticals Corporation and Incara	10-Q	02/13/01	10.59

	Development, Ltd.			
	License Agreement dated January 19, 2001 between Elan Corporation, plc, Elan Pharma International Ltd. and Incara Development,	10-Q	02/13/01	
*	Ltd.			10.60

Exhibit Number	Description of Document	Incorporated by Reference To Registrant's Form	Date Filed with the SEC	Exhibit Number	Filed Herewith
	Registration Rights Agreement dated December 21, 2000 among Incara Pharmaceuticals Corporation, Elan International Services, Ltd. and Elan Pharma International Ltd.	10-Q	02/13/01	10.62	
	Agreement and Amendment, effective as of January 22, 2001, by and among Incara Pharmaceuticals Corporation, Elan International Services, Ltd. and Elan Pharma International Limited	10-Q	05/14/01	10.64	
	Second Agreement and Amendment, effective as of January 22, 2001, by and among Incara Pharmaceuticals Corporation, Elan International Services, Ltd. and Elan Pharma International Limited	10-Q	05/14/01	10.65	
10.9	Third Agreement and Amendment, effective as of January 22, 2001, by and among Incara Pharmaceuticals Corporation, Elan International Services, Ltd. and Elan Pharma International Limited	8-K	06/01/01	10.66	
	Agreement and Fourth Amendment, effective February 13, 2002, by and among Incara Pharmaceuticals Corporation, Elan International Services, Ltd., Elan Pharma International Limited and	10-Q	02/14/02	10.75	

	Elan Pharmaceutical Investments III, Ltd.			
	License Agreement dated June 25, 1998 between Duke University and Aeolus Pharmaceuticals, Inc.	10-Q	05/15/02	10.82
	License Agreement dated May 7, 2002 between Duke University and Aeolus Pharmaceuticals, Inc.	10-Q	05/15/02	10.83
	License Agreement dated November 17, 2000 between National Jewish Medical and Research Center and Aeolus Pharmaceuticals, Inc.	10-Q	02/13/01	10.56
	Exclusive License Agreement, dated January 15, 2009, by and between the Company and National Jewish Health	10-Q	05/16/11	10.7
	Securities Purchase Agreement dated as of May 15, 2002, among Incara Pharmaceuticals Corporation, Aeolus Pharmaceuticals, Inc., Elan Pharma International Limited and Elan International Services, Ltd.	8-K/A	07/03/02	10.84
	Development and Option Agreement dated May 15, 2002, among Elan Pharma International Limited, Incara Pharmaceuticals Corporation and Aeolus Pharmaceuticals, Inc.	8-K/A	07/03/02	10.85
	Amended and Restated Registration Rights Agreement dated as of May 15, 2002, among Incara Pharmaceuticals Corporation, Elan International Services, Ltd. and Elan Pharma International Limited	8-K/A	07/03/02	10.86
	Amendment No. 1 to License Agreement dated	8-K/A	07/03/02	10.87

	May 14, 2002, between Aeolus Pharmaceuticals, Inc. and Duke University (amending License Agreement dated July 21, 1995)	

Exhibit Number	Description of Document	Incorporated by Reference To Registrant's Form	Date Filed with the SEC	Exhibit Number	Filed Herewith
	Amendment No. 1 to License Agreement dated May 14, 2002, between Aeolus Pharmaceuticals, Inc. and Duke University (amending License Agreement dated June 25, 1998)	8-K/A	07/03/02	10.88	
	Amendment No. 1 to License Agreement dated May 14, 2002, between Aeolus Pharmaceuticals, Inc. and National Jewish Medical and Research Center (amending License Agreement dated November 17, 2000)	8-K/A	07/03/02	10.89	
	Subaward Agreement, dated March 16, 2011, by and between the Company and the Office of Research and Development of the University of Maryland, Baltimore	10-Q	05/16/11	10.4	
	Letter dated May 17, 2004 from Elan International Services, Limited and Elan Pharma International Limited to Incara Pharmaceuticals Corporation	10-Q	08/11/04	10.106	
	Aeolus Pharmaceuticals, Inc. 1994 Stock Option Plan, as amended	10-Q	08/11/04	10.109	
	Aeolus Pharmaceuticals, Inc. Amended and Restated 2004 Stock Incentive Plan	S-8	04/28/11	99.1	
10.25+	Amended and Restated Employment Agreement dated March 4, 2013 between Aeolus Pharmaceuticals, Inc. and John L. McManus	8-K	03/04/12	10.1	

10.26+	Letter Agreement dated July 10, 2006 between Aeolus Pharmaceuticals, Inc. and McManus & Company, Inc.	8-K	07/10/06	10.2
	Form of Indemnity Agreement	10-K	12/27/11	10.27
	Terms of Outside Director Compensation	10-K	12/17/04	10.114
	Form of Incentive Stock Option Agreement	10-Q	02/08/05	10.115
	Form of Nonqualified Stock Option Agreement	10-Q	02/08/05	10.116
	Subscription Agreement dated June 5, 2006 by and between the Company and the investors whose names appear on the signature pages thereof.	8-K	06/06/06	10.1
	Board Observer Letter dated June 5, 2006 by and among the Company and Efficacy Biotech Master Fund Ltd.	8-K	06/06/06	10.6
	Consulting Agreement, dated December 1, 2010, between Aeolus Pharmaceuticals, Inc. and Brian J. Day	8-K	12/03/10	10.1
	Sponsored Research Agreement (Non-Clinical), dated April 12, 2011, by and between the Company and Duke University	10-Q	05/16/11	10.5
	Securities Purchase Agreement dated August 11, 2010 by and among Aeolus Pharmaceuticals, Inc. and the investors listed therein	8-K	8/12/10	10.1
	Form of Warrant pursuant to Securities Purchase Agreement dated August 11, 2010 by and among Aeolus Pharmaceuticals, Inc. and the investors listed therein	8-K	8/12/10	10.2
	Convertible Promissory Note dated February 7, 2007 issued by Aeolus Pharmaceuticals, Inc. to Elan Pharma International Ltd.	S-1	06/04/07	10.43
	Amendment No. 1 To Convertible Promissory Note dated February 7, 2009 by and between Aeolus	8-K	3/16/09	10.1

	Pharmaceuticals, Inc. and Elan Pharma International Limited			
10.39+	Form of Restricted Share Award Agreement	S-18PO	3/31/08	99.2

Exhibit Number	Description of Document	Incorporated by Reference To Registrant's Form	Date Filed with the SEC	Exhibit Number	Filed Herewith
	Securities Purchase and Exchange Agreement dated October 6, 2009 by and among the Company and the investors whose names appear on the signature pages thereof	8-K	10/06/09	10.1	
	Amendment Agreement to the Securities Purchase and Exchange Agreement, dated December 24, 2009, by and among the Company and the investors whose names appear on the signature pages thereof	8-K	12/28/09	10.1	
	Offer Letter, dated September 1, 2010 between the Company and Russell Skibsted	8-K	02/16/11	10.1	
	Contract No. HHSO100201100007C, dated February 11, 2011, by and between the Company and the U.S. Department of Health and Human Services Biomedical Advanced Research and Development Authority	10-Q	05/16/11	10.1	
10.44*	Research and Manufacturing Agreement, dated February 18, 2011 (the "JMPS Agreement"), by and between the Company and Johnson Matthey Pharmaceutical Materials, Inc. (d/b/a Johnson Matthey Pharma Services).	10-Q	05/16/11	10.2	
	Appendix 2 to the JMPS Agreement, dated February 18, 2011	10-Q	8/14/12	10.4	
10.46*	Appendix 3 to the JMPS Agreement, dated April 30, 2012	10-Q	8/14/12	10.5	
	Appendix 4 to the JMPS Agreement, dated April 30, 2012	10-Q	8/14/12	10.6	

	Appendix 5 to the JMPS Agreement, dated April 30, 2012	10-Q	8/14/12	10.7	
	Appendix 6 to the JMPS Agreement, dated April 30, 2012	10-Q	8/14/12	10.8	
	General Management Consulting Assignment, dated February 23, 2011, by and between the Company and Booz Allen Hamilton Inc.	10-Q	5/16/11	10.3	
	Form of Securities Purchase Agreement by and among the Company and the investors whose names appear on the signature pages thereof	8-K	4/5/12	10.1	
	Form of Registration Rights Agreement by and among the Company and the investors party thereto	8-K	4/5/12	10.2	
	Form of Warrant issued to investors in March and April 2012	8-K	4/5/12	10.3	
	Form of Securities Purchase Agreement by and among the Company and the investors whose names appear on the signature pages thereof	8-K	2/19/13	10.1	
	Form of Registration Rights Agreement by and among the Company and the investors party thereto	8-K	2/19/13	10.2	
	Form of Warrant issued to investors in February 2013	8-K	2/19/13	10.3	
	Form of Securities Purchase Agreement by and among the Company and the investors whose names appear on the signature pages thereof	8-K	3/4/13	10.1	
	Form of Registration Rights Agreement by and among the Company and the investors party thereto	8-K	3/4/13	10.2	
	Form of Warrant issued to investors in March 2013	8-K	3/4/13	10.3	
	List of Subsidiaries	10-K	12/31/12	21.1	
23.1	Consent of Grant Thornton LLP, Independent Registered Public Accounting Firm				X

Exhibit Number	Description of Document	Incorporated by Reference To Registrant's Form	Date Filed with the SEC	Exhibit Number	Filed Herewith
23.2	Consent of K&L Gates LLP (previously included in its opinion filed as Exhibit 5.1)	S-1	5/14/12	23.2	
24.1	Power of Attorney (previously filed with Signature Page)	S-1	5/16/14	P.II-7	
101.INS	XBRL Instance Document				X
101.SCH	XBRL Taxonomy Extension Schema Document				X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document				X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document				X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document				X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document				X

* The Company has received confidential treatment of certain portions of this agreement which have been omitted and filed separately with the U.S. Securities and Exchange Commission.

+ Indicates management contract or compensatory plan or arrangement.

†† Represents documents formatted in XBRL (Extensible Business Reporting Language). Users of this data are advised that, pursuant to Rule 406T of Regulation S-T, the interactive data file is deemed not filed or part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act of 1933, as amended, is deemed not filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is otherwise not subject to liability under these sections.