

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

FORM 10-K

(Mark One)

Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the fiscal year ended December 31, 2016

Transition Report under Section 13 or 15(d) of the Securities Exchange Act of 1934

For the transition period from to

Commission File Number: 001-32587

PHARMATHENE, INC.

(Exact name of registrant as specified in its charter)

Delaware

20-2726770

(State or other jurisdiction of incorporation or organization)

(I.R.S. Employer Identification No.)

One Park Place, Suite 450, Annapolis, MD

21401

(Address of principal executive offices)

(Zip Code)

Registrant's telephone number, including area code: (410) 269-2600

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

Title of Each Class:

Name of Each Exchange on Which Registered:

Common Stock, par value \$0.0001 per share

NYSE MKT

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act.

Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data file required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large Accelerated Filer

Accelerated Filer

Non-Accelerated Filer

Smaller Reporting Company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes No

The aggregate market value of voting and non-voting common equity held by non-affiliates of the registrant was approximately \$133.9 million based upon the closing price of the common equity on the NYSE MKT on the last business day of the registrant's most recently completed second fiscal quarter (June 30, 2016). In determining this amount, the registrant has assumed solely for this purpose that all of its directors, executive officers and persons beneficially owning 10% or more of the outstanding shares of common stock of the registrant may be considered to be affiliates. This assumption shall not be deemed conclusive as to affiliate status for this or any other purpose.

The number of shares of the registrant's Common Stock, par value \$0.0001 per share, outstanding as of March 6, 2017 was 68,815,195.

PHARMATHENE, INC.

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With respect to this discussion, the terms “we,” “us,” “our,” “PharmAthene” and the “Company” refer to PharmAthene, Inc., a Delaware corporation and its wholly owned subsidiaries.

Special Note Regarding Forward-Looking Statements.

This annual report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. This information may involve known and unknown risks, uncertainties and other factors that are difficult to predict and may cause our actual results, performance or achievements to be materially different from future results, performance or achievements expressed or implied by any forward-looking statements. These risks, uncertainties and other factors include, but are not limited to, risks associated with the following:

- the reliability of the results of the studies relating to human safety and possible adverse effects resulting from the administration of our product candidates,
- funding delays, reductions in or elimination of U.S. Government funding and/or non-renewal of expiring funding under our September 2014 contract with the National Institutes of Allergy and Infectious Diseases, or NIAID,
- our ability to satisfy certain technical milestones under our September 2014 contract with NIAID that would entitle us to receive additional funding over the period of the agreement,
- the preservation of our net operating loss carryforwards, or NOLs,
- delays caused by third parties challenging government contracts awarded to us,
- unforeseen safety and efficacy issues,
- accomplishing any future strategic partnerships or business combinations,
- our ability to continue to satisfy the listing requirements of the NYSE MKT,

as well as risks detailed under the caption “Risk Factors” in this annual report on Form 10-K and in our other reports filed with the U.S. Securities and Exchange Commission, or the SEC, from time to time hereafter.

Forward-looking statements describe management’s current expectations regarding our future plans, strategies and objectives and are generally identifiable by use of the words “may,” “will,” “should,” “could,” “expect,” “anticipate,” “estimate,” “believe,” “intend,” “project,” “potential” or “plan” or the negative of these words or other variations on these words or comparable terminology. Such statements include, but are not limited to, statements relating to:

- potential payments under government contracts or grants,
- potential future government contracts or grant awards,
- potential regulatory approvals,
- potential consummation of future strategic partnerships or business combinations,
- future product advancements, and
- anticipated financial or operational results.

Forward-looking statements are based on assumptions that may be incorrect, and we cannot assure you that the projections included in the forward-looking statements will come to pass.

We have based the forward-looking statements included in this annual report on Form 10-K on information available to us on the date of this annual report, and we assume no obligation to update any such forward-looking statements, other than as required by law. Although we undertake no obligation to revise or update any forward-looking statements, whether as a result of new information, future events or otherwise, you are advised to consult any additional disclosures that we may make directly to you or through reports that we, in the future, may file with the SEC, including annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K. For any risks associated with our proposed Mergers (as defined below) with Altimmune, Registration Statement on Form S-4 (File No. 333-215891) filed with the SEC on February 3, 2017, as the same may be amended from time to time.

All forward-looking statements included herein are expressly qualified in their entirety by the cautionary statements contained or referred to elsewhere in this annual report. Unless otherwise indicated, the information in this annual report is as of December 31, 2016.

PART I

Item 1. Business.

Overview

We are a biodefense company engaged in developing a next generation anthrax vaccines. These next generation vaccines are intended to have more rapid time to protection, fewer doses for protection and less stringent requirements for temperature controlled storage and handling than the currently used vaccine.

On September 9, 2014, we signed a contract with the National Institutes of Allergy and Infectious Diseases (“NIAID”) for the development of a next generation lyophilized anthrax vaccine (“SparVax-L”) based on the Company’s proprietary technology platform which contributes the recombinant protective antigen (“rPA”) bulk drug substance that is used in the liquid SparVax[®] formulation. The contract is incrementally funded. Over the base period of the contract, we were awarded initial funding of approximately \$5.2 million, which includes a cost reimbursement component and a fixed fee component payable upon achievement of certain milestones. NIAID has exercised four options under this agreement to provide additional funding of approximately \$8.8 million and an extension of the period of performance through December 31, 2017. The contract has a total value of up to approximately \$28.1 million, if all technical milestones are met and all eight contract options are exercised by NIAID. If NIAID exercises all options, the contract would last approximately five years. If NIAID does not exercise any additional options, the contract would expire by its terms on December 31, 2017.

Since 2006, we have been engaged in legal proceedings with SIGA Technologies, Inc. (“SIGA”). On December 23, 2015, the Delaware Supreme Court affirmed the Delaware Court of Chancery’s judgment against SIGA. On November 16, 2016, the Company received a final payment from SIGA which fully satisfied the judgment owed to PharmAthene. In total, the Company received payment of approximately \$217.1 million (including interest) from SIGA.

On November 17, 2016, PharmAthene declared a special one-time cash dividend of \$2.91 per share of common stock, paid on February 3, 2017. PharmAthene funded the one-time special dividend with approximately 98% of the after tax net cash proceeds that PharmAthene received from SIGA in satisfaction of the judgment owed to PharmAthene. On February 3, 2017, PharmAthene paid the one-time dividend in an aggregate amount of \$200.3 million.

The receipt of the award from SIGA generated substantial taxable income to the Company, a portion of which was offset by the Company’s tax net operating loss carryforwards (“NOLs”). At December 31, 2016, we had available \$176.1 million in accumulated domestic losses available to offset income, subject to limitations imposed by the Internal Revenue Code of 1986 (the “Code”) and a 382 limitation of approximately \$1 million, of which approximately \$175 million was utilized to offset current year income. On November 25, 2015, the Company had adopted a Shareholders Rights Plan to help ensure that the NOLs remained available to help maximize the value for our shareholders of any amount received from the SIGA litigation.

On January 18, 2017, PharmAthene entered into an Agreement and Plan of Merger and Reorganization (as amended from time to time, the “Merger Agreement”), pursuant to which Altimune, Inc. (“Altimune”) will merge into Mustang Merger Sub Corp I Inc., a Delaware corporation and a direct wholly owned subsidiary of PharmAthene (“Merger Sub Corp”), with Altimune as the surviving entity in such merger (“Merger 1”), and immediately thereafter, Altimune will be merged with and into Mustang Merger Sub II LLC, a Delaware limited liability company and a direct wholly owned subsidiary of PharmAthene (“Merger Sub LLC”), with Merger Sub LLC as the surviving entity in such merger (“Merger 2”, and together with Merger 1, the “Mergers”). Upon consummation of the Mergers, Merger Sub Corp and Altimune will cease to exist, and Merger Sub LLC will continue as a direct wholly owned subsidiary of PharmAthene. Upon completion of the Mergers, former PharmAthene security holders will own approximately 41.8% of the outstanding equity of the combined company, and former Altimune security holders will own approximately 58.2% of the outstanding equity of the combined company, in each case, on an as converted and fully diluted basis. Following the anticipated consummation of the Mergers, PharmAthene would change its name to “Altimune, Inc.”.

Altimune is a privately-held immunotherapeutics company targeting infectious diseases. The combined company will be a fully-integrated and diversified immunotherapeutics company with one preclinical stage and four clinical stage programs.

Special Dividend

On November 17, 2016, the Company’s Board of Directors declared a special one-time cash dividend of \$2.91 per share of common stock, paid on February 3, 2017.

The special dividend, totaling an aggregate payment of approximately \$200 million, represented approximately 98% of the after tax net cash proceeds received from SIGA. In total, PharmAthene received payment of approximately \$217.1 million (including interest) from SIGA in connection with the judgment.

Merger Agreement

On January 18, 2017, PharmAthene entered into the Merger Agreement, pursuant to which Altimune will merge into Merger Sub Corp, with Altimune as the surviving entity in Merger 1, and immediately thereafter, Altimune will be merged with and into Merger Sub LLC, with Merger Sub LLC as the surviving entity in Merger 2. Upon consummation of the Mergers, Merger Sub Corp and Altimune will cease to exist, and Merger Sub LLC will continue as a direct wholly owned subsidiary of PharmAthene. Upon completion of the Mergers, former PharmAthene security holders will own approximately 41.8% of the outstanding equity of the combined company, and former Altimune security holders will own approximately 58.2% of the outstanding equity of the combined company, in each case, on an as converted and fully diluted basis. Following the anticipated consummation of the Mergers, PharmAthene would change its name to “Altimune, Inc.”.

Proposed Mergers

The Mergers were unanimously approved by the respective Boards of Directors of PharmAthene and Altimune, but remain subject to the approval of PharmAthene and Altimune stockholders, and the satisfaction of other closing conditions. For the Mergers to be completed: (i) stockholders of Altimune must have approved and adopted the Merger Agreement and the Mergers; (ii) stockholders of PharmAthene must have approved and adopted the Merger Agreement, the Mergers, issuance of PharmAthene common stock in the Mergers and an amendment to PharmAthene’s certificate of incorporation to effect a reverse stock split; (iii) \$3.5 million of capital committed to Altimune must have been received by Altimune in connection with the Altimune Private Placement; (iv) the total amount of indebtedness and certain outstanding specified liabilities of Altimune as of the effective time of the Mergers, must not exceed \$2.5 million and all excess indebtedness and liabilities of Altimune must have been repaid, settled or otherwise extinguished; (v) PharmAthene and Altimune must have agreed in good faith on a final flu clinical development plan in accordance with the terms of the Merger Agreement; (vi) the net cash of PharmAthene must not be less than \$10.25 million; (vii) the shares of PharmAthene common stock to be issued in the Mergers must be approved for listing on the NYSE MKT LLC (“NYSE MKT”), subject to official notice of issuance; and (viii) other customary closing conditions must be satisfied.

The combined company, which will operate as a public company under the name "Altimmune, Inc.", is expected to trade on the NYSE MKT under the ticker symbol "ALT".

William Enright, Chief Executive Officer of Altimmune, Elizabeth Czerepak, Chief Financial Officer and Executive Vice President of Corporate Development of Altimmune, M. Scot Roberts, Ph.D., Chief Scientific Officer of Altimmune, and Sybil Tasker, M.D., M.P.H., Senior Vice President of Clinical Research and Development of Altimmune, will serve in their respective positions for the combined company following the consummation of the Mergers. The combined company's Board of Directors following consummation of the Mergers will be initially comprised of three former PharmAthene directors and four former Altimmune directors. The combined company's headquarters will be located in Gaithersburg, MD. At closing the combined company is expected to have approximately \$20 million in cash and cash commitments.

The combined company's clinical stage product candidates following the Mergers will include:

- NasoVAX: an intranasal, single dose, state-of-the-art recombinant influenza vaccine that in preclinical studies demonstrated early universal activity. Phase 2 is expected to commence during mid-2017 with initial data expected in the fourth quarter of 2017.
- HepTcell: a first-in-class immunotherapeutics for chronic hepatitis B with the potential to offer a functional cure. Phase 1 is ongoing with data expected in the fourth quarter of 2017.
- SparVax-L: a next generation lyophilized anthrax vaccine currently NIAID funded that may be stored at room temperature and provides extended shelf life. Depending on the requirements for future U.S. Government funding, a Phase 2 bridging study or non-human primate challenge study is anticipated to begin during the second half of 2017 with data anticipated during 2018.
- NasoShield: an intranasal, single dose, first-in-class anthrax vaccine currently funded by the Biomedical Advanced Research and Development Authority ("BARDA") that based on preclinical studies may offer protection within a few weeks of administration. A Phase 1 trial is expected to begin during the second half of 2017 with data anticipated during the first half of 2018.

In addition to the clinical stage product candidates, the combined company will have one preclinical program, Oncosyn, driven by Altimmune's proprietary Synigen synthetic peptide technology investigating the utility of this platform in immuno-oncology indications.

Anthrax Vaccine Program Product Candidates

On September 9, 2014, we signed a contract with NIAID that funds the preclinical development SparVax-L. Data generated to date demonstrates that our rPA can be stably formulated in a lyophilized state for room temperature storage. The next phase of the program is a demonstration of the final form of the vaccine in a single unit, dual-chambered syringe designed for simpler storage and ease of use. All of the necessary components of the vaccine will be contained in a single logistics transport and storage will be greatly improved. Animal efficacy studies were initiated in the second quarter of 2016 and the preliminary data from this study indicates that the vaccine is efficacious even when stored at room temperature. Additional non-clinical toxicology studies are currently being performed to support a filing with the U.S. Food and Drug Administration ("FDA") to update the SparVax[®] Investigational New Drug Application ("IND") to allow for the commencement of a subsequent clinical trial.

On July 6, 2015, we signed a license agreement with ImmunoVaccine Technologies ("IMV") for the exclusive use of the DepoVax[™] vaccine platform ("DPX"), to develop an anthrax vaccine utilizing PharmAthene's rPA. On June 23, 2016, we terminated this license agreement.

On August 5, 2016 the Company filed a formal protest against the Department of Health and Human Services ("DHHS") challenging its solicitation for a next generation anthrax vaccine provider. According to the protest, filed with the U.S. Government Accountability Office (the "GAO"), the government's Request for Proposals was written in a way that eliminated competition. The Company spent approximately \$1 million in related proposal, legal and professional consulting services. After further discussions with DHHS, the Company agreed to withdraw the protest on August 25, 2016 when BARDA agreed to participate in conversations with NIAID and the Company on mechanisms to advance the SparVax-L vaccine program. The stability and efficacy data developed under the NIAID contract were presented as part of the annual review meeting under the NIAID contract in November 2016 and discussions were held on the path forward for the SparVax-L vaccine program.

Stockholder Rights Plan to Preserve Value of Net Operating Loss Carryforwards

On November 25, 2015, the Company's Board of Directors adopted a stockholder rights plan ("Rights Plan") in an effort to preserve the value of its NOLs under Section 382 of the Code. The description and terms of the rights are set forth in a Section 382 Rights Agreement, dated as of November 25, 2015 (the "Section 382 Rights Agreement"), by and between the Company and Continental Stock Transfer & Trust Company, as Rights Agent. The Company's Board of Directors has terminated this plan.

SIGA Litigation

In December 2006, we filed a complaint against SIGA in the Delaware Court of Chancery. The complaint alleged, among other things, that we have the right to license exclusively the development and marketing rights for SIGA's drug candidate, Tecovirimat, also known as ST-246[®], pursuant to a merger agreement between the parties that was terminated in 2006. The complaint also alleged that SIGA failed to negotiate in good faith the terms of such a license pursuant to the terminated merger agreement with us.

In September 2014, SIGA filed a voluntary petition for relief under Chapter 11 of the United States Bankruptcy Code in the U.S. Bankruptcy Court for the Southern District of New York (the "Bankruptcy Court"). SIGA's petition for bankruptcy initiated a process whereby its assets were protected from creditors, including PharmAthene.

In January 2015, after years of litigation, the Delaware Court of Chancery issued a Final Order and Judgment, finding that we were entitled to receive a lump sum award of \$194.6 million, plus additional interest.

On December 23, 2015, the Delaware Supreme Court affirmed the Delaware Court of Chancery's decision as a result of which, with additional post-judgment interest, if calculated based on the original decision, would provide for an estimated total award in excess of \$205 million.

On November 16, 2016, the Company received a final payment from SIGA of \$83.9 million which fully satisfied the judgment owed to PharmAthene. We received approximately \$217.1 million from SIGA during the year ended December 31, 2016, including additional amounts calculated as interest by SIGA.

Corporate Information

We have been engaged in the biodefense business through our predecessor entity since our inception in 2001. Our subsidiary PharmAthene Canada, Inc. was operated in support of the Protexia[®] contract with the U.S. Army Space and Missile Command issued to develop a nerve agent countermeasure. In July 2012, we substantially liquidated our Canadian subsidiary, which we acquired in 2005. All assets in Canada have been disposed of. In March 2008, PharmAthene, Inc., through its wholly owned subsidiary PharmAthene UK Limited, acquired from Avecia Biologics Limited the rights to develop SparVax[®]. In 2009, the contract was novated from PharmAthene UK Limited to PharmAthene, Inc. In June 2015, we substantially liquidated PharmAthene UK Limited.

We are a Delaware corporation with executive offices located at One Park Place, Suite 450, Annapolis, Maryland 21401 and our telephone number is 410-269-2600. Our common stock trades on the NYSE MKT (formerly NYSE Amex) under the symbol "PIP." We maintain a website at <http://www.PharmAthene.com>. The information contained on or connected to our website is expressly not incorporated by reference into this annual report. We make available for download free of charge through the investor relations section of our website this annual report on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after we have electronically filed, or furnished, them to the SEC.

U.S. Government Regulation of Biological Products

General

Regulation by governmental authorities in the United States and other countries will have a significant impact on our research, product development, manufacturing and marketing of any biopharmaceutical products. The nature and the extent to which regulations apply to us will vary depending on the nature of any such products. Our potential biopharmaceutical products will require regulatory approval by governmental agencies prior to commercialization. The products we are developing are subject to federal regulation in the United States, principally by the FDA under the Public Health Service Act and Federal Food, Drug, and Cosmetic Act, or FDCA, and by state and local governments, as well as regulatory and other authorities in foreign governments that include rigorous preclinical and clinical testing and other approval procedures. Such regulations govern or influence, among other things, the research, development, testing, manufacture, safety and efficacy requirements, labeling, storage, recordkeeping, licensing, advertising, promotion, distribution and export of products, manufacturing and the manufacturing process. In many foreign countries, such regulations also govern the prices charged for products under their respective national social security systems and availability to consumers.

The Public Health Service Act classifies our current drug candidates which are produced using biological systems, as biological drug products, or Biologics. All drugs intended for human use, including Biologics, are subject to rigorous regulation by the FDA in the United States and similar regulatory bodies in other countries. The steps ordinarily required by the FDA before a biological drug product may be marketed in the United States are similar to steps required in most other countries and include, but are not limited to:

- completion of preclinical laboratory tests, preclinical animal testing and formulation studies;
- submission to the FDA of an IND, which must be in effect before clinical trials may commence;
- submission to the FDA of a Biologics License Application (“BLA”) that includes preclinical data, clinical trial data, product composition and formulation information, and manufacturing information;
- FDA review of the BLA;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facilities; and
- FDA approval of the BLA, including approval of all product labeling.

The research, development and approval process requires substantial time, effort and financial resources, and approvals may not be granted on a timely or commercially viable basis, if at all.

Preclinical testing includes laboratory evaluations to characterize the product’s composition, impurities, stability, and mechanism of its biologic effect, as well as animal studies to assess the potential safety, purity and potency of each product. Preclinical safety tests must be conducted by laboratories that comply with FDA regulations regarding Good Laboratory Practices, or GLP, and the U.S. Department of Agriculture’s Animal Welfare Act. Violations of these laws and regulations can, in some cases, lead to invalidation of the tests, requiring such tests to be repeated and delaying approval of the BLA. The results of the preclinical tests, together with manufacturing information and analytical data, are submitted to the FDA as part of an IND and are reviewed by the FDA before the commencement of human clinical trials. Unless the FDA objects to an IND by placing the study on clinical hold, the IND will go into effect 30 days following its receipt by the FDA. The FDA may authorize trials only on specified terms and may suspend clinical trials at any time on various grounds, including a finding that patients are being exposed to unacceptable health risks. If the FDA places a study on clinical hold, the sponsor must resolve all of the FDA’s concerns and have the FDA lift the clinical hold, before the study may proceed. The IND application process may become extremely costly and substantially delay development of products. Similar restrictive requirements also apply in other countries. Additionally, positive results of preclinical tests will not necessarily indicate positive results in clinical trials.

Clinical trials involve the administration of the investigational product to humans under the supervision of qualified principal investigators. Our clinical trials must be conducted in accordance with Good Clinical Practice, or GCP, regulations under protocols submitted to the FDA as part of an IND. In addition, each clinical trial must be approved and conducted under the auspices of an institutional review board, or IRB, and requires the patients’ informed consent. The IRB considers, among other things, ethical factors, the safety of human subjects, and the possibility of liability of the institutions conducting the trial. The IRB at each institution at which a clinical trial is being performed may suspend a clinical trial at any time for a variety of reasons, including a belief that the test subjects are being exposed to an unacceptable health risk. Since our products are being developed using funding from the U.S. Government, additional review by either the NIH’s IRB or the DOD’s IRB-equivalent may also be required. These reviews take place following approval by the independent IRB. As the sponsor, we can also suspend or terminate a clinical trial at any time.

Clinical trials are typically conducted in three sequential phases; phases 1, 2, and 3, involving an increasing number of human subjects. These phases may sometimes overlap or be combined. Phase 1 trials are performed in a small number of healthy human subjects or subjects with the targeted condition, and involve testing for safety, dosage tolerance, absorption, distribution, metabolism and excretion or immunogenicity for vaccine products. Phase 2 studies, which may involve up to hundreds of subjects, seek to identify possible adverse effects and safety risks, preliminary information related to the efficacy of the product for specific targeted diseases, dosage tolerance, and optimal dosage. Finally, Phase 3 trials may involve up to thousands of individuals often at geographically dispersed clinical trial sites, and are intended to provide the documentation of effectiveness and important additional safety data required for licensing. Prior to commencing Phase 3 clinical trials many sponsors elect to meet with FDA officials to discuss the conduct and design of the proposed trial or trials.

In addition, federal law requires the listing, on a publicly-available website, of detailed information on clinical trials for investigational drugs. Some states have similar or supplemental clinical trial reporting laws.

In 2002, the FDA amended its requirements applicable to BLAs to permit the approval of certain Biologics that are intended to reduce or prevent serious or life-threatening conditions based on evidence of safety from trial in healthy subjects and effectiveness from appropriate animal studies when human efficacy studies are not ethical or feasible. These regulations, also known as the Animal Rule, and published in the Code of Federal Regulations (21 CFR 601 Subpart H), authorize the FDA to rely on evidence from animal studies to provide evidence of a product's effectiveness under circumstances where there is a reasonably well-understood mechanism for the toxicity of the agent. Under these requirements, and with FDA's prior agreement, Biologics used to reduce or prevent the toxicity of chemical, biological, radiological or nuclear substances may be approved for use in humans based on evidence of effectiveness derived from appropriate animal studies and any additional supporting data. Products evaluated for effectiveness under this rule are evaluated for safety under pre-existing requirements for establishing the safety of new drug and biological products, including Phase 1 through Phase 2 clinical trials. Under certain circumstances a single animal species may be acceptable if that animal model is sufficiently well-characterized for predicting a response in humans. The animal study endpoint must be clearly related to the desired benefit in humans and the information obtained from animal studies must allow for selection of an effective dose in humans. Products approved under the Animal Rule are subject to additional requirements including post-marketing study requirements, restrictions imposed on marketing and distribution and requirements to provide information to patients.

We will rely on the Animal Rule for our product candidates because we cannot ethically expose humans to anthrax. 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 in countries other than the United States.

Success in early-stage animal studies and clinical trials does not necessarily assure success in later-stage clinical trials. Data obtained from animal studies and clinical activities are not always conclusive and may be subject to alternative interpretations that could delay, limit or even prevent regulatory approval.

All data obtained from the preclinical studies and clinical trials, in addition to detailed information on the manufacture and composition of the product, would be submitted in a BLA to the FDA for review and approval for the manufacture, marketing and commercial shipments of any of our products. FDA approval of the BLA is required before commercial marketing or non-investigational interstate shipment may begin in the United States. The FDA may also conduct an audit of the clinical trial data used to support the BLA.

However, under Project BioShield, the Secretary of DHHS may, with the concurrence of the Secretary of the Department of Homeland Security and upon the approval of the President, contract to purchase unapproved countermeasures for the Strategic National Stockpile, or SNS, in specified circumstances under an Emergency Use Authorization ("EUA"). The U.S. 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 and acceptance of a substantial portion of the countermeasure. To be eligible for purchase under these provisions, the Secretary of DHHS 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. The legislation also allows unlicensed products to be procured for the SNS so that they are available at the time an emergency is declared.

Project BioShield also allows the Secretary of DHHS to authorize the emergency use of medical products that have not yet been approved by the FDA. To exercise this authority, the Secretary of DHHS 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 DHHS to circumvent the FDA approval process, its use would be limited to rare circumstances.

We believe our products would be eligible both for consideration for procurement into the SNS and for use in the event of an emergency, although there is no guarantee that our products would meet the criteria set forth by DHHS or the FDA for procurement and EUA, respectively.

With regard to a BLA, the FDA may deny or delay approval of an application that does not meet applicable regulatory criteria, e.g., if the FDA determines that the preclinical or clinical data or the manufacturing information does not adequately establish the safety, purity and potency (including efficacy) of the Biologic. The FDA has substantial discretion in the approval process and may disagree with an applicant's interpretation of the data submitted in its BLA. The FDA can request additional information, seek clarification regarding information already provided in the submission or ask that additional clinical trials be conducted, all of which can delay approval. The FDA also may, at any time, require the submission of product samples and testing protocols for lot-by-lot confirmatory review or testing, known as lot release, by the FDA prior to commercial distribution. This means a specific lot of Biologic cannot be released for commercial distribution until the FDA has authorized such release. Similar types of regulatory processes will be encountered as efforts are made to market any Biologic internationally. We will be required to assure product performance and manufacturing processes from one country to another.

If the FDA approves a product, it may limit the approved uses for the product as described in the product labeling, require that contraindications, warning statements or precautions be included in the product labeling, require that additional studies be conducted following approval as a condition of the approval, impose restrictions and conditions on product distribution, prescribing or dispensing in the form of a risk evaluation and mitigation strategy, or otherwise limit the scope of any approval or limit labeling. Once it approves a BLA, the FDA may revoke or suspend the product approval if compliance with post-market regulatory standards is not maintained or if problems occur after the product reaches the marketplace. In addition, the FDA may require post-marketing studies to monitor the effect of approved products, and may limit further marketing of the product based on the results of these post-market studies. The Animal Rule requires post-marketing studies, such as field studies, to verify and describe the product's clinical benefit and assess its safety should an exigency exist that leads to the product being used in humans; the nature of these studies will be discussed with FDA as part of the BLA process. The FDA has broad post-market regulatory and enforcement powers, including the ability to levy civil and criminal penalties, suspend or delay issuance of approvals, seize or recall products and revoke approvals.

Biologics manufacturers, distributors and their subcontractors are required to register their facilities with the FDA and state agencies and are subject to periodic inspections, or inspections "for cause" by the FDA and other authorities, where applicable, and must comply with the FDA's current Good Manufacturing Practices, or cGMP, regulations, the FDA's general biological product standards, and the product establishment standards set forth in the approved BLA. The cGMP requirements for biological products in particular are extensive and compliance with them requires considerable time, resources and ongoing investment. The regulations require manufacturers to establish validated systems to ensure that products meet high standards of sterility, purity and potency. The requirements apply to all stages of the manufacturing process, including the synthesis, processing, sterilization, packaging, labeling, storage and shipment of the biological product. For all drugs and biological products, the regulations require investigation and correction of any deviations from cGMP requirements and impose documentation requirements upon us and any third party manufacturers that it may decide to use. Manufacturing establishments are subject to periodic unannounced inspections by the FDA and state agencies for compliance with all cGMP requirements. The FDA is authorized to inspect manufacturing facilities without a warrant at reasonable times and in a reasonable manner.

We, or our present or future suppliers, may not be able to comply with cGMP and other FDA regulatory requirements. Failure to comply with the statutory and regulatory requirements subjects the manufacturer to possible legal or regulatory action, such as a delay or refusal to approve a BLA, suspension of manufacturing, seizure or recall of a product, or civil or criminal prosecution of the company or individual officers or employees.

Post-Marketing Regulation

Any products manufactured or distributed pursuant to FDA licenses or approvals are subject to pervasive and continuing regulation by the FDA, including but not limited to:

- recordkeeping requirements;
- periodic reporting requirements;
- cGMP requirements related to all stages of manufacturing, testing, storage, packaging, labeling and distribution of finished dosage forms of the product;
- reporting of adverse experiences with the product; and
- advertising and promotion restrictions and enforcement actions.

Adverse experiences with the product must be reported to the FDA and could result in the imposition of market restrictions through labeling changes, recalls, or withdrawal of product approval. Product approvals may be revoked if compliance with regulatory requirements is not maintained or if problems concerning safety or effectiveness of the product occur following approval. As a condition of NDA or BLA approval, the FDA may require post-approval testing and surveillance to monitor a product's safety or efficacy. The FDA also may impose other conditions, including labeling restrictions which can materially impact the potential market and profitability of a product.

With respect to post-market product advertising and promotion, the FDA imposes a number of complex regulations on entities that advertise and promote Biologics, including, among others, standards and restrictions on direct-to-consumer advertising, off-label promotion, industry-sponsored scientific and educational activities and promotional activities involving the Internet. The FDA has very broad enforcement authority under the FDCA, and failure to abide by these regulations can result in administrative and judicial enforcement actions, including the issuance of a Warning Letter directing correction of deviations from FDA standards, a requirement that future advertising and promotional materials be pre-cleared by the FDA, and state and federal civil and criminal investigations and prosecutions. Foreign regulatory bodies also strictly enforce these and other regulatory requirements and drug marketing may be prohibited in whole or in part in other countries.

We, our collaborators or our third party contract manufacturers may not be able to comply with the applicable regulations. After regulatory approvals are obtained, the subsequent discovery of previously unknown problems, or the failure to maintain compliance with existing or new regulatory requirements, may result in:

- restrictions on the marketing or manufacturing of a product;
- Warning Letters or Untitled Letters from the FDA asking us, our collaborators or third party contractors to take or refrain from taking certain actions;
- withdrawal of the product from the market;
- FDA's refusal to approve pending applications or supplements to approved applications;
- voluntary or mandatory product recall;
- fines or disgorgement of profits or revenue;
- suspension or withdrawal of regulatory approvals;
- product seizure; and

injunctions or the imposition of civil or criminal penalties.

Other Regulations

In addition to the substantial regulations enforced by the FDA, we are also subject to various federal, state and local laws, regulations and recommendations relating to safe working conditions, laboratory and manufacturing practices, the experimental use of animals, and the use and disposal of hazardous or potentially hazardous substances, including radioactive compounds and infectious disease agents, used in connection with our various activities. We cannot accurately predict the extent of government regulation that might result from any future legislation or administrative action.

Changing Legal and Regulatory Landscape

Periodically legislation is introduced in the U.S. Congress that could change the statutory provisions governing the approval, manufacturing and marketing of drugs, including biological products. In addition, FDA regulations and guidance are often revised or reinterpreted by the FDA in ways that may significantly affect our business and products. We cannot predict whether or when legislation impacting our business will be enacted, what FDA regulations, guidance or interpretations may change, or what the impact of such changes, if any, may be in the future.

Process and Analytical Development, and Manufacturing

We have no drug substance or drug product development, analytical or manufacturing facilities of our own, and have been relying on third-party contract manufacturing organizations, or CMOs, and contract research organizations, or CROs. CMOs have experience in developing biological manufacturing processes and operating under cGMPs established by the Code of Federal Regulations and the Food, Drug and Cosmetic Act (Biologics) regulated by the FDA, and we rely on them for clinical and future commercial production of our product candidates. CROs provide cGLP/cGMP-compliant services for product analytical tests.

Certain raw materials used in producing our product candidates are available from only one source or a limited number of sources. We attempt to mitigate the risk associated with such sole source raw materials by actively managing our supplies. We have not experienced any shortages in supplies of such raw materials. Unavailability of certain materials or the loss of current sources of production could cause an interruption in production on a temporary basis pending establishment of new sources or, in some cases, implementation of alternative processes.

Intellectual Property

Part of our value depends in part on our ability to obtain patents, to protect trade secrets, and to operate without infringing upon the proprietary rights of others. We seek to protect our proprietary position by, among other methods, filing U.S. and foreign patent applications related to the proprietary technology, inventions and improvements that are important to our business.

The following table identifies each of our material issued and non-abandoned patents and published pending applications, in order of importance to us:

| Patent/Patent Application | Patent Number/ Application Number | Country of Issue/Filing | Issue Date/File Date | Expiration Date |
|---|--|------------------------------------|-----------------------------|------------------------|
| Anthrax Vaccine Formulation and Uses Thereof | GB2009/051293 | WO | October 2, 2009 | October 2, 2029 |
| | 12/998245 | U.S. | October 2, 2009 | October 2, 2029 |
| | 2011-529634 | Japan | October 2, 2009 | October 2, 2029 |
| | 9785720.5 | Europe | October 2, 2009 | October 2, 2029 |
| | 2,738,621 | Canada | October 2, 2009 | October 2, 2029 |
| | 2009299615 | Australia | October 2, 2009 | October 2, 2029 |
| Method for Assaying Antigens | 212118 | Israel | October 2, 2009 | October 2, 2029 |
| | GB07/001353 | WO | April 12, 2007 | April 13, 2027 |
| | 12/226101 | U.S. | October 7, 2008 | April 12, 2027 |
| | 2010914 | Europe | October 15, 2014 | April 12, 2027 |
| | 2,648,850 | Canada | October 9, 2008 | April 12, 2027 |
| | 2007242647 | Australia | October 13, 2013 | April 12, 2027 |
| | 194459 | Israel | November 1, 2012 | April 12, 2027 |

In addition, we are a party to various exclusive and non-exclusive licenses, which provide access to intellectual property and know-how useful for our products. Some of our licenses, which generally extend for the life of any applicable patent, require us to pay royalties on sales of products that may be derived from or produced using the licensed technology. For additional information on our license agreements, please refer to *Note 7 - Commitments and Contingencies - License Agreements* in the Notes to our Consolidated Financial Statements.

We recently received trademark designation for SparVax and we also were recently notified of a notice of allowance for SparVax-L from the United States Patent and Trademark Office.

We have relied upon certain proprietary trade secrets, know-how and continuing technological advances to develop a competitive position. In efforts to maintain confidentiality and ownership of trade secrets, proprietary information and developments, all of our employees are required to execute agreements regarding confidentiality and assign to us all rights to any inventions and processes they develop while they are employed by us. We may in the future use license agreements to access external products and technologies as well as to convey our own intellectual property to others. We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our proprietary rights are covered by valid and enforceable patents or are effectively maintained as trade secrets.

Competition

The pharmaceutical industry is characterized by rapidly evolving technology and intense competition. A large number of companies of all sizes engage in activities similar to our activities and many of our competitors have substantially greater financial and other resources available to them.

Anthrax Product Competition

In the anthrax vaccine field there is only one FDA licensed anthrax vaccine, Biothrax[®], which is sold by Emergent BioSolutions, Inc. With respect to the development of a next generation recombinant PA-based vaccine, we are aware of four other companies developing competing vaccines that are in the clinical stages of development: Emergent BioSolutions, Inc., Green Cross, Panacea Biotec Ltd., and PaxVax. There are a number of companies with anthrax vaccines in preclinical development including, but not limited to, Bavarian Nordic, IBio, Pfenex, Soligenix and Altimmune and there may be other companies developing competing vaccines that we are not aware of.

U.S. Government Contracts

Substantially all of our revenues to date have been derived from grants and U.S. Government contracts. There can be no assurances that our remaining U.S. Government contract will be continued, renewed beyond the base period, or that we can enter into new contracts or receive new grants to supply the U.S. or other governments with our products. The process of obtaining government contracts is lengthy and uncertain.

U.S. Government contracts typically are subject to audit by the government and contain termination provisions for the government allowing it to terminate at its discretion, which subjects us to additional risks. These risks include the ability of the U.S. Government unilaterally to:

- preclude us, either temporarily or for a set period of time, from receiving new contracts or extending our remaining contracts based on violations or suspected violations of laws or regulations;
- terminate our remaining contracts either for the convenience of the government (at the government's sole discretion, for example, if funds become unavailable or the government no longer wants the work) or for default (for failing to perform in accordance with the contract schedule and terms);
- revise the scope and value of our contracts and/or the timing for work to be performed;

- audit and object to our contract-related costs and fees, including allocated indirect costs;
- control and potentially prohibit the export of our products;
- claim rights to intellectual property, including our products, developed under the contract;
- add or remove the terms and conditions in our contracts; and
- cancel or amend planned procurements, including outstanding RFP solicitations.

The Company has been audited by BARDA through 2014 and has agreed on final indirect rates with DCAA through 2011.

Termination-for-convenience provisions generally enable us to recover only our costs incurred or committed, settlement expenses, and profit on the work completed prior to termination. Termination-for-default provisions do not permit these recoveries and would make us liable for excess costs incurred by the U.S. Government in procuring undelivered items from another source.

Employees

As of December 31, 2016, we employed 13 persons, including 6 individuals engaged in research and development activities and 7 individuals engaged in general and administrative functions, such as human resources, finance and accounting. None of our employees are party to any collective bargaining agreement, and we believe that our relationship with our employees is good.

Financial Information

Our consolidated contract revenues were approximately \$5.2 million, \$10.6 million and \$10.2 million during the fiscal years ended December 31, 2016, 2015 and 2014, respectively. As of December 31, 2016 our contract with NIAID was funded for approximately \$14.0 million, of which approximately \$4.4 million and \$4.5 million was recognized as revenue during the years ended December 31, 2016 and 2015, respectively.

Information on the portion of our consolidated revenues attributable to each of our three product candidates during those years is incorporated by reference to the section “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Results of Operations – Year Ended December 31, 2016 Compared to December 31, 2015” and “– Year Ended December 31, 2015 Compared to December 31, 2014.” For further information about operating revenue, operating income, and identifiable assets and liabilities attributable to our operations, see Item 6. Selected Financial Data and Item 8. Financial Statements and Supplementary Data.

Financial Information by Geographic Area

For the fiscal years ended December 31, 2016, 2015 and 2014, all revenues from external customers were attributed to United States customers. Our country of domicile is the United States. As of December 31, 2016, 2015 and 2014, all long-lived assets with a net book value were located in the United States.

Research and Development

During the fiscal years ended December 31, 2016, 2015 and 2014, we spent approximately \$4.8 million, \$5.1 million and \$9.3 million on research and development activities, respectively.

Item 1A. Risk Factors.

If any of the risks and uncertainties set forth below actually materialize, our business, financial condition and/or results of operations could be materially and adversely affected, the trading price of our common stock could decline and a stockholder could lose all or part of his or her investment. The risks and uncertainties set forth below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently consider immaterial may also impair our business operations.

With respect to the proposed Mergers, certain risks and uncertainties include that the issuance of shares of PharmAthene common stock to the Altimmune stockholders in the Mergers will dilute substantially the voting power of current PharmAthene stockholders; there is no assurance when or even if the Mergers will be completed, and failure to obtain required approvals necessary to satisfy closing conditions may delay or prevent completion of the Mergers; because the lack of a public market for Altimmune's outstanding shares makes it difficult to evaluate the fairness of the Mergers, Altimmune stockholders may receive consideration in the Mergers that is greater than or less than the fair market value of the Altimmune shares; because the Mergers will be completed after the date of the PharmAthene special meeting of stockholders and the Altimmune written consent of stockholders, at the time of the special meeting or written consent, investors will not know the exact number of shares of PharmAthene common stock that the Altimmune stockholders will receive upon completion of the Mergers; PharmAthene and Altimmune executive officers and directors may have interests in the Mergers that are different from, or in addition to, those of PharmAthene stockholders and Altimmune stockholders generally; the pendency of the Mergers could have an adverse effect on the trading price of PharmAthene common stock and the business, financial condition, results of operations or business prospects for PharmAthene, Altimmune and the combined company following consummation of the Mergers; failure of the combined company to satisfy initial listing requirements of the NYSE MKT; during the pendency of the Mergers, PharmAthene and Altimmune may be unable to enter into a business combination with another party because of restrictions in the Merger Agreement; the Mergers may be completed even though material adverse changes may result during the pendency of the Mergers or from industry-wide changes or other causes; the rights of Altimmune stockholders who become PharmAthene stockholders in the Mergers will be governed by PharmAthene's Certificate of Incorporation and Bylaws, each as amended; if the Mergers do not qualify as a reorganization under Section 368(a) of the Code or are otherwise taxable to U.S. holders of Altimmune common stock, then such holders may be required to pay substantial U.S. federal income taxes; PharmAthene and Altimmune have incurred and will continue to incur significant transaction costs in connection with the Mergers; and the anticipated benefits of the Mergers may not be realized fully or at all or may take longer to realize than expected. These risks, as well as other risks associated with the proposed Mergers, are more fully discussed in the Registration Statement on Form S-4 filed by PharmAthene with the SEC on February 3, 2017, as the same may be amended from time to time.

Risks Related to the Proposed Mergers

There is no assurance when or even if the Mergers will be completed. Failure to obtain required approvals necessary to satisfy closing conditions may delay or prevent completion of the Mergers.

Completion of the Mergers is subject to the satisfaction or waiver of a number of conditions, including the requisite approvals by the stockholders of PharmAthene and the stockholders of Altimmune. There can be no assurance that PharmAthene or Altimmune will be able to satisfy the closing conditions or that closing conditions beyond their control will be satisfied or waived. If the Mergers are not completed, PharmAthene will need to consider other strategic alternatives to grow and diversify its business to enhance stockholder value.

The anticipated benefits of the Mergers may not be realized fully or at all or may take longer to realize than expected.

The Mergers involve the integration of two companies that have previously operated independently with principal offices in two distinct locations. Due to legal restrictions, PharmAthene and Altimmune are able to conduct only limited planning regarding the integration of the two companies prior to completion of the Mergers. Significant management attention and resources will be required to integrate the two companies. Delays in this process could adversely affect the combined company's business, financial results, financial condition, and stock price following the Mergers. Even if the combined company were able to integrate the business operations successfully, there can be no assurance that this integration will result in the realization of the full benefits of synergies, innovation and operational efficiencies that may be possible from this integration and that these benefits will be achieved within a reasonable period of time.

Risks Related to our Financial Condition. History of Losses: Limited Resources.

We have experienced a significant decline in revenues. All of our immediately foreseeable future revenues relate to one contract with the U.S. Government. We will not achieve sufficient revenues from this agreement to attain profitability.

We have incurred significant losses since we commenced operations. As of December 31, 2016, we had an accumulated deficit of approximately \$29.9 million since our inception, after posting net income of approximately \$193.9 million during 2016 and had net losses of approximately \$3.4 million and \$10.0 million during 2015 and 2014, respectively.

We can offer no assurances that we have correctly estimated the resources or personnel necessary to seek partners, co-developers or acquirers for our biodefense programs or execute under our NIAID contract. If a larger workforce or one with a different skillset is ultimately required to maintain our operations, we may be unable to maximize our existing anthrax vaccine program. If revenues from our NIAID contract are less 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.

We cannot provide assurances that we will be able to obtain financing on acceptable terms or at all and any equity financing we do obtain will result in dilution.

If for any reason we require additional cash to maintain our operations, we may be forced to cease operations unless we are able to obtain financing on acceptable terms. There can be no assurances that we would 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.

To the extent that we raise additional capital through the sale of securities, the issuance of those securities or shares underlying such securities would result in dilution that could be substantial to our stockholders. In addition, if we incur additional debt financing, a substantial portion of our operating cash flow may be dedicated to the payment of principal and interest on such indebtedness, thus limiting funds available for our business activities.

The IRS could challenge the amount of our net operating loss carryforwards.

The amount of our net operating loss carryforwards has not been audited or otherwise validated by the IRS. The IRS could challenge the amount of our net operating loss carryforwards, which could significantly reduce our net operating loss carryforwards. In addition, calculating whether an ownership change has occurred is subject to uncertainty, both because of the complexity and ambiguity of Section 382 of the Code and because of limitations on a publicly-traded company's knowledge as to the ownership of, and transactions in, its securities. Therefore, the calculation of the amount of our net operating loss carryforwards may be changed as a result of a challenge by a governmental authority or our learning of new information about the ownership of, and transactions in, our securities. In reliance on our calculations of available NOL carryforwards, we announced, and on February 3, 2017 paid, a dividend of \$2.91 per share to our stockholders of record as of January 24, 2017, totaling approximately \$200 million. As a result, we may not have sufficient cash available to satisfy any amounts that may become due pursuant to an additional tax bill.

Risks Related to Product Development and Commercialization

We have not commercialized any products or recognized any revenues from sales. Our product candidates are still under development, which reduces their value from the perspective of potential partners, co-developers or acquirers.

We have not commercialized any product candidates or recognized any revenues from product sales. It is unlikely that we will receive complete funding for the development of our product candidates. Even if we do receive such funding, there can be no assurances that any of our product candidates would meet the safety and efficacy standards required for commercialization. To develop and commercialize biodefense treatment and prophylactic product candidates, we must provide the FDA and foreign regulatory authorities with human clinical and non-clinical animal data that demonstrate adequate safety and effectiveness. To generate this data, we would have to subject our product candidates to significant additional research and development efforts, including extensive non-clinical studies and clinical testing. We cannot be sure that our approach to drug discovery would be effective or would result in the development of any drug. Our development efforts have been primarily focused on two product candidates, SparVax[®] and SparVax L. Even if our product candidates were successful when tested in animals, such success would not be a guarantee of the safety or effectiveness of such product candidates in humans.

Research and development efforts are time-consuming and subject to delays. Even if we or our potential partners, co-developers or acquirers initially received positive early-stage preclinical or clinical results, such results may not be indicative of results that could be anticipated in the later stages of drug development. Delays in obtaining results in non-clinical studies and clinical testing can occur for a variety of reasons, such as slower than anticipated enrollment by volunteers in the trials, adverse events related to the products, failure to comply with Good Clinical Practices, unforeseen safety issues, unsatisfactory results in trials, perceived defects in the design of clinical trials, changes in regulatory policy as well as for reasons detailed in the section entitled "— Necessary reliance on the Animal Rule in conducting trials is time-consuming and expensive."

Any delay or adverse clinical event arising during any of the clinical trials could force us or our potential partners, co-developers or acquirers to conduct additional clinical trials in order to obtain approval from the FDA and other regulatory bodies. Development costs would increase substantially if we or they experience material delays in any clinical trials or need to conduct more or larger trials than planned. If delays are significant, or if any of our product candidates do not prove to be safe, pure, and potent (including efficacy) or do not receive required regulatory approvals, we or our potential partners, co-developers or acquirers may have to abandon the product candidate altogether and will be unable to recognize revenues from the sale of that product.

For any and all of the foregoing reasons, the value of our product candidates in the eyes of potential partners, co-developers or acquirers may be significantly less than we expect, resulting in lower proceeds to us from any agreement we may enter with such partners, co-developers or acquirers.

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

To obtain FDA approval for biological warfare defense products under current FDA regulations, companies 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 or our potential partners, co-developers or acquirers have to develop appropriate animal models, which is a time-consuming and expensive research effort. Further, we or they 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 non-clinical, clinical or other studies, refuse to approve our products, or place restrictions on our or our partners', co-developers' or acquirers' ability to commercialize those products. Further, other countries have not, at this time, 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 there can be no assurance that a company will be able to make a submission for marketing approval in foreign countries based on such animal data.

Additionally, few facilities in the United States and internationally have the capability to test animals with anthrax, nerve agents, or other lethal biotoxins or chemical agents or otherwise assist in qualifying the requisite animal models. We or our potential partners, co-developers or acquirers have to compete with other biodefense companies for access to this limited pool of highly specialized resources and therefore may not be able to secure contracts to conduct the testing in a predictable timeframe or at all.

Even if we or our potential partners, co-developers or acquirers were able to overcome the obstacles to funding, development and commercialization described in these Risk Factors, our products may not become profitable and manufacturing problems or side effects discovered at later stages could further increase costs of commercialization.

It is uncertain whether we will receive future funding of the development of our product candidates. Even if we did receive such funding, and even if we succeed in commercializing our product candidates with the help of potential partners or co-developers, or alone, we could not assure you that any drugs resulting from our research and development efforts would become commercially available. Even if we succeeded in (co-)developing and commercializing our product candidates, they may never generate sufficient or sustainable revenues to enable us to be profitable.

Even if effective, a product that reaches market may be subject to FDA-mandated or –requested 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 or our potential partners or co-developers, and our and their respective CMOs are also required to comply with the applicable FDA 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 or our potential partners or co-developers, and our respective contract manufacturers may not be able to comply with the applicable cGMP requirements and other FDA regulatory requirements. Should we or they fail to comply, we could be subject to fines or other sanctions or could be precluded from marketing the products.

We may become subject to product liability claims, which could result in damages that exceed our insurance coverage.

We face an inherent risk of exposure to product liability suits in connection with our product candidates being tested in clinical trials or sold commercially. We may become subject to a product liability suit if any product we (co-)develop causes injury, or if treated individuals subsequently become infected or suffer adverse effects from our products. Regardless of merit or eventual outcome, product liability claims may result in decreased demand for a product, injury to our reputation, withdrawal of clinical trial volunteers, and loss of revenues.

In addition, if a product liability claim is brought against us, the cost of defending the claim could be significant and any adverse determination may result in liabilities in excess of our insurance coverage. Although our anthrax countermeasures are covered under the general immunity provisions of the U.S. Public Readiness and Emergency Preparedness Act, or the Public Readiness Act, there can be no assurance that the U.S. Secretary of Health and Human Services will make other declarations in the future that cover any of our other product candidates or that the U.S. Congress will not act in the future to reduce coverage under the Public Readiness Act or to repeal it altogether. For further discussion of that act, see “— Legislation limiting or restricting liability for medical products used to fight bioterrorism is new, and it cannot be certain that any such protection will apply to our products or if applied what the scope of any such coverage will be.” Additionally, we are considering applying for indemnification under the U.S. Support Anti-terrorism by Fostering Effective Technologies (SAFETY) Act of 2002 which preempts and modifies tort laws so as to limit the claims and damages potentially faced by companies who provide certain “qualified” anti-terrorism products. However, we cannot be certain that we will be able to obtain or maintain coverage under the SAFETY Act or adequate insurance coverage on acceptable terms, if at all.

Our inability to enter into and complete strategic transactions with respect to our product candidates or otherwise could materially harm our financial condition.

We will be seeking to identify strategic partners for one or more of our product candidates. Any resulting transactions can take the form of partnerships, co-development agreements, and sales of our product candidates, among others. There can be no assurances that such transactions, if commenced, would be successfully completed or completed on favorable terms. In addition, if we pursue strategic acquisitions and business combinations for further development and commercialization efforts, we may incur significant out of pocket costs as well as expend management time and those of other employees. To achieve the anticipated benefits of an acquisition, there must be an integration of the two companies’ businesses, technologies and employees in an efficient and effective manner.

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

All of our immediately foreseeable future revenues relate to our contract with the U.S. Government. We will not achieve sufficient revenues from this or any future agreements to attain profitability.

Substantially all of our revenues to date have been derived from grants and U.S. Government contracts. After the expiration of our SparVax[®] contract, our main source of revenue is our September 2014 contract with NIAID for the development of a next generation lyophilized anthrax vaccine based on our proprietary technology platform which contributes the rPA BDS that is used in the liquid SparVax[®] formulation. We will not achieve sufficient revenues from this contract to attain profitability.

We may choose not to apply for new government funding for any of our programs. If we applied for additional funding, there is no assurance that we would be successful in entering into new contracts or receiving new grants to supply the United States or other governments with our products. The process of obtaining government contracts is lengthy and uncertain. If the U.S. Government made significant contract awards for the supply to the SNS to our competitors, rather than to us, our business would be harmed and we may ultimately be unable to supply that particular treatment or product to foreign governments or other third parties. Further, changes in U.S. Government budgets and agendas, funding strategies, cost overruns in our programs or others, or advances by our competitors, may result in changes in the timing of funding for, a decreased and de-prioritized emphasis on, or termination of, U.S. Government contracts that support the development and/or procurement of biodefense products.

Funding is subject to U.S. Congressional appropriations, which are generally made on an annual basis even for multi-year contracts. More generally, due to the ongoing economic uncertainty, the U.S. Government may reduce or delay spending in the biodefense field or eliminate funding of certain programs altogether, which further decreases the likelihood of future government contract awards or that the government would procure products from us. Future funding levels for two of our historical government customers, BARDA and the U.S. Department of Defense, for the advanced development and procurement of medical countermeasures are uncertain, and may be subject to budget cuts as the U.S. Congress and the President continue to balance a multitude of competing priorities.

U.S. Government agencies have special contracting authority that gives them the ability to terminate and/or modify its contracts.

U.S. Government contracts typically are subject to audit, and contain termination provisions allowing the government to terminate all or part of a contract at its sole discretion, which will subject us to additional risks. These risks include the ability of the U.S. Government unilaterally to:

- preclude us, either temporarily or for a set period of time, from receiving new contracts or extending our existing or future contracts based on violations or suspected violations of laws or regulations;
- terminate our contract, either for the convenience of the government (at the government's sole discretion, for example, if funds become unavailable or the government no longer wants the work, as was the case with the government's partial termination for convenience of our SparVax[®] contract) or for default (for failing to perform in accordance with the contract schedule and terms);
- revise the scope and value of our contract and/or revise the timing for work to be performed;
- audit and object to our contract-related costs and fees, including allocated indirect costs;
- control and potentially prohibit the export of our products, if and when developed;
- claim rights to intellectual property, including products, that may be developed under the contract;
- add or remove the terms and conditions in our contract; and
- cancel or amend planned procurements, including outstanding RFP solicitations.

As stated above, the U.S. Government can terminate or modify any of its contracts with us either for its convenience (at its sole discretion) or for default if we fail to perform in accordance with the contract schedule and terms. Termination-for-convenience provisions generally enable us to recover only our costs incurred or committed, settlement expenses, and profit on the work completed prior to termination. A contractor's rights under a termination for convenience are limited to an adjustment of profit and, with the contracting officer's concurrence, a reduction in the estimated cost. Under the general termination for convenience procedures, a partial termination is treated as a full termination when (i) the terminated portion is clearly severable from the balance of the contract or (ii) when contract performance is virtually complete or performance of the continued portion of the contract is only on subsidiary items or is otherwise not substantial. Termination-for-default provisions do not permit these recoveries and could make us liable for excess costs incurred by the U.S. Government in procuring undelivered items from another source.

The U.S. Government may reduce or delay spending in the biodefense field or eliminate funding of certain programs altogether, which could further decrease the likelihood of future government contract awards, the likelihood that the government will exercise its right to extend its remaining contract with us and/or the likelihood that the government would procure products from us, if and when developed.

The U.S. Government's determination to award any contracts may be challenged by an interested party, such as another bidder, at the relevant agency, GAO or the U.S. Court of Federal Claims (either in the first instance or in review of a prior agency or GAO decision). If such a challenge is successful, a contract award may be re-evaluated and terminated.

The laws and regulations governing the procurement of goods and services by the U.S. Government provide procedures by which other interested parties (typically, other offerors) may challenge the award of a government contract. If we were awarded a government contract, such challenges or protests could be filed, regardless of whether the award was actually improper. If a protest is filed, the government agency may decide, and in certain circumstances is required, either by statute or by court order, to suspend our performance under the contract while the protest is being considered by the U.S. Government Accountability Office, or GAO, or the U.S. Court of Federal Claims, thus potentially delaying delivery of goods and services and payment. In addition, we might need to expend considerable funds to defend any potential award. If a protest is successful, the government may be ordered to re-evaluate bids and make an award based on the re-evaluation or amend the solicitation, invite new bids, and make an award based on an evaluation of such revised bids.

For example, in March 2010, a third-party filed a bid protest with the GAO challenging the February 2010 decision of the DHHS to modify its existing research and development contract with us for the development of SparVax[®]. In March 2010 DHHS suspended performance under the modification pursuant to the automatic stay provisions of the Competition in Contract Act (31 U.S.C. § 3553(d)) and the Federal Acquisition Regulation, pending a decision by the GAO on the protest. While the bid protest was ultimately denied, and the related DHHS “stop work” order canceled in June 2010, the protest contributed to a reduction in revenues and cash and cash equivalents over the period that work could not be performed under the modification. In addition, we incurred unexpected general and administrative expenses to intervene in the protest.

Our business is subject to audit by the U.S. Government, and a negative audit could adversely affect our business.

BARDA audited indirect costs charged by us on the SparVax[®] contract for the years 2008 through 2014. We recorded additional revenue of \$0.8 million and \$5.8 million in 2016 and 2015, respectively.

Other U.S. Government agencies such as the Defense Contract Audit Agency, or the DCAA, also routinely audit and investigate government contractors. These agencies review, among other things, a contractor’s performance under its contracts, incurred costs, cost structure and compliance with applicable laws, regulations and standards. We have finalized incurred cost audits with DCAA for 2006 through 2011.

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 Regulation and agency-specific regulations supplemental to the Federal Acquisition Regulation, which comprehensively regulate procurement, from formation to administration and performance;
- the business ethics and public integrity obligations, which govern conflicts of interest and the hiring of former government employees, prohibit, among other things, gratuities, restrict funding of lobbying activities and incorporate other requirements such as the Anti-Kickback Act, the Procurement Integrity Act, the False Claims Act and Foreign Corrupt Practices Act;
- export and import control laws and regulations;
- 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; and

laws, regulations, and executive orders that allow the government to claim certain rights to contractors' intellectual property such as the Bayh-Dole Act.

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

Risks Related to Dependence on or Competition From Third Parties

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 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 organizations 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, manufacturing 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 and biopharmaceutical companies for access to this limited pool of highly specialized resources. If our contractors do not meet their obligations in an adequate and timely manner or we are unable to enter into contracts with them, the pace of clinical or non-clinical development, regulatory approval and commercialization of product candidates could be significantly delayed and our prospects could be adversely affected.

We depend on third parties to manufacture, package and distribute compounds for our product candidates and key components for our product candidates. The failure of these third parties to provide their services or to perform them successfully could harm our business.

Third-party manufacturers, suppliers and distributors, like most companies, have been adversely affected by the weakening of the global economy and as such may be more susceptible to being acquired as part of the current wave of consolidations in the pharmaceutical industry. If our third-party suppliers continue to experience financial difficulties as a result of weak demand for their products or for other reasons and are unable to obtain the capital necessary to continue their present level of operations or are acquired by others, they may have to reduce their activities and/or their priorities or our working relationship with them might change. A material deterioration in their ability or willingness to meet their obligations to us could cause a delay in our development program and potential future sales and jeopardize our ability to meet our obligations under our contract with the government or other third parties.

We do not have any of our own manufacturing facilities. We have therefore utilized third parties to manufacture, package and distribute our product candidates and key components of our product candidates. Any material disruption in manufacturing (i.e. due to third party capacity or availability limitations) could cause a delay in development programs and potential future sales, if any. Furthermore, certain compounds, media, or other raw materials used to manufacture our drug candidates are available from only one or a limited number of sources. Any delays or difficulties in obtaining key components for our product candidates or in manufacturing, packaging or distributing our product candidates could delay clinical trials and further development of these potential products. Additionally, the third parties we rely on for manufacturing and packaging are subject to regulatory review, and any regulatory compliance problems with these third parties could significantly delay or disrupt any commercialization activities we may engage in.

We face competition from companies with greater financial, personnel and research and development resources, further limiting our commercial opportunities.

The biopharmaceutical industry is characterized by rapid and significant technological change. Even if we were able to overcome the obstacles to funding, development and commercialization described in these Risk Factors, our success would depend on our ability to establish and maintain a market for our product candidates. There are many organizations, both public and private, including major pharmaceutical and chemical companies, specialized biotechnology firms, universities and other research institutions engaged in developing pharmaceutical and biotechnology products. Many of these organizations have substantially greater financial, technical, intellectual property, research and development, and human resources than we have. Competitors may develop products or other technologies that are more effective than any that we may be developing or may obtain FDA approval for products more rapidly.

Even if we were able to overcome the obstacles to funding, development and commercialization described in these Risk Factors, we still must compete in the manufacturing and marketing of such products, areas in which we have limited experience. Many of these organizations also have manufacturing facilities and established marketing capabilities that would enable such companies to market competing products through existing channels of distribution. Any commercial opportunities will be reduced or eliminated if our competitors develop and market products that:

- are more effective;
- have fewer or less severe adverse side effects;
- are more adaptable to various modes of dosing;
- obtain orphan drug exclusivity that blocks the approval of our application for seven years;
- are easier to administer; or
- are less expensive than the products or product candidates that we are, or in the future will be, developing.

The Patient Protection and Affordable Care Act, or Affordable Care Act, signed into law by former President Obama on March 23, 2010, amends the Public Health Service Act to create an abbreviated licensure pathway for biological products that are demonstrated to be “biosimilar” to or “interchangeable” with an FDA-licensed biological product. Under this new law, a biological product may be demonstrated to be “biosimilar” if data show that, among other things, the product is “highly similar” to an already-approved biological product. To date, the FDA has not approved a biological product as biosimilar or interchangeable. Since passage of the Affordable Care Act in 2010, however, the FDA has been establishing standards for licensure to ensure the safety and effectiveness of biosimilars. Because biological products are complex products, the development and approval of biosimilars is a complicated and challenging process. Numerous companies are reportedly developing biosimilar products and several applications for licensure have reportedly been submitted to the FDA under the new law. On March 6, 2015, the FDA approved a biosimilar application filed by Novartis for a competing version of Amgen’s cancer treatment biologic drug product, Neupogen. Scientists, clinicians, and other personnel at the FDA are continuing to work out the details of the biosimilar application requirements, and the FDA’s review and licensure process, which are expected to vary on a product-by-product basis.

If we were successful in developing licensed biological products and a competitor company/companies chose to develop biosimilar products and receives FDA licensure for such products, this competition could impact the revenue projections for our products.

Even if we were successful in developing effective products, and obtain FDA and other regulatory approvals necessary for commercializing them, our products may not compete effectively with other successful products. Our competitors may succeed in developing and marketing products either that are more effective than those that we may develop, alone or with our collaborators, making our products obsolete, or that are marketed before any products that we develop are marketed.

Risks Related to Political and Social Factors

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. Even if we were able to overcome the obstacles to funding, development and commercialization described in these Risk Factors, 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.

Risks Related to Intellectual Property

Part of our value depends on our ability (i) to obtain and maintain protection for our proprietary technology and that of our licensors and collaborators and (ii) not to infringe on patents and proprietary rights of third parties.

Issues surrounding patents of biotechnology firms often involve complex legal and factual questions, and, therefore, validity and enforceability cannot be predicted with certainty. To date, no consistent policy has emerged regarding the breadth of claims allowed in biotechnology patents. We currently have two U.S. patents, three pending U.S. patent applications, and have a limited number of foreign patents and pending international and foreign patents applications. In addition, we have rights under other patents and patent applications pursuant to exclusive and non-exclusive license arrangements with licensors and collaborators. However, there can be no assurance that patent applications owned or licensed by us will result in patents being issued or that the patents, whether existing or issued in the future, will afford protection against competitors with similar technology. Any conflicts resulting from third-party patent applications and patents could significantly reduce the coverage of the patents owned, optioned by or licensed to us or our collaborators and limit our ability or that of our collaborators to obtain meaningful patent protection. Further, our commercial success would depend significantly on our ability to operate without infringing the patents and proprietary rights of third parties.

The costs associated with establishing the validity of patents, of defending against patent infringement claims of others and of asserting infringement claims against others is expensive and time consuming, even if the ultimate outcome is favorable. An outcome of any patent prosecution or litigation that is unfavorable to us or one of our licensors or collaborators may have a material adverse effect on us. The expense of a protracted infringement suit, even if ultimately favorable, would also have a material adverse effect on us.

We furthermore rely upon trade secrets protection for our confidential and proprietary information. We have taken measures to protect our proprietary information; however, these measures may not provide adequate protection to us. We have sought to protect our proprietary information by entering into confidentiality agreements with employees, collaborators and consultants. Nevertheless, employees, collaborators or consultants may still disclose our proprietary information, and we may not be able to meaningfully protect our trade secrets. In addition, others may independently develop substantially equivalent proprietary information or techniques or otherwise gain access to our trade secrets.

Risks Related to Regulatory Approvals and Legislation

Our use of hazardous materials and chemicals requires us to comply with regulatory requirements which may result in significant costs and expose us to potential liabilities.

Our research and development involves the controlled use of hazardous materials and chemicals. We are subject to federal, state, local and foreign laws governing the use, manufacture, storage, handling and disposal of such materials. We will not be able to eliminate the risk of accidental contamination or injury from these materials. In the event of such an accident, we could be forced to pay significant damages or fines, and these damages could exceed our resources and any applicable insurance coverage. In addition, we may be required to incur significant costs to comply with regulatory requirements in the future.

Legislation limiting or restricting liability for medical products used to fight bioterrorism is new, and it 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 and creates general immunity for manufacturers of countermeasures, including security countermeasures (as defined in Section 319F-2(c)(1)(B) of that 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. Although our anthrax countermeasures have been covered under the general immunity provisions of the Public Readiness Act since October 1, 2008, there can be no assurance that the Secretary of Health and Human Services will make other declarations in the future that would cover any of our other product candidates or that the U.S. Congress will not act in the future to reduce coverage under the Public Readiness Act or to 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 their remedies under the compensation program which thereby could expose us to liability. Furthermore, there is no assurance that the Secretary of Health and Human Services will issue under this act a declaration 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.

We are required to comply with certain export control laws, which may limit our ability to sell our products to non-U.S. persons and may subject us to regulatory requirements that may further delay or limit our ability to develop and commercialize our products.

Our product candidates are subject to the Export Administration Regulations, or EAR, administered by the U.S. Department of Commerce and are, in certain instances (such as aspects of our nerve agent countermeasure product candidates) subject to the International Traffic in Arms Regulations, or ITAR, administered by the U.S. Department of State. EAR restricts the export of dual-use products and technical data to certain countries, while ITAR restricts the export of defense products, technical data and defense services. The U.S. Government agencies responsible for administering EAR and ITAR have significant discretion in the interpretation and enforcement of these regulations. Failure to comply with these regulations can result in criminal and civil penalties and may harm our ability to enter into future contracts with the U.S. Government. It is also possible that these regulations could adversely affect our ability to sell any products to non-U.S. customers.

Risks Related to Personnel

We depend on our key technical and management personnel, and the loss of these personnel could impair the development of our products.

We rely, and will continue to rely, on our key management and scientific staff, all of whom are employed at-will. The loss of key personnel or the failure to recruit necessary additional qualified personnel could have a material adverse effect on our business and results of operations. There is intense competition from other companies, research and academic institutions and other organizations for qualified personnel. We may not be able to continue to attract and retain the qualified personnel necessary for the development of our business. If we do not succeed in retaining and recruiting necessary personnel or developing this expertise, our business could suffer significantly.

Biotechnology companies often become subject to claims that they or their employees wrongfully used or disclosed alleged trade secrets of the employees’ former employers. Such litigation could result in substantial costs and be a distraction to our management.

As is commonplace in the biotechnology industry, we employ individuals who were previously employed at other biotechnology or pharmaceutical companies, including at competitors or potential competitors. Although no claims against us are currently pending, we may be subject to claims that we or our employees have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and distract management.

Risks Related to our Common Stock

If we do not meet the continued listing standards of the NYSE MKT our common stock could be delisted from trading, which could limit investors’ ability to make transactions in our common stock and subject us to additional trading restrictions.

Our common stock is listed on the NYSE MKT, a national securities exchange, which imposes continued listing requirements with respect to listed shares. If we fail to satisfy the continued listing standards, including with respect to the maintenance of a minimum share price of \$1.00, or the board of directors of the NYSE MKT, in its discretion, determines that a condition exists that makes further dealings of our Company on the exchange unwarranted, the NYSE MKT may issue a non-compliance letter or initiate delisting proceedings. On March 6, 2017, the closing price of our common stock on the NYSE MKT was \$0.66, which, if sustained, could subject us to delisting. We have recently reduced our workforce and otherwise limited our business activities. Under NYSE MKT rules, any developments which substantially reduce the size of a listed company or the nature and scope of its operations, or any abandonment of a substantial portion of the listed company's business, or the listed company's inability to continue its business, among other reasons, may trigger a review of continued listing by the exchange. In addition, we may in the future sell or otherwise dispose of our principal operating assets or cease to be an operating company, either of which may cause the Board of Directors of the NYSE MKT to suspend dealings in or remove from listing our common stock.

If our securities are delisted from trading on the NYSE MKT and we are not able to list our securities on another exchange such as NASDAQ, our securities could be quoted on the OTC Marketplace or on the OTC Pink Marketplace. As a result, we could face significant adverse consequences including:

- a limited availability of market quotations for our securities;
- a determination that our common stock is a "penny stock" which will require brokers trading in our common stock to adhere to more stringent rules and possibly result in a reduced level of trading activity in the secondary trading market for our securities;
- a limited amount of news and analyst coverage for us; and
- a decreased ability to issue additional securities (including pursuant to short-form registration statements on Form S-3) or obtain additional financing in the future.

Our stock price is volatile.

The market price of our common stock has been, and is expected to continue to be, subject to significant volatility. The value of our common stock may decline regardless of our operating performance or prospects. Factors that may affect our market price include:

- our perceived prospects, including but not limited to any changes in U.S. Government funding of projects in which we participate;
- variations in our operating results and whether we have achieved key business targets;
- changes in, or our failure to meet, revenue estimates;
- changes in securities analysts' buy/sell recommendations;
- differences between our reported results and those expected by investors and securities analysts;
- announcements of new contracts or other developments by us or our competitors;
- reaction to any acquisitions, merger, joint ventures or strategic investments announced by us or our competitors; and
- general economic, political or stock market conditions.

Shares that we may issue in the future in connection with certain capital-raising transactions and shares available for future issuance upon exercise of warrants and options could dilute our stockholders and depress the market price of our common stock.

The issuance of our securities in the future may depress the market price of our stock, and any such financing(s) will dilute our existing stockholders.

As of December 31, 2016, aggregate gross sales for additional common stock of approximately \$3.0 million remained available under our controlled equity offering agreement, as amended.

In addition, as of December 31, 2016, we had outstanding options to purchase approximately 1.7 million shares of common stock (not including restricted shares). Additional shares are reserved for issuance under our 2007 Long-Term Incentive Compensation Plan. Our stock options are generally exercisable for ten years, with a significant portion exercisable either immediately or beginning one year after the date of the grant.

We filed two registration statements on Form S-3 (File Nos. 333-161587 and 333-176607) covering the resale of shares issued upon conversion of our 10% convertible notes and issuable upon exercise of related warrants by certain of our affiliates, among other security holders. Both registration statements have been declared effective. While the warrants expired on January 28, 2015 without being exercised, shares underlying the notes continue to be held by their original holders. Our obligation under the terms of the related registration rights agreement is to keep these registration statements effective until the last share issued upon conversion of the notes has been resold by the selling security holders or is eligible for resale without restrictions under Rule 144. The sale by these security holders of their shares pursuant to the registration statement or otherwise could depress the market price of our common stock.

Finally, as of December 31, 2016, we had issued and outstanding warrants to purchase up to approximately 1.1 million shares of common stock, of which, approximately 0.1 million remained outstanding on March 6, 2017.

The issuance or even the expected issuance of a large number of shares of our common stock upon purchase, conversion or exercise of the securities described above could depress the market price of our stock and the issuance of such shares will dilute the stock ownership of our existing stockholders. Shares that we may issue in the future in connection with certain capital-raising transactions and shares available for future issuance upon exercise of warrants and options could dilute our stockholders and depress the market price of our common stock.

We can give no assurances that we will ever again pay dividends.

Other than for the PharmAthene Board of Directors' declaration of a special one-time cash dividend of \$2.91 per share of PharmAthene common stock paid on February 3, 2017 to holders of record as of January 24, 2017, PharmAthene has never paid any dividends on its common stock. While subject to periodic review, our current policy is to retain all earnings, if any, primarily to finance our future growth or ability to consummate strategic transactions, such as a merger or other business combination. We make no assurances that we will ever pay future dividends, cash or otherwise. Whether we pay any dividends in the future will depend on our financial condition, results of operations, and other factors that we will consider.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Our principal executive offices are located at One Park Place, Annapolis, MD 21401 and are comprised of leased space of approximately 21,900 square feet. The lease expires in May 2017. On September 2, 2015, the Company entered into a sublease agreement with a third party with respect to a portion of its leased space. For additional information on the lease, please refer to Note 7 – *Commitments and Contingencies* in the Notes to our Consolidated Financial Statements.

Management believes that these facilities are suitable and adequate to meet our anticipated needs.

Item 3. Legal Proceedings.

In December 2006, we filed a complaint against SIGA in the Delaware Court of Chancery. The complaint alleged, among other things, that we have the right to license exclusively the development and marketing rights for SIGA's drug candidate, Tecovirimat, also known as ST-246[®], pursuant to a merger agreement between the parties that was terminated in 2006. The complaint also alleged that SIGA failed to negotiate in good faith the terms of such a license pursuant to the terminated merger agreement with us.

In September 2014, SIGA filed a voluntary petition for relief under Chapter 11 of the United States Bankruptcy Code in the U.S. Bankruptcy Court for the Southern District of New York (the “Bankruptcy Court”). SIGA’s petition for bankruptcy initiated a process whereby its assets were protected from creditors, including PharmAthene.

In January 2015, after years of litigation, the Delaware Court of Chancery issued a Final Order and Judgment, finding that we were entitled to receive a lump sum award of \$194.6 million plus additional interest.

On December 23, 2015, the Delaware Supreme Court affirmed the Delaware Court of Chancery's decision as a result of which, with additional post-judgment interest, if calculated based on the original decision, would provide for an estimated total award in excess of \$205 million.

On November 16, 2016, the Company received a final payment from SIGA of \$83.9 million which fully satisfied the judgment owed to PharmAthene. We received approximately \$217.1 million from SIGA during the year ended December 31, 2016, including additional amounts calculated as interest by SIGA.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market

Our common stock trades on the NYSE MKT under the symbol “PIP”. The following table sets forth the range of high and low sales prices per share of our common stock on the NYSE MKT for the past two years during the periods shown.

| Fiscal Year 2016 | High | Low |
|--------------------------------|-------------|------------|
| 4th Quarter ended December 31 | \$ 3.25 | \$ 2.75 |
| 3rd Quarter ended September 30 | \$ 2.91 | \$ 2.43 |
| 2nd Quarter ended June 30 | \$ 2.49 | \$ 1.96 |
| 1st Quarter ended March 31 | \$ 1.97 | \$ 1.56 |
| Fiscal Year 2015 | High | Low |
| 4th Quarter ended December 31 | \$ 1.95 | \$ 1.33 |
| 3rd Quarter ended September 30 | \$ 1.93 | \$ 1.30 |
| 2nd Quarter ended June 30 | \$ 1.84 | \$ 1.55 |
| 1st Quarter ended March 31 | \$ 1.77 | \$ 1.49 |

Holders

As of March 6, 2017, we had 38 record holders of our common stock. The number of record holders is based on the actual number of holders registered on the books of our transfer agent and does not reflect holders of shares in “street name” or persons, partnerships, associations, corporations or other entities identified in security position listings maintained by depository trust companies.

Special Dividend

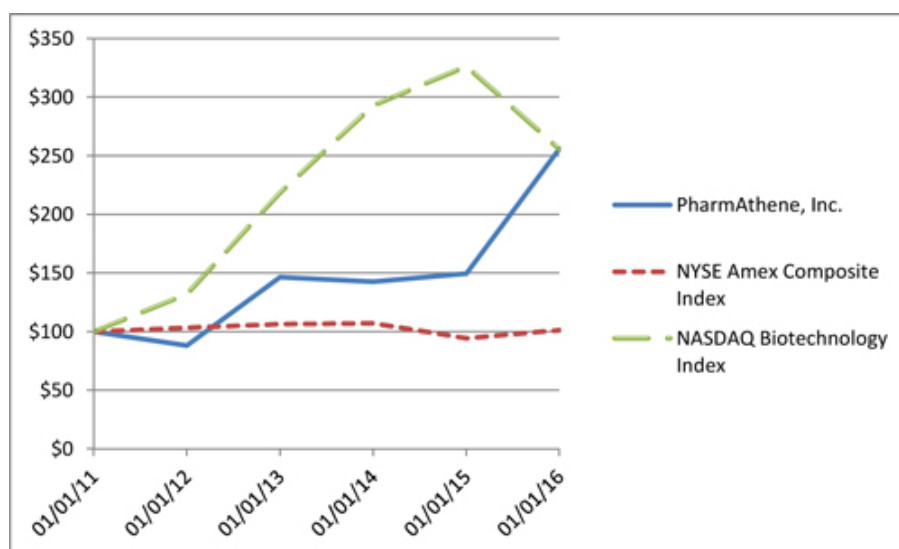
On November 17, 2016, the Company's Board of Directors declared a special one-time cash dividend of \$2.91 per share of common stock, paid on February 3, 2017. The special dividend, totaling an aggregate payment of approximately \$200 million, represented approximately 98% of the after tax net cash proceeds received from SIGA in satisfaction of the judgment owed by it to PharmAthene. In total, PharmAthene received payment of approximately \$217.1 million (including interest) from SIGA in connection with the judgment. Other than this special one-time cash dividend, PharmAthene has never paid any dividends on its common stock.

Performance Graph

The following line graph compares the cumulative total stockholder return through December 31, 2016, assuming reinvestment of dividends, by an investor who invested \$100 on December 31, 2011 in each of (i) our common stock, (ii) the NYSE MKT Composite Index; and (iii) the NASDAQ Biotechnology Index.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*

Among PharmAthene, Inc., NYSE MKT Composite Index, and the NASDAQ Biotechnology Index



* \$100 invested on 12/31/2011 in stock or index, including reinvestment of dividends. Fiscal year ending December 31.

| | 12/31/2011 | 12/31/2012 | 12/31/2013 | 12/31/2014 | 12/31/2015 | 12/31/2016 |
|----------------------------|------------|------------|------------|------------|------------|------------|
| PharmAthene, Inc. | \$ 100.00 | \$ 88.19 | \$ 146.46 | \$ 142.52 | \$ 149.61 | \$ 255.91 |
| NYSE MKT Composite Index | \$ 100.00 | \$ 103.39 | \$ 106.49 | \$ 107.29 | \$ 94.33 | \$ 101.30 |
| NASDAQ Biotechnology Index | \$ 100.00 | \$ 131.91 | \$ 218.45 | \$ 292.93 | \$ 326.39 | \$ 255.62 |

The stock price performance included in this graph is not necessarily indicative of future stock price performance.

Securities Authorized for Issuance Under Equity Compensation Plans

The information required by this Item concerning securities authorized for issuance under equity compensation plans is set forth under “Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.”

Recent Sales of Unregistered Securities

None.

Use of Proceeds

Not applicable.

Purchases of Equity Securities

Not applicable.

Item 6. Selected Financial Data.

You should read the following selected consolidated financial data together with our consolidated financial statements and the related notes included in this annual report on Form 10-K and the “Management’s Discussion and Analysis of Financial Condition and Results of Operations” section of this annual report.

We have derived the consolidated statement of operations data for the years ended December 31, 2016, 2015 and 2014 and the consolidated balance sheet data as of December 31, 2016 and 2015 from our audited consolidated financial statements, which are included elsewhere in this annual report on Form 10-K. We have derived the consolidated statements of operations data for the years ended December 31, 2013 and 2012 and the consolidated balance sheet data as of December 31, 2014, 2013 and 2012 from our audited consolidated financial statements that are not included in this annual report on Form 10-K. Our historical results for any prior period are not indicative of results to be expected in any future period.

Selected Financial Data

| | Year Ended December 31, | | | | |
|---|-------------------------|-----------------------|-----------------------|------------------------|-----------------------|
| | 2016 | 2015 | 2014 | 2013 | 2012 |
| Statements of operations data: | | | | | |
| Revenue | \$ 5,230,196 | \$ 10,640,660 | \$ 10,190,205 | \$ 17,912,607 | \$ 25,175,887 |
| Operating expenses: | | | | | |
| Research and development | 4,836,035 | 5,133,512 | 9,319,828 | 15,290,142 | 19,509,629 |
| General and administrative | 11,515,071 | 6,222,185 | 10,911,724 | 13,279,186 | 11,628,732 |
| Restructuring expense | - | 2,546,159 | - | - | - |
| Depreciation and amortization | 143,437 | 141,604 | 149,958 | 182,487 | 303,916 |
| Total operating expenses | <u>16,494,543</u> | <u>14,043,460</u> | <u>20,381,510</u> | <u>28,751,815</u> | <u>31,442,277</u> |
| Loss from operations | (11,264,347) | (3,402,800) | (10,191,305) | (10,839,208) | (6,266,390) |
| Other income (expense): | | | | | |
| Interest income (expense), net | 168,150 | (54,581) | (210,399) | (366,706) | (324,753) |
| Realization of cumulative translation adjustment | - | (229,192) | - | - | 1,227,656 |
| Change in fair value of derivative instruments | (957,070) | 299,477 | 508,817 | (444,622) | 591,039 |
| Other income litigation | 217,068,969 | - | - | - | - |
| Other income (expense) | 7,847 | 8,137 | (762) | (6,071) | 47,862 |
| Total other income (expense) | <u>216,287,896</u> | <u>23,841</u> | <u>297,656</u> | <u>(817,399)</u> | <u>1,541,804</u> |
| Net income (loss) before income taxes | 205,023,549 | (3,378,959) | (9,893,649) | (11,656,607) | (4,724,586) |
| Provision for income taxes | (11,169,376) | (61,746) | (61,746) | (61,746) | (195,529) |
| Net income (loss) | <u>\$ 193,854,173</u> | <u>\$ (3,440,705)</u> | <u>\$ (9,955,395)</u> | <u>\$ (11,718,353)</u> | <u>\$ (4,920,115)</u> |
| Basic net income (loss) per share | \$ 2.97 | \$ (0.05) | \$ (0.17) | \$ (0.23) | \$ (0.10) |
| Diluted net income (loss) per share | \$ 2.95 | \$ (0.05) | \$ (0.17) | \$ (0.23) | \$ (0.10) |
| Weighted-average shares used in calculation of basic net income (loss) per share | | | | | |
| Weighted-average shares used in calculation of basic net income (loss) per share | 65,306,962 | 63,986,013 | 57,535,325 | 50,659,116 | 48,323,067 |
| Weighted-average shares used in calculation of diluted net income (loss) per share | | | | | |
| Weighted-average shares used in calculation of diluted net income (loss) per share | 65,657,802 | 63,986,013 | 57,535,325 | 50,659,116 | 48,323,067 |

As of December 31,

| | 2016 | 2015 | 2014 | 2013 | 2012 |
|-----------------------------|----------------|---------------|---------------|---------------|---------------|
| Balance sheet data: | | | | | |
| Cash and cash equivalents | \$ 153,994,922 | \$ 15,569,813 | \$ 18,643,351 | \$ 10,480,979 | \$ 12,701,517 |
| Working capital | 17,432,283 | 15,047,425 | 16,668,843 | 7,543,127 | 12,307,429 |
| Total assets | 224,739,223 | 19,862,397 | 21,978,241 | 17,139,289 | 22,741,404 |
| Total long-term liabilities | 442,589 | 1,033,839 | 1,122,307 | 3,007,596 | 3,579,148 |
| Total stockholders' equity | 19,459,091 | 16,649,117 | 18,274,145 | 7,335,712 | 11,673,840 |

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

The following discussion should be read in conjunction with our consolidated financial statements, which present our results of operations for the years ended December 31, 2016, 2015 and 2014, as well as our financial positions at December 31, 2016 and 2015, contained elsewhere in this annual report on Form 10-K. Some of the information contained in this discussion and analysis or set forth elsewhere in this annual report, including information with respect to our plans and strategy for our business and related financing, includes forward-looking statements that involve risks and uncertainties. You should review the "Special Note Regarding Forward Looking Statements" and "Risk Factors" sections of this annual report for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are a biotechnology company engaged in developing a next generation anthrax vaccine. The next generation vaccine is intended to have more rapid time to protection, fewer doses for protection and less stringent requirements for temperature controlled storage and handling than the currently used vaccine.

Since 2006, we were engaged in legal proceedings with SIGA. On December 23, 2015, the Delaware Supreme Court affirmed the Delaware Court of Chancery's judgment against SIGA.

On November 16, 2016, the Company received the final payment from SIGA of \$83.9 million which fully satisfied the judgment owed to PharmAthene. In total, the Company received payment of approximately \$217.1 million including interest from SIGA.

The receipt of the award from SIGA did generate substantial taxable income to the Company, a portion of which was offset by the Company's tax net operating loss carryforwards. At December 31, 2016 we had available \$176.1 million in accumulated losses available to offset income, subject to a 382 limitation of approximately \$1 million. On November 25, 2015, the Company adopted a Shareholders Rights Plan to help ensure that the NOLs remain available to help maximize the value for our shareholders of any amount received from the SIGA litigation.

On August 5, 2016, the Company filed a formal protest against the Department of Health and Human Services "DHHS" challenging its solicitation for a next-generation anthrax vaccine provider. According to the protest, filed with the U.S. Government Accountability Office (the "GAO"), the government's "Request for Proposals" was written in a way that eliminated competition. The Company spent approximately \$1 million in related proposal, legal and professional consulting services. After discussions with DHHS, the Company agreed to withdraw the protest on August 25, 2016 when BARDA agreed to participate in conversations with NIAID and the Company on mechanisms to advance the SparVax-L vaccine program.

On January 18, 2017, we entered into the Merger Agreement in connection with the proposed Mergers with Altimmune, as further described below under the section entitled "*—Merger Agreement*".

Special Dividend

On November 17, 2016, the Company's Board of Directors declared a special one-time cash dividend of \$2.91 per share of common stock, paid on February 3, 2017.

The special dividend, totaled an aggregate payment of approximately \$200 million, which represented approximately 98% of the after tax net cash proceeds received from SIGA. The special dividend was approved by the Company's Board of Directors following the Company's receipt of \$83.9 million as final payment from SIGA in satisfaction of the judgment owed by it to PharmAthene. In total, PharmAthene received payment of approximately \$217.1 million (including interest) from SIGA in connection with the judgment.

Merger Agreement

On January 18, 2017, PharmAthene entered into the Merger Agreement, pursuant to which Altimmune will merge into Merger Sub Corp, with Altimmune as the surviving entity in Merger 1, and immediately thereafter, Altimmune will be merged with and into Merger Sub LLC, with Merger Sub LLC as the surviving entity in Merger 2. Upon consummation of the Mergers, Merger Sub Corp and Altimmune will cease to exist, and Merger Sub LLC will continue as a direct wholly owned subsidiary of PharmAthene. Upon completion of the Mergers, former PharmAthene security holders will own approximately 41.8% of the outstanding equity of the combined company, and former Altimmune security holders will own approximately 58.2% of the outstanding equity of the combined company, in each case, on an as converted and fully diluted basis. Following the anticipated consummation of the Mergers, PharmAthene would change its name to "Altimmune, Inc."

SIGA Litigation

In December 2006, we filed a complaint against SIGA in the Delaware Court of Chancery. The complaint alleged, among other things, that we have the right to license exclusively the development and marketing rights for SIGA's drug candidate, Tecovirimat, also known as ST-246[®], pursuant to a merger agreement between the parties that was terminated in 2006. The complaint also alleged that SIGA failed to negotiate in good faith the terms of such a license pursuant to the terminated merger agreement with us.

In September 2014, SIGA filed a voluntary petition for relief under Chapter 11 of the United States Bankruptcy Code in the U.S. Bankruptcy Court for the Southern District of New York (the "Bankruptcy Court"). SIGA's petition for bankruptcy initiated a process whereby its assets were protected from creditors, including PharmAthene.

In January 2015, after years of litigation, the Delaware Court of Chancery issued a Final Order and Judgment, finding that we were entitled to receive a lump sum award of \$194.6 million plus additional interest.

On December 23, 2015, the Delaware Supreme Court affirmed the Delaware Court of Chancery's decision as a result of which, with additional post-judgment interest, if calculated based on the original decision, would provide for an estimated total award in excess of \$205 million.

On November 16, 2016, the Company received a final payment from SIGA of \$83.9 million which fully satisfied the judgment owed to PharmAthene. We received approximately \$217.1 million from SIGA during the year ended December 31, 2016, including additional amounts calculated as interest by SIGA.

Critical Accounting Policies

A “critical accounting policy” is one that is both important to the portrayal of our financial condition and results of operations and that requires management’s most difficult, subjective or complex judgments. Such judgments are often the result of a need to make estimates about the effect of matters that are inherently uncertain. The preparation of our financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ materially from those estimates.

A summary of our critical accounting policies, including those that require the use of significant estimates and judgment, follows. A more comprehensive description of all of our significant accounting policies is contained in Note 2 to our Consolidated Financial Statements.

Revenue Recognition

Our revenue for the years presented is generated from two types of contractual arrangements, which are cost-plus-fee contracts and fixed price contracts. Revenue is recognized when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the seller’s price to the buyer is fixed or determinable, and collectability is reasonably assured.

Revenue on cost-plus-fee contracts is recognized in an amount equal to the costs incurred during the period plus an estimate of the applicable fee earned. The estimate of the applicable fee earned is determined by reference to the contract: if the contract defines the fee in terms of risk-based milestones and specifies the fees to be earned upon the completion of each milestone, then the fee is recognized when the related milestones are earned, as further described below; otherwise, we estimate the fee earned in a given period by using a proportional performance method based on costs incurred during the period as compared to total estimated project costs and application of the resulting fraction to the total project fee specified in the contract.

Under the milestone method of revenue recognition, milestone payments (including milestone payments for fees) contained in research and development arrangements are recognized as revenue when: (i) the milestones are achieved; (ii) no further performance obligations with respect to the milestone exist; (iii) collection is reasonably assured; and (iv) substantive effort was necessary to achieve the milestone.

Milestones are considered substantive if all of the following conditions are met:

- is commensurate with either our performance to meet the milestone or the enhancement of the value of the delivered item or items as a result of a specific outcome resulting from our performance to achieve the milestone
- it relates solely to past performance, and
- the value of the milestone is reasonable relative to all the deliverables and payment terms (including other potential milestone consideration) within the arrangement.

If a milestone is deemed not to be substantive, the Company recognizes the portion of the milestone payment as revenue that correlates to work already performed; the remaining portion of the milestone payment is deferred and recognized as revenue as the Company completes its performance obligations.

Revenue on fixed price contracts (without substantive milestones as described above) is recognized on the percentage-of-completion method. The percentage-of-completion method recognizes revenue as the contract progresses based on the total costs expended as compared to an estimate of the total costs on the contract. The use of the percentage-of-completion method depends on the ability to make reasonable dependable estimates and the fact that circumstances may necessitate frequent revision of estimates does not indicate that the estimates are unreliable for the purpose for which they are used.

Revenue on fixed price contracts with substantive milestones as described above is recognized as each milestone is achieved. Revenue may be recognized upon completion of the contract, when substantive delivery is achieved, transfer of title takes place and payment is reasonably assured.

As a result of our revenue recognition policies and the billing provisions contained in our contracts, the timing of customer billings may differ from the timing of recognizing revenue. Amounts recognized as revenue in excess of amounts billed to customers are reflected on the balance sheet as unbilled accounts receivable. Amounts invoiced to customers in excess of revenue recognized are reflected on the balance sheet as deferred revenue.

Share-Based Payments

We have a long-term incentive compensation plan (“LTIP”) under which options to purchase shares of our common stock may be granted to employees, consultants and nonemployee directors at a price no less than the quoted market value on the date of grant. The LTIP also provides for awards in the form of stock appreciation rights, restricted or unrestricted stock awards, stock-equivalent units or performance-based stock awards.

We account for share-based awards to employees, consultants and non-employee directors at fair value. The amount of compensation expense recognized using the fair value method requires us to exercise judgment and make assumptions relating to the factors that determine the fair value of our stock option grants. We use the Black-Scholes option-pricing model to estimate the fair value of our option grants. The fair value calculated by this model is a function of several factors, including grant price, the risk-free interest rate, the expected term of the option and the anticipated volatility of the option.

Goodwill

We continually assess the realizability and recoverability of our goodwill. Recoverability of goodwill is reviewed by comparing our market value (as measured by our stock price multiplied by the number of outstanding shares as of the assessment date) to the net book value of our equity. If our market value exceeds our net book value, no further analysis is required. We completed our annual impairment assessment of goodwill on December 31, 2016 and determined that there was no impairment at that date.

Financial Instruments

Our financial instruments, and/or embedded features contained in those instruments, often are classified as derivative liabilities and are recorded at their fair values. The determination of fair value of these instruments and features requires estimates and judgments. Some of our stock purchase warrants are considered to be derivative liabilities due to the presence of net settlement features and/or non-standard anti-dilution provisions. Generally the fair value of our warrants is determined based on the Black-Scholes option-pricing model. Use of the Black-Scholes option-pricing model requires the use of unobservable inputs such as the expected term, anticipated volatility and expected dividends.

Results of Operations

Year Ended December 31, 2016 Compared to December 31, 2015

Revenue

We recognized revenue of \$5.2 million and \$10.6 million during the years ended December 31, 2016 and 2015, respectively.

During 2016 and 2015, our revenue was derived primarily from contracts with the U.S. Government for the development of anthrax vaccine programs. Our revenue changed in 2016 from 2015 primarily due to the following:

Under our existing contract with NIAID for the development of a next generation lyophilized anthrax vaccine (“SparVax-L”) based on the Company’s proprietary technology platform which contributes the rPA bulk drug substance that is used in the liquid SparVax[®] formulation, we recognized \$4.4 million and \$4.5 million of revenue during the years ended December 31, 2016 and 2015, respectively. Revenue recognized to date under this contract is \$9.5 million. The contract is incrementally funded. Over the base period of the agreement, we were awarded initial funding of approximately \$5.2 million, which includes a cost reimbursement component and a fixed fee component payable upon achievement of certain milestones. NIAID exercised the first and second options under this agreement in the third and fourth quarters of 2015, respectively, and exercised the third and fourth options under this agreement in the third and fourth quarters of 2016, respectively. The exercised options provide additional funding of approximately \$8.8 million and an extension of the period of performance through December 31, 2017. The contract has a total value of up to approximately \$28.1 million, if all technical milestones are met and all eight contract options are exercised by NIAID. If NIAID exercises all options, the contract would last approximately five years. If NIAID does not exercise any additional options, the contract would expire by its terms on December 31, 2017.

Under our contract for the development of SparVax[®] (the liquid second generation rPA) with BARDA, we recognized \$0.8 million and \$6.1 million during the year ended December 31, 2016 and 2015, respectively. During 2016, our revenue was the result of an audit by BARDA for 2014 and subsequent one-time cash payment. During 2015, revenue was primarily attributable to the receipt of a one-time payment as a result of an audit completed by BARDA and contract wind-up activity. In 2014, BARDA audited indirect costs or rates charged by us on the SparVax[®] contract for the years 2008 through 2013. We billed and recognized revenue using the provisional rates as defined in the contract. As a result of the audit, we recognized revenue and received payment of \$5.8 million in 2015, representing the difference between actual rates (i.e., actual cost to us) and the provisional rates used to calculate previously billed and recognized revenue. In 2016, BARDA audited and paid our final invoice for \$0.8 million for 2015 related costs and other related items. This final invoice included all settlement costs claimed by PharmAthene.

Research and Development Expenses

Our research and development expenses were \$4.8 million and \$5.1 million for the years ended December 31, 2016 and 2015, respectively, representing a year-over-year decrease of \$0.3 million, or 5.7%. These expenses resulted from research and development activities in all periods related primarily to our anthrax vaccine programs. Direct expenses included salaries and other costs of personnel, raw materials and supplies, and an allocation of indirect expenses. We also incurred third-party costs, such as contract research, consulting, and clinical development costs for individual projects.

In accordance with our realignment plan, or Realignment Plan, approved by our Board on March 9, 2015 (with the goal of preserving and maximizing, for the benefit of our stockholders, the value of the proceeds from the SIGA litigation and our existing biodefense assets, and which plan eliminated approximately two-thirds of our workforce and aimed to preserve sufficient cash and cash equivalents to finance our continued operations through a period of time expected to extend beyond our collection of the amount awarded to us by the Delaware Chancery Court’s affirmed judgment), labor and related indirect costs decreased period over period. In addition, costs were incurred in 2015 to further the NIAID SparVax-L program.

Expenses from research and development activities in both periods related primarily to our SparVax[®] programs. Direct expenses included salaries and other costs of personnel, raw materials and supplies, and an allocation of indirect expenses. We also incurred third-party costs, such as contract research, consulting and clinical development costs for individual projects.

General and Administrative Expenses

General and administrative functions include executive management, finance and administration, government affairs and regulations, corporate development, human resources, legal, and compliance. For each function, we may incur expenses such as salaries, supplies and third-party consulting and other external costs and non-cash expenditures such as expense related to stock option and restricted share awards. An allocation of indirect costs such as facilities, utilities and other administrative overhead is also included in general and administrative expenses.

General and administrative expenses increased by \$5.3 million, or 85%, to \$11.5 million for the year ended December 31, 2016, from \$6.2 million for 2015. The increase is primarily due to an increase in stock compensation expense and expenses related to the preparation of the proposal and protest to DHHS in response to the request for a next generation anthrax vaccine, and costs associated with the proposed Merger with Altimmune, offset by a decrease in SIGA related legal expenses.

Other Income (Expense)

Other income was \$216.3 million and \$0.02 million for the years ended December 31, 2016 and 2015, respectively.

Other income for the year ended December 31, 2016 primarily consists of payments of approximately \$217.1 million received from SIGA, interest income from our short-term investments of approximately \$0.2 million, offset by approximately \$1.0 million of unrealized losses from the change in fair value of our derivative financial instruments.

Other income for the year ended December 31, 2015 primarily consists of the realization of cumulative translation adjustments on the substantial liquidation of our wholly owned United Kingdom subsidiary, PharmAthene UK Limited, changes in the fair value of our derivative financial instruments and interest expense on our debt and other financial obligations. In June 2015, we substantially liquidated our United Kingdom subsidiary, PharmAthene UK Limited, which we had acquired in 2008. Prior to substantially liquidating the UK subsidiary, currency fluctuations were recorded as foreign currency translation adjustments, a component of other comprehensive income. As a result of the substantially completed liquidation, we realized an approximate loss of \$0.2 million in our consolidated statement of operations, which represents the amount of previously recorded foreign currency translation adjustments related to our UK subsidiary.

Income Taxes

The provision for income taxes was approximately \$11.2 million and \$0.1 million during the years ended December 31, 2016 and 2015. Our provision for income taxes for 2016 relates to income generated from payments received from SIGA primarily offset by the usage of the majority of our net operating losses and for 2015 it results from the difference between the treatment of goodwill for income tax purposes and for U.S. GAAP purposes.

Year Ended December 31, 2015 Compared to December 31, 2014

Revenue

We recognized revenue of \$10.6 million and \$10.2 million during the years ended December 31, 2015 and 2014, respectively.

| Revenue (\$ in millions) | Year ended December 31, | | |
|--|-------------------------|----------------|-------------|
| | 2015 | 2014 | % Change |
| SparVax [®] and next generation anthrax vaccine | \$ 10.6 | \$ 8.7 | 21.8% |
| rBChE bioscavenger | - | 0.5 | (100.0)% |
| Valortim [®] | - | 1.0 | 100.0% |
| Total revenue | <u>\$ 10.6</u> | <u>\$ 10.2</u> | <u>3.9%</u> |

During 2015, our revenue was derived from contracts with the U.S. Government for the development of anthrax vaccine programs. During 2014, our revenue was derived from contracts with the U.S. Government for the development of anthrax vaccine programs, our rBChE bioscavenger, and Valortim[®]. Our revenue changed in 2015 from 2014 primarily due to the following:

Under our contract for the development of SparVax[®] (the liquid second generation rPA) with BARDA, we recognized \$6.1 million and \$8.1 million of revenue for the years ended December 31, 2015 and 2014, respectively. During 2015, revenue was primarily attributable to the receipt of a one-time payment as a result of an audit completed by BARDA and contract wind-up activity. On April 4, 2014, we received notification from BARDA, advising us of its decision to de-scope the SparVax[®] anthrax vaccine contract through a partial termination for convenience. The contract formally expired on February 28, 2015.

In 2014, BARDA audited indirect costs or rates charged by us on the SparVax[®] contract for the years 2008 through 2013. We billed and recognized revenue using the provisional rates as defined in the contract. As a result of the audit, we recognized revenue and received payment of \$5.8 million in 2015, representing the difference between actual rates (i.e., actual cost to us) and the provisional rates used to calculate previously billed and recognized revenue.

- On September 9, 2014, we signed a contract with NIAID for the development of SparVax-L. The contract is incrementally funded. Under this agreement, we recognized \$4.5 million in revenue, including milestone revenue of \$0.2 million in 2015. We recognized \$0.6 million in revenue for the year ended December 31, 2014. The contract has a total value of up to approximately \$28.1 million, if all technical milestones are met and all eight contract options are exercised by NIAID. If NIAID exercises all options, the contract would last approximately five years. If NIAID does not exercise any additional options, the contract would expire by its terms on December 31, 2017.
- Our contract with Chemical Biological Medical Systems (“CBMS”), for our second generation rBChE bioscavenger ended on September 8, 2014. We do not foresee any additional funding for this program. Revenue in support of contract activities for the year ended December 31, 2014 was \$0.5 million. We do not foresee any additional funding for this program.
- With respect to our Valortim[®] development program, we did not recognize any revenue in 2015 compared to \$1.0 million of revenue in 2014. Under the fixed price order awarded by BARDA in 2013 for Valortim[®] which is an indefinite delivery, indefinite quantity, or “IDIQ” contract, delivery was made in the fourth quarter of 2014. Additional government funding has not been awarded for the development of Valortim[®]. We do not foresee any additional funding for this program.

Research and Development Expenses

Our research and development expenses were \$5.1 million and \$9.3 million for the years ended December 31, 2015 and 2014, respectively, representing a year-over-year decrease of \$4.2 million, or 45.2%. Expenses from research and development activities in both periods related primarily to our SparVax[®] and rBChE bioscavenger programs. Direct expenses included salaries and other costs of personnel, raw materials and supplies, and an allocation of indirect expenses. We also incurred third-party costs, such as contract research, consulting and clinical development costs for individual projects.

Research and development expenses for the years ended December 31, 2015 and 2014 were attributable to research programs as follows:

| Expenses (\$ in millions) | Year Ended December 31, | | |
|--|-------------------------|--------|----------|
| | 2015 | 2014 | % Change |
| SparVax [®] , next generation anthrax vaccine and Valortim [®] | \$ 5.1 | \$ 8.9 | (42.7)% |
| rBChE bioscavenger | - | 0.4 | (100.0)% |
| Total research and development expenses | \$ 5.1 | \$ 9.3 | (45.2)% |

For the year ended December 31, 2015, research and development expenses decreased \$4.2 million from 2014, primarily due to decreased costs related to our BARDA sponsored SparVax[®] program, as a result of BARDA’s de-scoping of the contract and the expiration of the period of performance under our rBChE bioscavenger contract on September 8, 2014. In accordance with the Company’s Realignment Plan, labor and related indirect costs decreased. Costs were incurred in 2015 to further the NIAID (lyophilized) program.

General and Administrative Expenses

General and administrative functions include executive management, finance and administration, government affairs and regulations, corporate development, human resources, legal, and compliance. For each function, we may incur expenses such as salaries, supplies and third-party consulting and other external costs and non-cash expenditures such as expense related to stock option and restricted share awards. An allocation of indirect costs such as facilities, utilities and other administrative overhead is also included in general and administrative expenses.

General and administrative expenses decreased by \$4.7 million, or 43.0%, to \$6.2 million for the year ended December 31, 2015, from \$10.9 million for 2014. The reduction in expenses is primarily due to a reduction in employee costs resulting from our implementation of the Realignment Plan and a reduction in legal expenses.

Other Income

Other income was \$0.02 million and \$0.3 million for the years ended December 31, 2015 and 2014, respectively. Other income for the year ended December 31, 2015 primarily consisted of unrealized gains from the change in fair value of our derivative financial instruments, offset by the realization of cumulative translation adjustment on the substantial liquidation of our wholly owned United Kingdom subsidiary, PharmAthene UK limited and interest expense on our debt and other financial obligations. Other income for the year ended December 31, 2014 primarily consisted of unrealized gains from the change in fair value of our derivative financial instruments of approximately \$0.5 million, offset by interest expense on our debt and other financial obligations of approximately \$0.2 million.

Income Taxes

The provision for income taxes was \$0.1 million during the years ended December 31, 2015 and 2014. Our provision for income taxes results from the difference between the treatment of goodwill for income tax purposes and for U.S. GAAP purposes.

Liquidity and Capital Resources

Overview

Our primary source of cash during the year ended December 31, 2016 was approximately \$217.1 million in proceeds received from SIGA, proceeds received under our contract with NIAID, and proceeds received from the issuance of common stock due to stock options exercised.

We received \$217.1 million from SIGA during the year ended December 31, 2016, comprised of principal payments of \$208.7 million and \$8.4 million of payments calculated by SIGA as interest on the judgment, all of which has been recorded in other income – litigation on the consolidated statement of operations.

Our primary sources of cash during 2015 were amounts paid under our contract with NIAID, the receipt of a \$5.8 million one-time payment as the result of an audit completed by BARDA, and proceeds received from the issuance of common stock due to stock options exercised. As noted above, in 2014, BARDA audited indirect costs or rates charged by us on the SparVax[®] contract for the years 2008 through 2013. We billed and recognized revenue using the provisional rates as defined in the contract. As a result of the audit, we recognized revenue and received payment of \$5.8 million in 2015, representing the difference between actual rates (i.e., actual cost to us) and the provisional rates used to calculate previously billed and recognized revenue.

Our sole sources of revenue consist of (1) revenues under our September 2014 agreement with NIAID for the development of SparVax-L and (2) any potential revenue adjustments related to the future audits of the BARDA contract for the periods after 2014.

The NIAID agreement is incrementally funded. Over the base period of the agreement, we were awarded initial funding of approximately \$5.2 million, which includes a cost reimbursement component and a fixed fee component payable upon achievement of certain milestones. NIAID has exercised four options under this agreement to provide additional funding of approximately \$8.8 million and an extension of the period of performance through December 31, 2017. The contract has a total value of up to approximately \$28.1 million, if all technical milestones are met and all eight contract options are exercised by NIAID. NIAID may exercise the options in its sole discretion. If NIAID exercises all options, the contract would last approximately five years. If NIAID does not exercise any additional options, the contract would expire by its terms on December 31, 2017.

We have incurred significant losses since we commenced operations. As of December 31, 2016, we had an accumulated deficit of approximately \$29.9 million since our inception.

Historically, we have not generated positive cash flows from operations. To bridge the gap between payments made to us under our U.S. Government contracts and grants and our operating and capital needs, we have had to rely on a variety of financing sources, including the issuance of equity and equity-linked securities and proceeds from SIGA litigation. On March 25, 2013, we entered into a controlled equity offering arrangement pursuant to which we could offer and sell, from time to time, through a sales agent, shares of our common stock having an aggregate offering price of up to \$15.0 million, which we later amended on May 23, 2014 to increase the offering amount by \$15.0 million. During the years ended December 31, 2016 and December 31, 2015, we did not sell any shares of our common stock under the controlled equity offering sales agreement. During 2014, we generated net proceeds of approximately \$17.8 million under this agreement, as amended. Aggregate gross proceeds of up to \$3.0 million remain available under this agreement. We have no current plans to sell any shares under the controlled equity agreement.

On September 3, 2015, we satisfied in full our remaining obligations under our March 2012 Loan Agreement with General Electric Capital Corporation (“GE”). The termination of the Loan Agreement released us from our obligations under the Loan Agreement, which were collateralized by a security interest in substantially all of our assets.

On March 9, 2015, our Board of Directors approved our Realignment Plan with the goal of preserving and maximizing, for the benefit of our stockholders, the value of any proceeds from the SIGA litigation and our existing biodefense assets. The plan eliminated approximately two-thirds of our workforce and aimed to preserve sufficient cash and cash equivalents to finance our continued operations through a period of time expected to extend beyond our collection of the amount awarded to us by the Delaware Chancery Court’s affirmed judgment. The Company paid total severance payments of approximately \$2.0 million to executives and non-executives in connection with the Realignment Plan, of which \$1.9 million was paid in 2015, and the balance was paid in 2016.

Cash Flows

The following table provides information regarding our cash flows for the years ended December 31, 2016, 2015 and 2014.

| | Year Ended December 31, | | |
|--|--------------------------------|-----------------------|---------------------|
| | 2016 | 2015 | 2014 |
| Net cash provided by (used in): | | | |
| Operating activities | \$ 201,508,238 | \$ (3,215,981) | \$ (8,474,042) |
| Investing activities | (66,877,586) | (78,907) | (84,269) |
| Financing activities | 3,800,831 | 223,125 | 16,733,524 |
| Effects of exchange rates on cash | (6,374) | (1,775) | (12,841) |
| Total increase (decrease) in cash and cash equivalents | <u>\$ 138,425,109</u> | <u>\$ (3,073,538)</u> | <u>\$ 8,162,372</u> |

Sources and Uses of Cash

Cash and cash equivalents were \$154.0 million, \$15.6 million and \$18.6 million at December 31, 2016, 2015 and 2014, respectively. The \$138.4 million increase at December 31, 2016 compared to December 31, 2015 was primarily attributable to the SIGA proceeds included in cash provided by operating activities, \$3.8 million in proceeds from stock option exercises included in cash provided by financing activities, offset by \$66.8 million in purchases of short-term investments included in cash used in investing activities. The \$3.1 million decrease at December 31, 2015 compared to December 31, 2014 was primarily attributable to \$3.2 million of cash used in operations, the \$0.8 million repayment of the GE term loan, and \$0.1 million in purchases of fixed assets, partially offset by \$1.0 million in proceeds from stock option exercises.

Operating Activities

Net cash provided by operating activities was approximately \$201.5 million for the year ended December 31, 2016. Net cash used by operating activities was approximately \$3.2 million and \$8.5 million for the years ended December 31, 2015 and 2014, respectively.

Net cash provided by operating activities during 2016 primarily reflects our net income of \$193.9 million, adjusted for \$2.2 million for non-cash share-based compensation expense, the increase in the fair value of our derivative instruments of \$1.0 million and \$0.3 million for other non-cash expenses. An increase in prepaid expenses and other current assets of \$0.3 million was offset by a \$0.5 million decrease in receivables (billed and unbilled). Increases in accrued expenses and other liabilities, accrued income taxes payable and accounts payable of \$0.8 million, \$3.2 million and \$0.4 million, respectively, were offset by a \$0.4 million decrease in accrued restructuring expenses.

Net cash used by operating activities during 2015 primarily reflects our net loss of \$3.4 million, adjusted for \$0.6 million for non-cash share-based compensation expense, the realization of a cumulative translation adjustment of \$0.2 million, \$0.2 million for other non-cash expenses, offset by the decrease in the fair value of our derivative instruments of \$0.3 million. Receivables (billed and unbilled) increased by \$1.1 million, accounts payable increased \$0.1 million, and accrued restructuring expenses were \$0.5 million.

Net cash used by operating activities during 2014 primarily reflects our net loss of \$10.0 million, adjusted for \$1.7 million for non-cash share-based compensation expense, \$0.5 million for the increase in the fair value of derivative instruments and \$0.3 million for other non-cash expenses.

Investing Activities

During the year ended December 31, 2016, the Company purchased \$66.8 million in short-term U.S. Treasury securities and government-sponsored enterprise securities. There were no significant investing activities for the years ended December 31, 2015 and 2014, respectively.

Financing Activities

Net cash provided by financing activities was \$3.8 million for the year ended December 31, 2016, as compared to \$0.2 million for the year ended December 31, 2015 and \$16.7 million for the year ended December 31, 2014.

Net cash provided by financing activities for the year ended December 31, 2016 was primarily due to \$3.8 million in proceeds received from the issuance of common stock due to stock options exercised.

Net cash provided by financing activities for the year ended December 31, 2015 was primarily due to \$1.0 million in proceeds received from the issuance of common stock due to stock options exercised, partially offset by a \$0.8 million repayment of the GE term loan.

Net cash provided by financing activities for the year ended December 31, 2014 was primarily due net proceeds received of \$18.1 million from the sale of our common stock under the controlled equity offering arrangement and \$0.7 million from the exercise of warrants, partially offset by a \$2.1 million repayment of the GE loans.

During 2016 and 2015, we did not generate any proceeds under the controlled equity offering sales agreement, as amended. Aggregate gross proceeds of up to \$3.0 million remain available under this arrangement. We have no current plans to sell any shares under the controlled equity agreement. For more information on the controlled equity offering sales agreement, see Note 8 – *Stockholders' Equity – Controlled Equity Offering* in the consolidated financial statements.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements.

Contractual Obligations

The following are contractual commitments at December 31, 2016:

| Contractual Obligations ⁽¹⁾ | Total | Less than 1 Year | 1-3 Years | 3-5 Years | More than 5 Years |
|--|---------------------|---------------------|-------------|-------------|----------------------|
| Operating facility leases ⁽²⁾ | \$ 356,911 | \$ 356,911 | \$ - | \$ - | \$ - |
| Research and development agreements | 1,811,813 | 1,811,813 | - | - | - |
| Total contractual obligations | <u>\$ 2,168,724</u> | <u>\$ 2,168,724</u> | <u>\$ -</u> | <u>\$ -</u> | <u>\$ -</u> |

(1) This table does not include any royalty payments relating to any future sales of products subject to license agreements we have entered into in relation to our in-licensed technology, as the timing and likelihood of such payments are not known. The table also excludes any obligations related to registration rights agreements, as a result of a maintenance failure (as defined in such agreements), as the likelihood of any such payment is not probable. See additional discussion in Note 7 – *Commitments and Contingencies* in the consolidated financial statements

(2) Lease obligations have not been reduced by the minimum sublease rentals of \$0.1 million due in the future under noncancellable subleases.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk.

Our exposure to market risk is currently confined to our cash and cash equivalents and our revolving line of credit. We currently do not hedge interest rate exposure or foreign currency exchange exposure. We have not used derivative financial instruments for speculation or trading purposes.

The Company's current operations in foreign countries are minimal. We have closed our operations in Canada, and have substantially liquidated our UK subsidiary. A 10% change in exchange rates (against the U.S. dollar) would not have a material impact on earnings, fair values or cash flow.

Because of the short-term maturities of our cash and cash equivalents and short-term investments, we do not believe that an increase in market interest rates would have a significant impact on their realized value.

The change in fair value of our derivative instruments is calculated utilizing the Black-Scholes model; therefore, a 10% increase/decrease in the closing price of our common stock at December 31, 2016, would have resulted in a change in fair value of derivative instruments and our earnings of approximately \$0.3 million.

Item 8. Financial Statements and Supplementary Data.

Our financial statements and supplementary data required to be filed pursuant to this Item 8 appear in a separate section of this report beginning on page F-1.

Item 9. Changes In and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures pursuant to Rule 13a-15 under the Securities Exchange Act of 1934, as of the end of the period covered by this Annual Report on Form 10-K.

Based on this evaluation, our principal executive officer and principal financial officer concluded that, as of December 31, 2016, our disclosure controls and procedures were effective to ensure that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Management’s Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rule 13a-15(f) under the Exchange Act. Our management conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, our management has concluded that our internal control over financial reporting was effective as of December 31, 2016.

Limitations on Effectiveness of Controls and Procedures

In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs.

The Company’s independent registered public accounting firm has issued a report on the effectiveness of internal control over financial reporting. This report dated March 14, 2017 appears on page F-2 of this Form 10-K.

Changes in Internal Control Over Financial Reporting

There was no change in the Company’s internal control over financial reporting during the most recently completed fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting.

Item 9B. Other Information.

None.

Part III

Item 10. Directors, Executive Officers and Corporate Governance.

Directors

PharmAthene’s directors are elected at each annual meeting of stockholders and hold office until the next annual meeting of stockholders and until their successors have been elected and qualified. Our Bylaws provide that the number of Directors constituting the entire Board shall be not less than one nor more than nine as determined by resolution of the Board. Our Board currently has six Directors, each of whom was elected at the 2016 annual meeting of stockholders.

Set forth below is information regarding each of our Directors.

| Name | Age | Position |
|---------------------------|------------|---|
| John M. Gill | 65 | Director, President and Chief Executive Officer |
| Eric I. Richman | 56 | Director |
| Jeffrey W. Runge, M.D.* | 61 | Director |
| Mitchel B. Sayare, Ph.D.* | 69 | Chairman of the Board |
| Derace L. Schaffer, M.D.* | 69 | Director |
| Steven St. Peter, M.D.* | 50 | Director |

* Currently independent director.

John M. Gill. Mr. Gill has served as a member of the Board since August 2007 and from February 2004 to August 2007 served as a member of the Board and as Chairman of the Audit Committee of our predecessor, privately-held PharmAthene (“Former PharmAthene”). On March 12, 2015, Mr. Gill became our President and Chief Executive Officer. Mr. Gill is expected to devote necessary time to carry out his duties as President and Chief Executive Officer, and although he does not have other employment, he is not expected to devote his full time to the business of the Company. From 2003 to 2013, Mr. Gill served as the President, Chief Executive Officer, co-founder and a Director of TetraLogic Pharmaceuticals Corporation, a public biopharmaceutical company. He is also an advisor or director of other private companies, the Kimmel Cancer Center at Thomas Jefferson University, and other non-profit community organizations. Mr. Gill has previously held positions at 3-Dimensional Pharmaceuticals and SmithKline Beecham. Mr. Gill earned a B.A. from Rutgers University after serving in the United States Marine Corps. Mr. Gill was chosen to serve as a director of the Company because of his executive and Board experience in the pharmaceutical industry and his substantial financial knowledge and expertise.

Eric I. Richman. Mr. Richman has served as a member of the Board since May 2010. Mr. Richman was appointed our President and Chief Operating Officer in March 2010, our interim Chief Executive Officer in May 2010 and our Chief Executive Officer in October 2010. He served as our President and Chief Executive Officer through March 11, 2015. Prior to his March 2010 appointment, Mr. Richman was our Senior Vice President, Business Development and Strategic Planning since August 2003. Prior to joining the Company, Mr. Richman held various commercial and strategic positions of increasing responsibility over a 12 year period at MedImmune, Inc. from its inception and was Director, International Commercialization at that company. Mr. Richman previously served as director of Lev Pharmaceuticals (until its acquisition by ViroPharma Incorporated in 2008) and American Bank (until its acquisition by Congressional Bancshares in 2015) and has been serving as director of ADMA Biologics, Inc. since 2007 and director of Therabron Therapeutics, Inc. Mr. Richman earned a B.S. in biomedical science from the Sophie Davis School of Biomedical Education (CUNY Medical School) and a M.B.A. from the American Graduate School of International Management. Mr. Richman was chosen to serve on the Board because of his years of experience as executive officer at the Company and his experience in the areas of business development and commercialization. As our former Chief Executive Officer, Mr. Richman provides the Board with critical insight into the day-to-day operations of the Company.

Jeffrey W. Runge, M.D. Dr. Runge has served as a member of the Board since December 2009. Dr. Runge is a former Principal at The Chertoff Group, a firm providing advisory services in business risk management, homeland security and homeland defense, where he now serves as senior advisor for biodefense and the health sector. He is also the President and founder of Biologue, Inc., which provides consulting in biodefense, medical preparedness and injury prevention and control. Dr. Runge is an Adjunct Professor of Emergency Medicine at the University of North Carolina (UNC) — Chapel Hill and is the Director of the National Collaborative for Bio-Preparedness, a national biodefense asset under development for the Department of Homeland Security (DHS). From 2001 through August of 2008, Dr. Runge served in the Bush administration, first as the head of the National Highway Traffic Safety Administration, and, beginning in September 2005, as the Department of Homeland Security’s first Chief Medical Officer. Dr. Runge founded the DHS Office of Health Affairs in 2007 and was confirmed by the Senate as DHS’s first Assistant Secretary for Health Affairs in December of 2007. Dr. Runge also served as Acting DHS Undersecretary for Science and Technology from February through August 2006. In his role at DHS, Dr. Runge oversaw the operations of the department’s biodefense activities, medical preparedness and workforce health protection, including managing DHS’ role in Project BioShield, working with the various federal departments on medical countermeasure assurance. Prior to joining DHS, Dr. Runge was Assistant Chairman of the Department of Emergency Medicine at the Carolinas Medical Center in Charlotte, North Carolina, from 1984 through 2001. Dr. Runge served on the board of directors of Conmed Corporation in 2011 and 2012. Dr. Runge earned a M.D. from the Medical University of South Carolina and his undergraduate degree from the University of the South. Dr. Runge was chosen to serve as a director of the Company because of his invaluable background in the public sector, particularly his experience in the Bush administration as a founder of the DHS Office of Health Affairs, as well as his practical experience in the medical field.

Mitchel B. Sayare, Ph.D. Dr. Sayare has been a member of the Board since April 2010 and was appointed Chairman of the Board in July 2011. Until 2010, Dr. Sayare served as the Chairman of the Board of public company ImmunoGen, Inc. (a position he had held since 1989). In addition, he served as ImmunoGen’s Chief Executive Officer from 1986 to December 31, 2009, and as its President from 1986 to 1992, and from 1994 to July 2008. He currently serves as a consultant to ImmunoGen. Prior to joining ImmunoGen, he served as Vice President of Development of Xenogen from 1982 to 1985. Prior to that he was Assistant Professor of Biophysics and Biochemistry at the University of Connecticut. Dr. Sayare earned a Ph.D. in biochemistry from Temple University School of Medicine. Dr. Sayare is a director of Boston IVF, Inc., Cymogen Dx, Inc. and Isabella Products, Inc., all privately-held companies. Dr. Sayare was chosen to serve as a director because of his substantial experience as a Board member and executive officer of biotechnology companies.

Derace L. Schaffer, M.D. Dr. Schaffer previously served as Vice Chairman and Chief Executive Officer of Healthcare Acquisition Corp. from April 2005 to August 2007. Dr. Schaffer is the founder and Chief Executive Officer of The Lan Group, a venture capital firm specializing in healthcare and high technology investments. He has served as Chairman of several healthcare companies, including Radiologix, Inc. when it was private, and he has been an active investor for approximately thirty years on a variety of healthcare companies. Dr. Schaffer is the founder of Radiologix. Dr. Schaffer served as Chief Executive Officer and Chairman of the Board of Ide Imaging Group, P.C. from 1980 to 2001. Dr. Schaffer has served as a director on many healthcare boards of directors, including several health systems and more than twenty healthcare services and technology companies. Dr. Schaffer received his postgraduate radiology training at Harvard Medical School and Massachusetts General Hospital, where he served as Chief Resident. He has previously served as director of American CareSource Holdings, Inc., Radiologix, King Pharmaceuticals, Inc. and Allion Healthcare, Inc. (each a public company). Dr. Schaffer serves as a director on the boards of private companies Innovolt, Inc., Medical Tracking Solutions, Inc., InstantLabs, and Partners Imaging. Dr. Schaffer is a member of Alpha Omega Alpha, the national medical honor society. Dr. Schaffer has also been a Clinical Professor of Radiology at the University of Rochester School of Medicine as well as the Weill Cornell Medical College. Dr. Schaffer was chosen to serve as a director of the Company because of his substantial experience as an executive, Board member and investor in the healthcare and technology industries and his practical experience in the medical field.

Steven St. Peter, M.D. Dr. St. Peter has served as a member of the Board since August 2007 and from October 2004 to August 2007 was a member of the Board of Former PharmAthene. Dr. St. Peter is President and Chief Executive Officer of Aratana Therapeutics, an animal health company, a position he assumed in September 2012. Dr. St. Peter has also served as a director of Aratana since 2010. Dr. St. Peter was employed by MPM Capital from 2004 to May 2012, and he was a Managing Director based in the Boston office. His investment scope included both venture and buyout transactions across the pharmaceuticals and medical technology industries. He has previous investment experience from Apax Partners and The Carlyle Group. Dr. St. Peter was previously an assistant Clinical Professor of Medicine at Columbia University. He completed his residency and fellowship at the Hospital of the University of Pennsylvania. Prior to his medical training, he was an investment banker at Merrill Lynch. His previous board experience includes Omrix Biopharmaceuticals, Helicos Biosciences Corporation, EKR Therapeutics, Inc., Proteon Therapeutics, Inc., Rhythm Pharmaceuticals, Inc., Syndax Pharmaceuticals, Inc. and Xanodyne Pharmaceuticals, Inc. Dr. St. Peter earned a M.D. from Washington University, M.B.A. from the Wharton School of the University of Pennsylvania and B.A. in chemistry from the University of Kansas. Dr. St. Peter was chosen to serve as a director of the Company because of his diverse background as a venture capital investor, investment banker, professor of medicine and director of several healthcare companies, which provides him with a unique perspective in serving on our Board.

Executive Officers

The following table sets forth the names, ages and positions of our executive officers.

| Name | Age | Office |
|-----------------|-----|--|
| John M. Gill | 65 | President and Chief Executive Officer, Director |
| Philip MacNeill | 63 | Vice President, Chief Financial Officer, Treasurer and Secretary |

The following is a biographical summary of our executive officer who is not a director:

Philip MacNeill. Mr. MacNeill was appointed our Vice President, Chief Financial Officer, Treasurer and Secretary effective May 1, 2015. Between January 2011 and April 2015, Mr. MacNeill served as the Company’s Vice President and Controller. Mr. MacNeill has over 30 years of experience in finance and accounting with the majority of that experience focused on the government contracting industry. Prior to joining the Company, he worked for 3e Technologies International, Inc. (“3e Technologies”), a government contractor, as Director of Finance from 2008 through January 2011. Prior to joining 3e Technologies, Mr. MacNeill spent five years with BAE Systems plc, a global defense company, first as a Senior Financial Analyst and then as an Accounting Director. From 1998 to 2003, Mr. MacNeill worked as an Assistant Controller at Presearch Incorporated, a government contractor. Mr. MacNeill also worked at JHM Research and Development, Inc. as Controller. Previously, Mr. MacNeill was a member of the senior financial staff at Mitretek and spent 11 years at The Mitre Corporation, a non-profit federally funded R&D development center. Mr. MacNeill is a C.P.A. He holds a B.A. from the University of Maryland.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act requires our directors, executive officers, and persons who own more than 10% of our common stock to file reports of ownership and changes in ownership of our common stock with the SEC. Based solely on our review of copies of these reports filed with the SEC, we believe there has been compliance with all Section 16(a) filing requirements applicable to such directors, executive officers and 10% beneficial owners for 2016.

Corporate Governance

Corporate Governance Guidelines

Pursuant to the Delaware General Corporation Law and the Company's Bylaws, the Company's business, property and affairs are managed by or under the direction of the Board of Directors. Members of the Board are kept informed of the Company's business through discussions with the Chief Executive Officer and other officers, by reviewing materials provided to them and by participating in meetings of the Board and its committees. We currently have six members on our Board.

Code of Ethics and Business Conduct

PharmAthene has a Code of Ethics and Business Conduct that applies to all directors, officers and employees, which can be found on our website, www.pharmathene.com, under the heading "Investors" (see "Corporate Governance" — "Governance Documents") or by writing to PharmAthene, Inc., One Park Place, Suite 450, Annapolis, Maryland 21401, c/o Corporate Secretary. All of our directors, officers and employees are expected to be familiar with the Code and to adhere to those principles and procedures set forth in the Code that apply to them. The Company will post any amendments to the Code of Ethics and Business Conduct, as well as any waivers, that are required to be disclosed by the rules of either the SEC or the NYSE MKT, on the Company's web site, www.pharmathene.com.

Director Independence

We use the definition of "independence" under Section 803A of the NYSE MKT Company Guide, as applicable and as may be modified or supplemented from time to time, and the interpretations thereunder, to determine if the members of our Board are independent. In making this determination, our Board considers, among other things, transactions and relationships between each director and his immediate family and the Company, including those, if any, reported in this Form 10-K under the caption "Certain Relationships and Related Transactions." The purpose of this review is to determine whether any such relationships or transactions are material and, therefore, inconsistent with a determination that the directors are independent. On the basis of such review and its understanding of such relationships and transactions, our Board affirmatively determined that our Board was comprised of a majority of independent directors.

Board Leadership Structure

To assure effective and independent oversight of management, our Board of Directors operates with the roles of Chief Executive Officer and Chairman of the Board separated in recognition of the differences between these two roles in the management of the Company. The Chairman of the Board is an independent, non-management role.

Our Board of Directors believes that this leadership structure provides the most effective leadership model for our company. By permitting more effective monitoring and objective evaluation of the Chief Executive Officer's performance, this structure increases the accountability of the Chief Executive Officer. A separation of the Chief Executive Officer and Chairman roles also prevents the former from controlling the Board's agenda and information flow, thereby reducing the likelihood that the Chief Executive Officer would abuse his power.

Board Oversight of Risk Management

Our Board believes that overseeing how management manages the various risks we face is one of its most important responsibilities to the Company's stakeholders. Our Board believes that, in light of the interrelated nature of the Company's risks, oversight of risk management is ultimately the responsibility of the full Board; however, it has delegated this responsibility to the Audit Committee with respect to financial risk. The Audit Committee periodically meets with management and the independent registered public accounting firm to review the Company's major financial risk exposures and the steps taken to monitor and control such exposures. Our Board meets regularly to discuss the strategic direction and the issues and opportunities facing our company in light of trends and developments in the biodefense industry and general business environment. Throughout the year, our Board provides guidance to management regarding our strategy and helps to refine our operating plans to implement our strategy. The involvement of the Board in setting our business strategy is critical to the determination of the types and appropriate levels of risk undertaken by the Company.

Board Meetings

During the fiscal year ended December 31, 2016, the Board held 8 meetings and the Board Committees held a total of 10 meetings. Each incumbent director attended 75% or more of the total number of meetings of the Board and the Board Committees of which he was a member during the period he served as a director in fiscal year 2016.

Director Attendance at Annual Meeting

The Company has no specific policy regarding director attendance at its Annual Meeting. Generally, however, Board meetings are held immediately preceding and following the Annual Meeting, with directors attending the Annual Meeting. Our 2016 Annual Meeting was attended by all of our directors.

Board Committees

The Board currently has a separately-designated standing Audit Committee established in accordance with Section 3(a)(58)(A) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). In addition, the Board has a Governance and Nominating Committee and a Compensation Committee. Each Committee consists entirely of independent, non-employee directors (see "Director Independence" above). The charter of each Board Committee is available free of charge on our website, www.pharmathene.com, under the heading "Investors" (see "Corporate Governance" — "Committee Charters") or by writing to PharmAthene, Inc., One Park Place, Suite 450, Annapolis, Maryland 21401, c/o Corporate Secretary.

The following table below sets forth the Committees, current membership of each Committee and the number of Committee meetings held in the fiscal year ended December 31, 2016.

| Name | Audit | Governance And Nominating | Compensation |
|--------------------------|-------|---------------------------|--------------|
| Jeffrey W. Runge, M.D. | X | | X* |
| Mitchel B. Sayare, Ph.D. | X* | X | X |
| Derace L. Schaffer, M.D. | X | X* | X |
| Steven St. Peter, M.D. | | X | |
| Total 2016 Meetings | 5 | 1 | 4 |

* Committee Chairperson

The primary functions of each of the Board Committees are described below.

Audit Committee. The primary functions of the Audit Committee are to: review the professional services and independence of our independent registered public accounting firm and our accounts, procedures and internal controls; appoint the firm selected to be our independent registered public accounting firm; review and approve the scope of the annual audit; review and evaluate with the independent registered public accounting firm our annual audit and annual consolidated financial statements; review with management the status of internal accounting controls; evaluate problem areas having a potential financial impact on us that may be brought to the Audit Committee's attention by management, the independent registered public accounting firm or the Board of Directors; and evaluate all of our public financial reporting documents.

The current members of our Audit Committee each meet the independence criteria for directors set forth under the rules of the NYSE MKT and the additional independence criteria for members of audit committees specified in Section 803B of the NYSE MKT Company Guide and Rule 10A-3 under the Exchange Act. Each member of our Audit Committee is financially literate under the current listing standards of the NYSE MKT. Our Board has determined that Mitchel Sayare, the chairman of the Audit Committee, qualifies as an “audit committee financial expert,” as such term is defined by SEC rules.

Governance and Nominating Committee. The primary functions of the Governance and Nominating Committee are to: review and make recommendations on the range of skills and expertise which should be represented on the Board, and the eligibility criteria for individual Board and Committee membership; review and recommend to the Board the appropriate structure of the Board; identify individuals qualified to become Board members and recommend to the Board the nominees for election to the Board at the next Annual Meeting of Stockholders; implement a policy and procedures with regard to consideration of any director candidate recommended by stockholders; retain and terminate any search firm to be used to identify director candidates, and to approve the search firm, fees and other retention terms; and review and recommend to the Board the appropriate structure of Board Committees, Committee assignments and the Board Committee chairman.

Among the factors the Governance and Nominating Committee considers when determining persons to be nominated include whether such individuals are actively engaged in business endeavors, have an understanding of financial statements, corporate budgeting and capital structure, are familiar with the requirements of a publicly traded company, are familiar with industries relevant to our business endeavors, are willing to devote significant time to the oversight duties of the Board of Directors of a public company, and are able to promote a diversity of views based on the person’s education, experience and professional employment. The Governance and Nominating Committee evaluates each individual in the context of the Board as a whole, with the objective of recommending a group of persons that can best implement our business plan, perpetuate our business and represent stockholder interests. The Governance and Nominating Committee may require certain skills or attributes, such as financial or accounting experience, to meet specific Board needs that arise from time to time.

The Company is of the view that the continuing service of qualified incumbents promotes stability and continuity in the Board room, contributing to the ability of the Board of Directors to work as a collective body, while giving the Company the benefit of the familiarity and insight into the Company’s affairs that its directors have accumulated during their tenure. Accordingly, the process of the Governance and Nominating Committee for identifying nominees reflects the Company’s practice of re-nominating incumbent directors who continue to satisfy the Governance and Nominating Committee’s criteria for membership on the Board of Directors, whom the Governance and Nominating Committee believes continue to make important contributions to the Board of Directors and who consent to continue their service on the Board of Directors. The Governance and Nominating Committee will identify and/or solicit recommendations for new candidates when there is no qualified and available incumbent.

The Governance and Nominating Committee will consider nominees recommended by stockholders. There are no differences in the manner in which the committee evaluates nominees for director based on whether the nominee is recommended by a stockholder. Stockholders who would like to have our Governance and Nominating Committee consider their recommendations for nominees for the position of director, should submit their recommendations, in accordance with the procedures set forth below, in writing to: Corporate Secretary, PharmAthene, Inc., One Park Place, Suite 450, Annapolis, Maryland 21401.

For nominations, a stockholder’s notice must include: (i) as to each person whom the stockholder proposes to nominate for election as a director, (A) the name, age, business address and residential address of such person, (B) the principal occupation or employment of such person, (C) the class and number of shares of stock of PharmAthene that are beneficially owned by such person, (D) any other information relating to such person that is required to be disclosed in solicitations of proxies for election of directors or is otherwise required by the rules and regulations of the SEC promulgated under the Exchange Act, and (E) the written consent of the nominee to be named in the proxy statement as a nominee and to serve as a director if elected and (ii) as to the stockholder giving the notice, (A) the name, business address, and residential address, as they appear on our stock transfer books, of the nominating stockholder, (B) a representation that the nominating stockholder is a stockholder of record and intends to appear in person or by proxy at the meeting to nominate the person or persons specified in the notice, (C) the class and number of shares of stock of our Company beneficially owned by the nominating stockholder and (D) a description of all arrangements or understandings between the nominating stockholder and each nominee and any other person or persons (naming such person or persons) pursuant to which the nomination or nominations are to be made by the nominating stockholder.

The current members of our Governance and Nominating Committee each meet the independence criteria for directors set forth under the rules of the NYSE MKT Company Guide.

Compensation Committee. The Company's executive compensation program is administered by the Compensation Committee. The primary functions of the Compensation Committee are to: consider, recommend, oversee and implement executive compensation plans, policies and programs; review the performance and determine the compensation of our executive officers and directors, including the negotiation of any employment agreements with such persons, oversight and administration of the 2007 Long-Term Incentive Compensation Plan, as amended (the "2007 Plan") and the grant of options and awards under the 2007 Plan. Pursuant to Section 805 of the NYSE MKT Company Guide, compensation of our Chief Executive Officer is determined, or recommended to the Board for determination, by the Compensation Committee comprised solely of independent directors. The Chief Executive Officer is not present during voting or deliberations. Compensation for all other officers is determined, or recommended to the Board for determination, by the Compensation Committee comprised solely of independent directors.

Under the Compensation Committee Charter, our Chief Executive Officer and our Chairman of the Board may recommend to the Compensation Committee individual compensation awards for our officers. The Compensation Committee would then have to review the recommendation and make its own recommendation to the Board.

The current members of our Compensation Committee each meet the independence criteria for directors set forth under the rules of the NYSE MKT and the additional independence criteria for members of compensation committees specified in Section 805(c) of the NYSE MKT Company Guide and Rule 10C-1 under the Exchange Act.

Process for Communicating with Board Members

Interested parties may communicate with any and all members our Board of Directors by transmitting correspondence addressed to one or more directors by name at the following address: PharmAthene, Inc., One Park Place, Suite 450, Annapolis, Maryland 21401, c/o Corporate Secretary. Communications from our stockholders to one or more directors will be collected and organized by our Corporate Secretary and will be forwarded to the Chairman of the Board of Directors or to the identified director(s) as soon as practicable. If multiple communications are received on a similar topic, the Corporate Secretary may, in his or her discretion, forward only representative correspondence.

The Chairman of the Board of Directors will determine whether any communication addressed to the entire Board of Directors should be properly addressed by the entire Board of Directors or a committee thereof. If a communication is sent to the Board of Directors or a committee, the Chairman of the Board of Directors or the Chairman of that committee, as the case may be, will determine whether a response to the communication is warranted.

Audit Committee Report⁽¹⁾

The Audit Committee has reviewed and discussed the audited financial statements for the fiscal year ended December 31, 2016 with management of the Company and has furnished the following report for inclusion in this Form 10-K.

The Audit Committee consists of the directors named below. Each member of the Audit Committee is an independent director as defined by applicable SEC rules and NYSE MKT listing standards. In addition, the Board has determined that Mitchel B. Sayare, Ph.D. is the "audit committee financial expert" as defined by applicable SEC rules and satisfies the "financial sophistication" criteria under the applicable rules of the NYSE MKT. The Audit Committee operates under a written charter adopted by the Board, which is available free of charge on our website under the heading "Investors" (see "Corporate Governance — Highlights — Committee Charters"), or by writing to PharmAthene, Inc., One Park Place, Suite 450, Annapolis, Maryland 21401, c/o Corporate Secretary.

Management is responsible for the Company's internal controls and preparing the Company's consolidated financial statements. The Company's independent accountants are responsible for performing an independent audit of the consolidated financial statements in accordance with generally accepted auditing standards and issuing a report thereon. The Committee is responsible for overseeing the conduct of these activities and appointing the Company's independent accountants. As stated above and in the Committee's charter, the Committee's responsibility is one of oversight. The Committee does not provide any expert or special assurance as to the Company's financial statements concerning compliance with laws, regulations or generally accepted accounting principles. In performing its oversight function, the Committee relies, without independent verification, on the information provided to it and on representations made by management and the independent accountants.

The Audit Committee reviewed and discussed the Company's consolidated financial statements for the year ended December 31, 2016 with management and the independent accountants. Management represented to the Audit Committee that the Company's consolidated financial statements were prepared in accordance with generally accepted accounting principles. The Audit Committee discussed with the independent accountants matters required to be discussed by Statement on Auditing Standard No. 1301, as amended, Communication with Audit Committees, as adopted by the Public Company Accounting Oversight Board ("PCAOB"). The Committee also reviewed, and discussed with management, management's report on internal control over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act.

The Company's independent accountants provided to the Audit Committee the written disclosures and the letter required by applicable requirements of the PCAOB regarding the independent accountants' communications with the Audit Committee concerning independence, and the Audit Committee discussed with the independent accountants their independence. The Audit Committee concluded that Ernst & Young LLP's provision of non-audit services, as described in this Form 10-K, to the Company and its affiliates is compatible with Ernst & Young LLP's independence.

Based on the Audit Committee's discussion with management and the independent accountants and the Audit Committee's review of the representations of management, the written disclosures and the letter from the independent accountants and the report of the independent accountants, the Committee recommended that the Board include the audited consolidated financial statements in the Form 10-K for the year ended December 31, 2016 for filing with the SEC.

SUBMITTED BY THE AUDIT COMMITTEE OF THE BOARD OF DIRECTORS

Mitchel B. Sayare, Ph.D., Chairman
Jeffrey W. Runge, M.D.
Derace L. Schaffer, M.D.

-
- (1) The material in this report is not "soliciting material" and is not deemed "filed" with the SEC and is not to be incorporated by reference in any of our filings under the Securities Act of 1933 or the Exchange Act of 1934, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

Item 11. Executive Compensation.

Compensation Discussion and Analysis

This section discusses the principles underlying our executive compensation decisions. It provides qualitative information on the factors relevant to these decisions and the manner in which we awarded compensation to our Named Executive Officers (NEOs). As used in this section, "Committee" refers to the Compensation Committee of the Board of Directors.

Compensation Objectives

Subsequent to the implementation of our "Realignment Plan" in March 2015, the objectives of the Compensation Committee in establishing the Company's compensation policy for executive officers and other employees were to plan and commence execution of a process intended to capture the value of the Company's remaining assets. With the implementation of the Realignment Plan and the substantial reduction in activities by the Company, the requirements of our management team, and accordingly the compensation strategy of the Committee, shifted. The goals and activities of our management team were directed specifically to the prosecution of the SIGA litigation, furtherance of our vaccine programs and execution of a process intended to capture the value of the Company's remaining assets, without a view towards expansion of the operations of the Company.

Overview and Role of the Compensation Committee

The Compensation Committee reviews and approves the Company's compensation policies. The specific roles of the Committee have included (and will continue to include if the proposed Mergers with Altimmune are not consummated):

- recommending to the Board, in consultation with senior management of the Company, (i) the corporate goals and objectives relevant to compensation of officers and directors and (ii) the compensation and benefits philosophy and strategy for the Company;
- recommending performance measures and, if applicable, goals for measuring performance in consultation with senior management of the Company;
- assessing the performance of the Chairman of the Board, CEO and President;
- evaluating competitive pay levels for key executives of other biodefense and life sciences companies based on industry analyses;
- recommending to the Board for approval compensation for the CEO and President, including salary, bonus, restricted securities, stock options, and, if applicable, any supplemental compensation or benefit arrangements;
- making determinations with respect to the grant of stock options and restricted securities under the 2007 Plan to the CFO of the Company, and report to the Board on such determinations at the Board's subsequent meeting;
- making determinations with respect to the grant of stock options and restricted securities under the 2007 Plan to all employees who are not officers of the Company and to consultants eligible to receive such grants under such plan, or, at the Committee's sole discretion, delegate such responsibility to the CEO and President, subject to any limitations it shall impose from time to time;
- to the extent not covered by the determinations above, reviewing and approving compensation programs applicable to the two officers and other selected employees and, upon recommendation of the Chairman of the Board and CEO and President, reviewing and recommending the Board's approval of individual compensation awards for the CFO;
- recommending to the Board for approval the compensation for directors, including retainer, committee chairman's fees, the grant of restricted securities or stock options and other similar items, as appropriate; and
- overseeing the preparation of, and approving, the "Compensation Discussion and Analysis" section of the Company's annual proxy statement or Form 10-K, as applicable.

Compensation Process

The implementation of the compensation philosophy is carried out under the supervision of the Committee. The compensation for our President and Chief Executive Officer is approved by the Board of Directors after the Committee has provided its analysis and recommendation. The compensation for our CFO, our only other executive officer, is determined by the Committee. The CEO, under guidelines approved by the Committee, makes decisions regarding compensation of non-executive officer employees.

The Compensation Committee charter requires the Committee to meet at least once per year, and in practice the committee meets several times per year.

Compensation Survey Data, Consultants and Peer Group

In early 2015, the Compensation Committee engaged Arthur J. Gallagher & Co., or Gallagher (formerly James Reda & Associates), to assist the Committee in determining the changes to be made in connection with the Realignment Plan, and to preserve and maximize, for the benefit of its stockholders, the value of any proceeds from the SIGA litigation and its existing biodefense assets. In connection therewith, the Committee referenced a peer group consisting of Arqule Inc., Biocryst Pharmaceuticals Inc., Biota Pharmaceuticals Inc., Biotime Inc., Chimerix Inc., Cleveland Biolabs, Inc., DynaVax Technologies Corp., Emergent Biosolutions Inc., Galena Biopharma Inc., Immunomedics Inc., Kalobios Pharmaceuticals Inc., Merrimack Pharmaceuticals, NovaVax Inc., Osiris Therapeutics Inc., Pergrine Pharmaceuticals Inc., SIGA Technologies, Inc., Sunesis Pharmaceuticals Inc., Targacept Inc., Tetrphase Pharmaceuticals Inc., Threshold Pharmaceuticals, Xoma Corp. and Ziopharm Oncology Inc. Based on Gallagher's analysis of CEO compensation trends among our peer group, and the requirements of Mr. Gill's service in relation to such peer group, the Committee recommended and the Board approved a salary in the annual amount of \$300,000 for Mr. Gill for 2016.

Components of Compensation

Prior to the implementation of the Realignment Plan, the Company's compensation for executives consisted of five components: base salary, cash bonuses, retention plans, equity awards, and retirement benefits as provided under the Company's 401(k) plan. Then, the President and Chief Executive Officer annually reviewed the performance and contributions of each executive officer (other than himself) and reported the results of such reviews to the Compensation Committee. The Board of Directors annually reviewed the performance and contributions of the President and Chief Executive Officer.

Using significant discretion, the Committee considered each executive's performance, contributions, responsibilities, experience, and qualifications when determining the appropriate compensation level for each executive in light of the relevant compensation survey data. The components of the Company's executive officer compensation prior to the implementation of the Realignment Plan are described below.

Base Salary

The base salary component of compensation was designed to compensate executive officers competitively at levels necessary to attract and retain qualified executives in the life sciences industry. As a general matter, the base salary for each executive officer was based on the scope of each executive's responsibilities, as well as his/her qualifications, breadth of experience, performance record, and depth and breadth of applicable functional expertise. Base salaries of the executive officers were reviewed by the Committee annually in light of personal and Company goal attainment, executive officer performance reviews and compensation survey data. Adjustments to each executive's base salary were based upon individual performance, changes in the general level of base salaries of persons in comparable positions within the industry, as indicated by compensation survey data, and the average merit salary increase for such year for all employees of the Company established by the Committee, as well as other factors the Committee judged to be pertinent during an assessment period. In making base salary decisions, the Committee exercised its discretion to determine the appropriate weight to be given to each of these factors.

The NEO base salaries for 2016 were as follows: Mr. Gill, President and Chief Executive Officer, \$300,000; and Mr. MacNeill, Vice President, Chief Financial Officer, Treasurer and Secretary, \$258,596.

Bonuses

2016 Cash Bonuses

For 2016, the Compensation Committee established with Mr. Gill the following corporate performance objectives for Mr. Gill's 2016 bonus payments: (i) maximize value and return to the Company's stockholders resulting from the final satisfaction of the obligations of SIGA to the Company resulting from the Delaware court proceedings; (ii) maximize value to the stockholders of the anthrax vaccine program and (iii) plan and commence execution of a process that is intended to capture the value of the remaining assets of the Company. The Committee did not establish corporate performance objectives for the Vice President, Chief Financial Officer, Treasurer and Secretary. Instead, bonuses earned under the 2016 bonus program for the Chief Financial Officer was based solely on personal performance objectives.

John Gill. On February 15, 2016, in accordance with the recommendation of the Compensation Committee, our Board approved the award of a \$125,000 bonus to Mr. Gill, based upon its conclusion that Mr. Gill had satisfied 100% of the following pre-determined performance objectives for a 2015 bonus: (i) progress toward approval of a reorganization plan for SIGA by the bankruptcy court that provides for payment to us by SIGA upon the completion of the litigation; (ii) progress toward a decision by the Delaware Supreme Court with respect to the appeal and cross-appeal in our litigation with SIGA that allows for a payment to us by SIGA; and (iii) the development of a plan for enhancing our value after the completion of the SIGA litigation and bankruptcy process.

On June 1, 2016, Mr. Gill was awarded a \$25,000 discretionary cash bonus.

Philip MacNeill. For 2016, Mr. MacNeill, our Vice President, Chief Financial Officer, Treasurer and Secretary, was eligible to receive, at the sole discretion of the Compensation Committee, an annual cash bonus of up to 25% of his base salary payable based on the achievement of certain pre-determined performance milestones, and was eligible for additional bonuses at the option and sole discretion of the Compensation Committee. Upon the CEO's recommendation to the Compensation Committee that Mr. MacNeill satisfied his 2016 objectives, the Compensation Committee awarded Mr. MacNeill a cash bonus of \$64,649 for the fiscal year 2016. Mr. MacNeill also received a retention bonus equal to 10% of his salary for service without termination or resignation through December 31, 2016.

2017 Cash Bonuses

John Gill. For 2017, in light of the proposed Merger with Altimmune, the Compensation Committee has not yet established corporate performance or other objectives for Mr. Gill's 2017 bonus payments, if any. In the event the Merger with Altimmune is not consummated, the Compensation Committee would undertake to establish such performance or other objectives for Mr. Gill's 2017 bonus. Pursuant to his employment agreement, Mr. Gill is eligible to receive, at the sole and absolute discretion of the Compensation Committee and the Board of Directors, an annual target bonus payable in cash of up to an additional fifty percent (50%) of his then current base salary based upon the achievement of pre-determined performance milestones established by the Compensation Committee after input from Mr. Gill and as approved by the Board.

Philip MacNeill. For 2017, the Compensation Committee approved, on January 14, 2017, a retention arrangement for Philip MacNeill, which included one-time cash bonus of \$67,235 if Mr. MacNeill remains employed through the closing of the anticipated merger with Altimmune, is not terminated for cause, or has not resigned other than for good reason prior to December 31, 2016.

Bonus Program

For 2017, and in contemplation of the consummation of the proposed Merger, the Compensation Committee has discontinued the Company's Bonus Program. Prior to 2017, the Compensation Committee adopted a bonus program (the "Bonus Program") for our two executive officers and other employees to be identified from time to time by the Chief Executive Officer. The Bonus Program was established to provide for the payment to these executive officers and identified employees of a bonus that was generally linked to achievement of key performance objectives. The goal of the Bonus Program was to reward personnel by providing further compensation to these executive officers and identified employees based on the achievement of specified annual goals that the Compensation Committee and the Board of Directors believed correlated closely with the growth of long-term stockholder value. Management believed that the Bonus Program also promoted greater communication among employees and fostered the appropriate feedback for enhanced productivity and effectiveness.

The Bonus Program was intended to be applicable to our President and Chief Executive Officer, our Vice President, Chief Financial Officer, Treasurer and Secretary and identified employees.

Determining the annual target bonus pool. In each fiscal year prior to 2017, the Committee determined a target bonus pool for that fiscal year, how much of that pool should be allocated to executive officers and how much should be allocated to all other personnel. This pool was discontinued in 2017 in light of the proposed Merger with Altimmune. If the proposed Merger with Altimmune is not consummated, the Committee will undertake to establish such a pool for 2017.

For fiscal year 2016, the target bonus pool was equal to the approximate sum of: (i) 25% of the base salary of our Vice President, Chief Financial Officer, Treasurer and Secretary, and (ii) 10% of the aggregate base salary of all other employees of the Company. The target bonus for our Chief Executive Officer, which was equal to approximately 50% of his base salary, was set forth in his employment agreement.

For fiscal year 2016, the pool was divided among the relevant executives with reference to the achievement of specific personal and corporate performance targets. Generally, the Compensation Committee has the discretion to award more or less than the target bonus payout; and any particular executive or other employee may be awarded a bonus that is greater or less than the target percentages above. The Board has the discretion to award more or less than the target bonus payout for the CEO. Finally, the pool may be increased at the discretion of the Committee to the extent new executive officers and other employees may be hired during the year.

Retention Plan

In connection with the Realignment Plan, the Board of Directors adopted a retention plan in March 2015 for our Chief Financial Officer and other employees identified by our Chief Executive Officer, pursuant to which the Company has awarded cash bonuses and grants of stock options to qualifying participants if they have not been terminated for cause, or otherwise resigned for good reason, prior to December 31, 2015. For 2015, Mr. MacNeill, our Chief Financial Officer, received a cash bonus equal to approximately 10% of his then salary, and 25,000 shares of restricted stock vesting in two years or earlier under certain circumstances. For fiscal 2016, the Company renewed the retention plan, pursuant to which Mr. MacNeill, our Chief Financial Officer, received (i) a 10% cash bonus, and (ii) a grant of 25,000 shares of restricted stock with 50% of the shares originally scheduled to vest on December 3, 2016 and the remaining 50% vesting on December 3, 2017. Vesting of the shares of restricted stock not previously vested was accelerated on September 14, 2016, pursuant to the terms of the restricted stock agreements.

Equity Awards

The 2007 Plan terminated in January 2017. In connection with the proposed Merger with Altimmune, the Board of Directors has adopted a new omnibus incentive plan, subject to approval of our stockholders.

Under the 2007 Plan, the Committee provided the Company's executive officers with long-term incentive compensation through grants of stock options and/or restricted stock awards ("RSAs"). The 2007 Plan created a strong link to the Company's long term financial and equity market performance, created an ownership culture, and closely aligned the interests of our executive officers with those of the stockholders. The Committee believed that these grants directly motivated an executive to maximize long-term stockholder value and created an effective tool for incentivizing and retaining those executives who are most responsible for influencing stockholder value. The grants also utilized vesting periods that encouraged key executives to continue in the employ of the Company. Among other things, the Committee considered individual performance of the executive officer, the anticipated contribution of the executive officer to the attainment of the Company's long-term strategic performance goals, and retention and motivation of key executives in determining equity awards. The equity awards for each year were set to enable the Company to attract, motivate, and retain highly skilled executives. Long-term incentives granted in prior years may be taken into consideration, but did not play a significant role in subsequent year determinations.

It had been the Company's practice to make equity-based awards to our executives on an annual basis. Annual non-qualified stock option awards to executives typically vested over four years and had a ten year term. In addition, from time to time, the Company granted additional stock options to specific executive officers for promotions, superior performance in response to changed or challenging circumstances and other special circumstances. All stock option awards were priced based upon the closing price of the Company's common stock on the date of grant, which was also the approval date, by the committee or Board of Directors. From time to time the Company also granted RSAs, with varying vesting periods. The Company did not maintain any equity ownership guidelines for its executive officers.

The Board approved a stock option award to the CEO on June 1, 2016 under the 2007 Plan. The stock option award was determined based on individual performance and performance goals. Mr. Gill was awarded options to purchase 100,000 shares. These stock options vest over a 3 year period (subject to acceleration upon the occurrence of certain events) with one third of the options vesting on the first, second and third anniversaries of the date of grant.

Retirement Benefits

The terms of the Company's 401(k) Savings Plan (the "401(k) Plan") provide for executive officer and broad-based employee participation on the same general terms. Under the 401(k) Plan, all Company employees were formerly eligible to receive from the Company matching contributions that vested 25% per year over four years. The Company's basic matching contribution for the 401(k) Plan was suspended September 1, 2010 and subsequently reinstated July 1, 2013.

2015 Realignment Plan

In connection with the Realignment Plan announced in March 2015, our Board terminated Eric Richman as President and Chief Executive Officer, effective 11:59 pm on March 11, 2015, and Linda Chang as Senior Vice President, Chief Financial Officer, Treasurer and Secretary, effective April 30, 2015. Mr. Richman remains a member of our Board of Directors. Our Board also terminated our executive officers Francesca Cook and Wayne Morges, effective March 9, 2015.

John M. Gill replaced Mr. Richman as President and Chief Executive Officer beginning March 12, 2015, and Vice President and Controller Philip MacNeill was appointed Vice President and Chief Financial Officer, Treasurer and Secretary effective May 1, 2015.

Under the terms of the January 2017 Agreement and Plan of Merger, pursuant to which Altimmune will merge into Merger Sub Corp, with Altimmune as the surviving entity in Merger 1, and immediately thereafter, Altimmune will be merged with and into Merger Sub LLC, with Merger Sub LLC as the surviving entity in Merger 2, Mr. Gill and Mr. MacNeill each have agreements which specifically provide for payments upon the closing of the Mergers.

The employment agreement with Mr. Gill specifically provides for a payment to him upon the closing of the Mergers, upon which he will receive, if terminated without cause or for “good reason” or upon a written notice of non-extension, his target bonus of 50% of his base salary, or \$153,150. Mr. MacNeill will be eligible to receive: (i) a severance payment in the amount of \$93,095 if Mr. MacNeill remains employed with PharmAthene through the closing of the Mergers and the preparation of PharmAthene's 2016 annual report and proxy statement for the PharmAthene 2017 annual meeting of stockholders and (ii) a bonus payment in the amount of \$67,235 if he remains employed through the closing of the Mergers. Each payment will become due and payable upon a termination by PharmAthene without cause.

Tax Considerations

Section 162(m) Policy

Section 162(m) of the Internal Revenue Code places a \$1 million limit on the amount of compensation a company can deduct in any one year for compensation paid to the chief executive officer and the three most highly-compensated executive officers employed by the company at the end of the year (other than the chief financial officer). However, the \$1 million deduction limit generally does not apply to compensation that is performance-based and provided under the specific criteria of Section 162(m).

The restricted stock awards granted to Mr. Gill in 2015 that fully vested in 2016 were designed to incentivize him to achieve the goals the Board believed to be most relevant for creating stockholder value, but did not satisfy the criteria to be exempt under Section 162(m); accordingly, a portion of such compensation could not be deducted from the Company's taxable income for such year.

Compensation Committee Report⁽¹⁾

The Compensation Committee has reviewed and discussed with management the “Compensation Discussion and Analysis” section of this Form 10-K. Based on its review and discussion, the Compensation Committee has recommended to the Board of Directors, that this Compensation Discussion and Analysis be included in this Annual Report on Form 10-K for the fiscal year ended December 31, 2016.

Jeffrey W. Runge, M.D.
Mitchel B. Sayare, Ph.D.
Derace L. Schaffer, M.D.

(1) The material in this report is not “soliciting material” and is not deemed “filed” with the SEC and, except as specifically stated in this report, is not to be incorporated by reference in any of our filings under the Securities Act of 1933 or the Exchange Act of 1934, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

Summary Compensation Table

The following Summary Compensation Table sets forth, for the stated fiscal years, all compensation awarded to, earned by, or paid to our “Named Executive Officers”, or NEOs, i.e., (i) all individuals serving as our principal executive officer or acting in a similar capacity during 2016, (ii) all individuals serving as our principal financial officer or acting in a similar capacity during 2016, (iii) our three most highly compensated executive officers other than the principal executive officer and principal financial officer who were serving as executive officers of PharmAthene at December 31, 2016 and who received annual compensation in excess of \$100,000, and (iv) up to two additional individuals who would have been included under (iii) above but for the fact that they were not serving as an executive officer of PharmAthene at December 31, 2016.

| Name and Principal Position | Year | Salary (\$) | Bonus (\$) ⁽¹⁾ | Stock Awards (\$) ⁽²⁾ | Option Awards (\$) ⁽²⁾ | Non-equity Incentive Plan Compensation (\$) ⁽¹⁾ | All Other Compensation (\$) ⁽³⁾ | Total (\$) |
|--|------|-------------|---------------------------|----------------------------------|-----------------------------------|--|--|------------|
| | | | | | | | | |
| John M. Gill President and CEO ⁽⁴⁾ | 2016 | 300,000 | — | 1,098,978 | 134,972 | 150,000 | 7,950 | 1,691,900 |
| | 2015 | 159,872 | — | — | — | 175,000 | 1,000 | 335,872 |
| Philip MacNeill CFO, Treasurer and Secretary ⁽⁵⁾ | 2016 | 258,596 | — | — | — | 90,509 | 6,142 | 355,247 |
| | 2015 | 223,885 | — | 84,250 | 73,088 | 87,593 | 6,149 | 474,965 |

- Amounts appearing in the Bonus column include any previously guaranteed bonuses and, in accordance with SEC guidance, also include discretionary bonus payments, while any amounts appearing in the Non-equity Incentive Plan Compensation column reflect non-discretionary bonus payments awarded under the PharmAthene Bonus Program for executive officers and other employees, i.e., any amounts that were earned by the executive officers by meeting the relevant performance objectives specified in the PharmAthene Bonus Program. For 2016, those performance objectives are described in the section “Compensation Discussion and Analysis” above.
- Dollar amounts shown reflect the aggregate grant date fair value of stock/options computed in accordance with FASB ASC Topic 718 (formerly FAS 123R). The fair value was estimated using the assumptions detailed in Note 8 to the Company’s Consolidated Financial Statements included in our Annual Reports on Form 10-K for the fiscal years ended December 31, 2016 and 2015, respectively. The material terms of each grant are described in the footnotes to the “Outstanding Equity Awards at Fiscal Year-End table” below.
- Amounts include matching contributions under the Company’s 401(k) plan.
- Mr. Gill was appointed our President and Chief Executive Officer as of March 12, 2015. As Mr. Gill was not a NEO prior to 2015, his summary compensation information for 2014 is omitted.
- Mr. MacNeill was appointed our Chief Financial Officer, Secretary and Treasurer as of May 1, 2015. As Mr. MacNeill was not a NEO prior to 2015, his summary compensation information for 2014 is omitted.

Grants of Plan-Based Awards

The following table sets forth information regarding each grant of an award made to our Named Executive Officers during the fiscal year ended December 31, 2016 under any plan, contract, authorization or arrangement pursuant to which cash, securities, similar instruments or other property may be received.

| Name | Grant Date | Estimated Future Payouts under Non-Equity Incentive Plan Awards ⁽¹⁾ | | | All Other Option Awards | | Grant Date Fair Value of Stock and Option Awards (\$) ⁽⁴⁾ |
|-----------------|------------|--|----------------|-----------------|---|--|---|
| | | Threshold (\$) | Target (\$) | Maximum (\$) | Number of Securities Underlying Options ⁽²⁾ | Exercise or Base Price of Option Awards (\$/sh) ⁽³⁾ | |
| John M. Gill | 06/01/2016 | — | 150,000 | — | 100,000 | 2.20 | 134,972 |
| Philip MacNeill | | — | 64,649 | — | — | — | — |

(1) Represents awards made under the 2016 Bonus Program. Amounts earned under that program appear in the “Non-Equity Incentive Plan Compensation” column in the “Summary Compensation Table.” Please refer to “— Components of Compensation — Bonuses” for a description of the 2016 Bonus Program.

(2) Represents shares of common stock issuable upon exercise of stock options.

(3) Represents the closing sales price of our common stock on the NYSE MKT on the grant date.

(4) Dollar amounts shown reflect the aggregate grant date fair value of options and restricted stock computed in accordance with FASB ASC Topic 718 (formerly FAS 123R). The fair value was estimated using the assumptions detailed in Note 8 to the Company’s Consolidated Financial Statements included in our Annual Reports on Form 10-K for the fiscal years ended December 31, 2016 and 2015, respectively. The material terms of each grant are described in the footnotes to the “Outstanding Equity Awards at Fiscal Year-End table” below.

In 2016, all equity awards were granted under our 2007 Plan.

Outstanding Equity Awards at Fiscal Year-End

The following table sets forth information concerning the outstanding equity awards of each of the Named Executive Officers as of December 31, 2016.

| Name | Option Awards | | | |
|--------------------------------|---|---|-------------------------------------|----------------------------|
| | Number of Securities Underlying Unexercised Options Exercisable ⁽¹⁾ | Number of Securities Underlying Unexercised Options Unexercisable ⁽¹⁾ | Option Exercise Price (\$) | Option Expiration Date |
| John M. Gill ⁽²⁾ | 20,000 | — | 5.25 | 10/09/2017 ⁽³⁾ |
| | 40,000 | — | 2.92 | 08/14/2019 ⁽⁴⁾ |
| | 20,000 | — | 3.11 | 06/23/2021 ⁽⁵⁾ |
| Philip MacNeill ⁽⁶⁾ | 15,000 | — | 3.23 | 01/31/2021 ⁽⁷⁾ |
| | — | 4,687 | 1.94 | 01/29/2024 ⁽⁸⁾ |
| | — | 5,000 | 1.71 | 12/08/2024 ⁽⁹⁾ |
| | — | 35,312 | 1.66 | 12/03/2025 ⁽¹⁰⁾ |

(1) Reflects options granted under our 2007 Plan and now outstanding under the 2007 Plan. The exercise price of these options is subject to customary anti-dilution adjustments.

(2) Mr. Gill was appointed our President and Chief Executive Officer as of March 12, 2015.

(3) Reflects options to purchase 20,000 shares of common stock granted on October 9, 2007, which are fully vested.

- (4) Reflects options to purchase 40,000 shares of common stock granted on August 14, 2009, which are fully vested.
- (5) Reflects options to purchase 20,000 shares of common stock granted on June 23, 2011, which are fully vested.
- (6) Mr. MacNeill was appointed our Vice President, Chief Financial Officer, Treasurer and Secretary as of May 1, 2015.
- (7) Reflects options to purchase 15,000 shares of common stock granted on January 31, 2011, which are fully vested.
- (8) Reflects options to purchase 18,750 shares of common stock granted on January 29, 2014, pursuant to which 25% vest immediately, and 25% vest on the first, second and third anniversaries of the grant date. 14,063 of the vested options were exercised.
- (9) Reflects options to purchase 20,000 shares of common stock granted on December 8, 2014, pursuant to which 25% vest immediately, and 25% vest on the first, second and third anniversaries of the grant date. 15,000 of the vested options were exercised.
- (10) Reflects options to purchase 70,625 shares of common stock granted on December 3, 2015, pursuant to which 25% vest immediately, and 25% vest on the first, second and third anniversaries of the grant date. 35,313 of the vested options were exercised.

Option Exercises and Stock Awards Vested

The following table sets forth information regarding the exercise of stock options and vesting of restricted stock awards during the fiscal year ended December 31, 2016 for each Named Executive Officer on an aggregated basis.

| Name | Option Awards | | Stock Awards | |
|-----------------|---|--|---------------------------------------|--|
| | Number of Shares Acquired on Exercise (#) | Value Realized on Exercise (\$) ⁽¹⁾ | Number of Shares Acquired on Vest (#) | Value Realized on Vest (\$) ⁽²⁾ |
| John M. Gill | 210,000 | 184,900 | 612,244 | 1,646,936 |
| Philip MacNeill | 76,346 | 98,916 | 50,000 | 122,625 |

(1) The amounts in the “Value Realized on Exercise” column are calculated based on the difference between the closing market price per share of our common stock on the date of exercise and the exercise price of the option.

(2) The amounts in the “Value Realized on Vest” column are calculated based on the product of the closing market price per share of our common stock on the date of vest and the number of shares that vested on such date.

Employment and Separation Agreements

John M. Gill

John M. Gill, a member of our Board of Directors, was appointed to serve as our President and Chief Executive Officer beginning March 12, 2015. Mr. Gill is expected to devote necessary time to carry out his duties as President and Chief Executive Officer, and although he does not have other employment, he is not expected to devote his full time to the business of the Company, which is reflected in his compensation. For 2017, Mr. Gill will receive an annual salary of \$306,300 as President and Chief Executive Officer, with the possibility of bonuses and option grants to be determined at a future date.

Employment Agreement

The Company entered into an employment agreement with John M. Gill, dated as of November 5, 2015, for the period commencing on September 17, 2015 and initially ending on the first anniversary thereof. On each anniversary of the Employment Agreement, the term of the agreement automatically extends for an additional one-year period, unless either party provides the other party with 90 days’ prior written notice of non-extension. Under the terms of the agreement, in 2016 Mr. Gill’s annual base salary was increased to \$300,000. Mr. Gill was eligible for and received a \$150,000 bonus for services rendered in 2016 and will be eligible for an annual cash bonus, the target of which is up to 50% of his base salary, based on the achievement of certain pre-determined performance milestones established by the Compensation Committee and the Board of Directors.

In addition, pursuant to the agreement, among other customary terms, Mr. Gill: (i) was granted an award (the "Incentive Compensation") of restricted stock award under the Company's 2007 Long-Term Incentive Plan for 612,244 shares of the Company's common stock (valued in the aggregate at \$900,000 based on the closing price of the Company's common stock on the NYSE MKT on September 17, 2015), which will vest upon the earliest to occur of (a) a "change in control," (b) each of three pre-determined milestones, or (c) the termination of Mr. Gill's employment for any reason other than (1) a termination for "cause" or (2) a "voluntary resignation."; (ii) will receive, if terminated without cause or for "good reason" or upon a written notice of non-extension, (a) unpaid salary, housing allowance and expenses, (b) payment of a pro-rata portion of the annual cash bonus and (c) if, upon the occurrence of a "change of in control," the Incentive Compensation; (iii) will continue to be provided with corporate housing in the Annapolis, Maryland area comparable to that previously provided; (iv) will be required to devote an average of three days per week to the business of the Company; (v) will be entitled to receive reimbursements for certain expenses, in accordance with the practices of the Company in effect from time to time; and (vi) will be subject to certain work-for-hire, confidentiality, non-disparagement and non-competition covenants. In addition, Mr. Gill is not entitled to participate in any employee benefit plans and programs of the Company. The restricted stock award vested in 2016.

Philip MacNeill

Philip MacNeill was appointed to serve as our Vice President, Chief Financial Officer, Treasurer and Secretary effective May 1, 2015. The Company has not entered into a written employment agreement with Mr. MacNeill. In 2016 Mr. MacNeill's salary was increased to \$258,596 and he received a 10% retention bonus which was payable if he had not been terminated for cause or had not resigned other than for good reason prior to December 31, 2016. Mr. MacNeill is also eligible to receive, at the sole discretion of the Compensation Committee, an annual cash bonus of up to 25% of his base salary payable based on the achievement of certain pre-determined performance milestones. In addition, Mr. MacNeill may be eligible for additional bonuses at the option and sole discretion of the Compensation Committee. Mr. MacNeill received a grant of 25,000 shares of restricted stock in 2015 and 2016, vesting in two equal increments over two years, subject to acceleration if (A) each of (i) the Company's litigation in the State of Delaware against SIGA Technologies, Inc. and (ii) the proceedings in the United States Bankruptcy Court in the Southern District of New York involving SIGA Technologies, Inc., are finally resolved (i.e., no longer remain subject to appeal) or (B) Mr. MacNeill's position is eliminated as part of a reduction in force. Vesting of the shares of restricted stock not previously vested was accelerated on September 14, 2016, pursuant to the terms of the restricted stock agreements.

On January 14, 2017, PharmAthene entered into a retention and severance agreement with Mr. MacNeill, which provides for (i) a severance payment to Mr. MacNeill in the amount of \$93,095 if Mr. MacNeill remains employed with PharmAthene through the closing of the Merger and the preparation of PharmAthene's 2016 annual report and proxy statement for the PharmAthene 2017 annual meeting of stockholders and (ii) a bonus payment to Mr. MacNeill in the amount of \$67,235 if he remains employed through the closing of the Merger. Each payment will become due and payable upon a termination by PharmAthene without cause.

Potential Payments Upon Termination or Change of Control

Severance Plan

Executive officers are eligible to receive certain severance benefits in connection with terminations of employment due to death, disability, or termination without cause or constructive termination (including following a change-in-control) as more fully described in the section entitled "*Severance Agreements and Other Benefits*", including the subsection thereto entitled "*—2015 Realignment Plan*", as well as the section above entitled "*Employment and Separation Agreements*."

Termination Without Cause/For Good Reason after a Change of Control

Pursuant to Mr. Gill's employment agreement if he is terminated without cause or for good reason, respectively, or upon non-renewal of his employment agreement, Mr. Gill shall not have any further rights or claims against the Company under this employment agreement except the right to receive: (i) the unpaid portion of his base salary, (ii) the unpaid portion of his housing allowance computed on a pro rata basis to the date of termination; (iii) reimbursement for any expenses for which Mr. Gill shall not have yet been reimbursed, (iv) the pro rata portion of the target bonus that he may be eligible to receive, and (v) the full acceleration of Mr. Gill's Incentive Compensation, upon the occurrence of a Change of Control.

The following table sets forth the amount of potential payments that Mr. Gill would have received if we had terminated his employment without cause or Mr. Gill had resigned for good reason on December 31, 2016 following a “change of control” as specified under his Employment Agreement.

| Name | Cash Payments (\$) ⁽¹⁾ |
|--------------|---|
| John M. Gill | \$ 150,000 |

(1) Represents an amount equal to 50% of the target annual cash bonus, but excludes reimbursement for any expenses for which Mr. Gill had not yet been reimbursed. According to Mr. Gill’s employment agreement, Mr. Gill's target bonus was up to 50% of base salary.

On January 14, 2017, PharmAthene entered into a retention and severance agreement with Mr. MacNeill, which provides for (i) a severance payment to Mr. MacNeill in the amount of \$93,095 if Mr. MacNeill remains employed with PharmAthene through the closing of the Merger and the preparation of PharmAthene's 2016 annual report and proxy statement for the PharmAthene 2017 annual meeting of stockholders and (ii) a bonus payment to Mr. MacNeill in the amount of \$67,235 if he remains employed through the closing of the Merger. Each payment will become due and payable upon a termination by PharmAthene without cause.

Termination Without Cause/For Good Reason in the Absence of a Change of Control

Pursuant to Mr. Gill's employment agreement if he is terminated without cause or for good reason, respectively, or upon non-renewal of his employment agreement, Mr. Gill shall not have any further rights or claims against the Company under this employment agreement except the right to receive: (i) the unpaid portion of his base salary, (ii) the unpaid portion of his housing allowance computed on a pro rata basis to the date of termination; (iii) reimbursement for any expenses for which Mr. Gill shall not have yet been reimbursed, (iv) the pro rata portion of the target bonus that he may be eligible to receive, and (v) the full acceleration of Mr. Gill's Incentive Compensation.

The following table sets forth the percentage of the target bonus for which John Gill was entitled, if we had terminated Mr. Gill's employment without cause or if Mr. Gill had resigned for good reason on December 31, 2016, as set forth in his employment agreement.

| Name | Percentage of Target Bonus | Stated Period for Continued Employee Benefits |
|--------------|---|---|
| John M. Gill | 50% of the target annual cash bonus (\$150,000) | None |

The following table sets forth the amount of potential payments that Mr. Gill would have received if we had terminated his employment without cause or if Mr. Gill had resigned for good reason on December 31, 2016, as set forth in his employment agreement.

| Name | Cash Payments (\$) ⁽¹⁾ |
|--------------|---|
| John M. Gill | \$ 150,000 |

(1) Represents an amount equal to 50% of the target annual cash bonus, but excludes reimbursement for any expenses for which Mr. Gill had not yet been reimbursed. According to Mr. Gill’s employment agreement, Mr. Gill's target bonus was up to 50% of base salary.

On January 14, 2017, PharmAthene entered into a retention and severance agreement with Mr. MacNeill, which provides for (i) a severance payment to Mr. MacNeill in the amount of \$93,095 if Mr. MacNeill remains employed with PharmAthene through the closing of the Merger and the preparation of PharmAthene's 2016 annual report and proxy statement for the PharmAthene 2017 annual meeting of stockholders and (ii) a bonus payment to Mr. MacNeill in the amount of \$67,235 if he remains employed through the closing of the Merger. Each payment will become due and payable upon a termination by PharmAthene without cause.

Compensation Committee Interlocks and Insider Participation

All members of Board committees are independent directors, and no member is or has been an employee or former employee of PharmAthene, except that Dr. Schaffer served as Vice Chairman and Chief Executive Officer of Healthcare Acquisition Corp. from April 2005 to August 2007. In addition, no Committee member had any relationship requiring disclosure under “Certain Relationships and Related Transactions” in this proxy statement.

During the fiscal year ended December 31, 2016, none of our executive officers served on the compensation committee (or its equivalent) or on the board of directors of another entity, one of whose executive officers served on our Compensation Committee or our Board of Directors.

Director Compensation

The following table sets forth, for the fiscal year ended December 31, 2016, the cash and non-cash compensation of our Directors (other than our Chief Executive Officer, who was not separately compensated for his service on the Board) during that year. In the paragraph following the table and in the footnotes, we describe our standard compensation arrangement for service on the Board of Directors and Board Committees.

For the Fiscal Year Ended December 31, 2016

| Name | Fees earned or paid in cash (\$) ⁽¹⁾ | Stock Awards (\$) ⁽²⁾ | Option Awards (\$) ⁽²⁾ | Total (\$) |
|------------------------|--|--|---|---------------|
| Mitchel Sayare, Ph.D. | 85,500 | — | 24,297 | 109,797 |
| Derace Schaffer, M.D. | 58,000 | — | 24,297 | 82,297 |
| Jeffrey Runge, M.D. | 57,000 | — | 24,297 | 81,297 |
| Eric I. Richman | 40,000 | — | 24,297 | 64,297 |
| Steven St. Peter, M.D. | 42,500 | — | 24,297 | 66,797 |

- (1) Fees earned are based on membership on the PharmAthene Board of Directors, committee membership and leadership positions. In addition to the other compensation received, members of the PharmAthene Board of Directors are reimbursed for the reasonable out-of-pocket costs incurred by them in connection with travel to and from Board of Directors' and committee meetings. None of such reimbursements amounted to \$10,000 or more in 2016. The amounts reflected in this column represent the cash fees earned by non-executive directors for services during 2016. Of these amounts, the following amounts were paid in 2017 with respect to 2016 services: Sayare: \$21,375, Schaffer: \$14,500, Runge: \$14,250, Richman: \$10,000 and St. Peter: \$10,625. The amounts reflected in this column do not include the following cash payments made to directors during 2016 for 2015 services: Sayare: \$21,375, Schaffer: \$14,500, Runge: \$14,250, Richman: \$10,000 and St. Peter: \$10,625.
- (2) The amounts in this column represent the aggregate grant date fair value for stock awards and stock option awards issued during 2016 computed in accordance with FAS ASC Topic 718. As of December 31, 2016, there were no stock awards outstanding (vested and unvested) for Dr. Sayare, Dr. Schaffer, Dr. Runge, Mr. Richman and Dr. St. Peter. As of December 31, 2016, the aggregate number of option awards outstanding (vested and unvested) for Dr. Sayare was 20,000, for Dr. Schaffer was 60,000, for Dr. Runge was 20,000, for Mr. Richman was 958,942 and for Dr. St. Peter was 20,000 (not including options to purchase 70,000 shares assigned to MPM Funds).

General Policy Regarding Compensation of Directors

In light of the proposed Merger with Altimmune, the compensation of Directors has not been determined. If the Merger is not consummated, the Board will undertake to establish such annual compensation policies for non-employee members of the Board.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

Principal Stockholders of PharmAthene

The following table sets forth information, as it was available to PharmAthene on March 6, 2017 except as otherwise indicated, based on information furnished by the persons named below, obtained from PharmAthene's transfer agent and/or obtained from certain filings made by the persons named below with the SEC, with respect to the beneficial ownership of shares of the PharmAthene common stock by (i) each person known by PharmAthene to be the beneficial owner of more than 5% of the outstanding shares of PharmAthene common stock (inclusion in this table shall not be deemed an admission of affiliate status), (ii) each director, nominee for director and Named Executive Officer and (iii) all current directors and executive officers as a group. Except as indicated in the footnotes to the table, the persons named in the table have sole voting and investment power with respect to all shares of PharmAthene common stock shown as beneficially owned by them.

| Name of Beneficial Owner ⁽¹⁾ | Number of Shares Beneficially Owned | Percentage of Outstanding Shares ⁽²⁾ |
|---|-------------------------------------|---|
| Eric I. Richman ^{(3)**} | 1,643,055 | 2.36% |
| Derace L. Schaffer, M.D. ^{(4)**} | 1,207,711 | 1.75% |
| John M. Gill ^{(5)**} | 902,244 | 1.31% |
| Mitchel Sayare, Ph.D. ^{(6)**} | 295,500 | * |
| Steven St. Peter, M.D. ^{(7)**} | 205,004 | * |
| Jeffrey W. Runge, M.D. ^{(8)**} | 197,700 | * |
| Philip MacNeill ⁽⁹⁾ | 146,033 | * |
| All directors and executive officers as a group (7 persons) | 4,597,247 | 6.59% |

* Less than 1.0%

** Director

(1) Unless otherwise indicated in other footnotes to this table, the address for each beneficial owner is c/o PharmAthene, Inc., One Park Place, Suite 450, Annapolis, MD 21401.

(2) Based on 68,815,195 shares of common stock as of March 6, 2017, all of which were outstanding on the records of PharmAthene's transfer agent. Beneficial ownership is determined in accordance with the rules and regulations of the SEC. In computing the number of shares beneficially owned by a person and the percentage ownership of that person, shares of PharmAthene common stock underlying warrants, notes or subject to options held by that person that are currently exercisable or exercisable within 60 days are deemed outstanding. Such shares, however, are not deemed outstanding for the purposes of computing the percentage ownership of any other person. Except as indicated in the following footnotes or pursuant to applicable community property laws, each stockholder named in the table has sole voting and investment power with respect to the shares set forth opposite such stockholder's name.

Equity Compensation Plan Information

The following table provides information regarding the number of securities to be issued under our 2007 Plan, the weighted-average exercise price of options issued under the 2007 Plan and the number of securities remaining available for future issuance under the 2007 Plan, in each case as of December 31, 2016:

| Plan category | Number of securities to be issued upon exercise of outstanding options, warrants and rights | Weighted-average exercise price of outstanding options, warrants and rights (\$) | Number of securities remaining available for future issuance under equity compensation plans |
|--|---|--|--|
| Equity compensation plans approved by security holders | 1,720,029 | 3.36 | 5,120,722 ⁽¹⁾ |
| Equity compensation plans not approved by security holders | — | — | — |
| Total | 1,720,029 | 3.36 | 5,120,722 |

(1) This amount includes shares underlying unexercised options already granted and reported in the first column. Under our 2007 Plan, such shares are not treated as issued and are not counted as used against the plan limits until the options are exercised. If we were to exclude shares underlying unexercised options already granted, this amount would be 3,400,693 as of December 31, 2016. Under our 2007 Plan, the number of shares available for issuance under such plan was automatically increased as of the first day of our fiscal year, beginning in 2009 and occurring each year thereafter through 2015, by a number that is equal to the lower of (i) 1,100,000 shares, (ii) 2.5% of the outstanding shares of common stock as of the end of our immediately preceding fiscal year, and (iii) any lesser number of shares determined by the Board; provided, however, that the aggregate number of shares available for issuance pursuant to such increases may not exceed 5,700,000 shares. This 5,700,000 share limit was reached on January 1, 2014.

Further information regarding our 2007 Plan is contained in Note 8 to our consolidated financial statements for the fiscal year ended December 31, 2016 contained in this Annual Report on Form 10-K.

- (3) Includes 159,516 shares granted as restricted stock and not relinquished for tax purposes (included herein irrespective of vesting date) and options to purchase a total of 735,000 shares of common stock (representing the portion of options to purchase a total of 950,660 shares of common stock that are exercisable as of February 16, 2017 or will become exercisable within 60 days thereof). Mr. Richman is a member of PharmAthene's Board of Directors and served as PharmAthene's President and Chief Executive Officer through March 11, 2015.
- (4) Includes options to purchase 40,000 shares of common stock, all of which are exercisable. Dr. Schaffer is a member of PharmAthene's Board of Directors.
- (5) Includes 612,244 shares granted as restricted stock and not relinquished for tax purposes (included herein irrespective of vesting date) and options to purchase a total of 80,000 shares of common stock, all of which are exercisable. Mr. Gill is a member of PharmAthene's Board of Directors and was appointed our President and Chief Executive Officer effective March 12, 2015.
- (6) Includes options to purchase a total of 20,000 shares of common stock, all of which are exercisable. Dr. Sayare is the Chairman of PharmAthene's Board of Directors.
- (7) Dr. St. Peter is a member of PharmAthene's Board of Directors.
- (8) Dr. Runge is a member of PharmAthene's Board of Directors.
- (9) Includes 50,000 shares granted as restricted stock and not relinquished for tax purposes (included herein irrespective of vesting date) and options to purchase 19,687 shares of common stock (representing the portion of options to purchase a total of 59,999 shares of common stock that are exercisable as of February 16, 2017 or will become exercisable within 60 days thereof). Mr. MacNeill was appointed PharmAthene's Vice President, Chief Financial Officer, Treasurer and Secretary as of May 1, 2015.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

Certain Relationships and Related Transactions

Other than as disclosed pursuant to Item 402 of Regulation S-K in the sections "Director Compensation" and "Executives and Executive Compensation" above, no reportable transactions as described in Item 404(a) of Regulation S-K took place in the year ended December 31, 2016 through the date of this Form 10-K. There are no familial relationships among our directors, nominees and/or executive officers.

Under the Company's written Conflicts of Interest Policy, each director and officer must disclose to the Board, or separately-appointed conflicts committee of the Board (the "Reviewing Directors"), any matter that could reasonably be considered to involve a material financial interest that such director or officer, or any immediate family member of such director or officer, has, or any transaction, contract or arrangement involving the Company and another entity of which the person serves as officer or director. As defined in the policy, financial interests include any direct or indirect (i) existing or potential ownership or investment interest in any entity with which the Company has a transaction, contract or other arrangement; (ii) compensation arrangement with the Company or with any entity or individual with which the Company has a transaction, contract or other arrangement (except that officers need not disclose compensation and other benefits paid to the officer pursuant to a resolution of the Board of Directors); (iii) existing or potential ownership or investment interest in, or compensation arrangement with, any entity or individual with which the Company is negotiating a transaction, contract or other arrangement; or (iv) existing or potential ownership or investment interest in, or compensation arrangement with, any entity whose business or operation has been or will be directly affected by a decision or action of the Company. After disclosure of the actual or potential conflict of interest, the disinterested Reviewing Directors must determine whether a conflict of interest exists. If the disinterested Reviewing Directors determine a conflict of interest exists, the chairman of the Board or the committee must, if appropriate, appoint a disinterested person to investigate alternatives to the proposed transaction, contract or arrangement. If a more advantageous transaction, contract or arrangement that would not give rise to a conflict of interest is not reasonably attainable under the circumstances, the Board or the committee, as the case may be, must determine by majority vote of the disinterested directors whether the transaction, contract or arrangement is in the Company's best interest and for its own benefit and whether it is fair and reasonable to the Company. In addition, each of PharmAthene's directors and officers must submit a written statement annually as to their business and other affiliations that in any way relate to the business and other affiliations of the Company.

Item 14. Principal Accountant Fees and Services.

General

Our Audit Committee has appointed Ernst & Young LLP (“E&Y”) as our independent registered public accountants for the fiscal year ending December 31, 2017 (the “E&Y Appointment”).

During the two most recent fiscal years and the interim period preceding the engagement of E&Y, the Company has not consulted with E&Y regarding either: (i) the application of accounting principles to a specified transaction, either completed or proposed, or the type of audit opinion that might be rendered on the Company’s financial statements; or (ii) any matter that was either the subject of a disagreement or reportable event identified in paragraph (a)(1)(iv) of Item 304 of Regulation S-K.

Audit Fees, Audit Related Fees, Tax Fees and Other Fees

The following table sets forth the aggregate fees billed to the Company during the fiscal years ended December 31, 2016 and 2015 by E&Y:

| | Fiscal 2016 (\$) | Fiscal 2015 (\$) |
|-----------------------------------|---------------------------------|---------------------------------|
| Audit Fees ⁽¹⁾ | 449,675 | 288,564 |
| Audit Related Fees ⁽²⁾ | 1,252 | 91,425 |
| Tax Fees ⁽³⁾ | 238,145 | 68,540 |
| Total Fees | <u>689,072</u> | <u>448,529</u> |

- (1) Audit Fees consist of fees billed for professional services rendered for the audit of the Company’s consolidated annual financial statements included in our Annual Report on Form 10-K and review of the interim consolidated financial statements included in our Quarterly Reports on Form 10-Q, and services that are normally provided by our independent registered public accountants in connection with statutory and regulatory filings or engagements. For the fiscal years ended December 31, 2016 and 2015, fees in this category for professional services billed by E&Y were \$449,675 and \$288,564, respectively.
- (2) Audit-Related Fees consist of fees billed for assurance and related services rendered that are reasonably related to the performance of the audit or review of the Company’s consolidated financial statements and are not reported under “Audit Fees.” For the fiscal years ended December 31, 2016 and 2015, fees in this category for professional services billed by E&Y were \$1,252 and \$91,425, respectively.
- (3) Tax Fees were billed for services including assistance with tax compliance and the preparation of tax returns, tax consultation services, assistance in connection with tax audits and tax advice related to mergers, acquisitions and dispositions. For the fiscal years ended December 31, 2016 and 2015, fees in this category for professional services billed by E&Y were \$238,145 and \$68,540, respectively.

Pre-Approval of Audit and Permissible Non-Audit Services

Our Audit Committee has considered whether the provisions of services described in the table above are compatible with maintaining auditor independence. Our Audit Committee requires pre-approval of all audit and non-audit services in one of two methods, and each of the permitted non-auditing services described above has been pre-approved by the Audit Committee. Under the first method, the engagement to render the services would be entered into pursuant to pre-approval policies and procedures established by the Audit Committee, provided (i) the policies and procedures are detailed as to the services to be performed, (ii) the Audit Committee is informed of each service, and (iii) such policies and procedures do not include delegation of the Audit Committee's responsibilities under the Exchange Act to the Company's management. Under the second method, the engagement to render the services would be presented to and pre-approved by the Audit Committee (subject to the de minimis exceptions for non-audit services described in Section 10A(i)(1)(B) of the Exchange Act that are approved by the Audit Committee prior to the completion of the audit). The Chairman of the Audit Committee has the authority to grant pre-approvals of audit and permissible non-audit services by the independent registered public accounting firm, provided that all pre-approvals by the Chairman must be presented to the full Audit Committee at its next scheduled meeting.

Part IV

Item 15. Exhibits and Financial Statement Schedules.

Financial Statements

Reference is made to the Index to the Consolidated Financial Statements beginning on page F-1 of this report.

Financial Statement Schedules

Required information is included in the footnotes to the financial statements.

Exhibit Index

| Exhibit No. | Description |
|--------------------|---|
| 2.1 | Sale and Purchase Agreement, dated March 20, 2008, by and among the Registrant and Avecia Investments Limited, Avecia Biologics Limited and Avecia Biologics, Inc. (5) |
| 2.2 | Amendment Agreement, dated April 2, 2008, by and among, PharmAthene, Inc., PharmAthene UK Limited and PharmAthene US Corporation and Avecia Investments Limited, Avecia Biologics Limited and Avecia Biologics, Inc. (6) |
| 2.3 | Agreement and Plan of Merger and Reorganization dated as of January 18, 2017, by and among PharmAthene, Inc., Mustang Merger Sub, Inc., Mustang Merger Sub LLC, Altimmune, Inc. and Shareholder Representative Services LLC, as representative of Altimmune Securityholders. (42) |
| 3.1 | Amended and Restated Certificate of Incorporation of the Company, as amended. (17) |
| 3.1.1 | Certificate of Designation, as filed with the State of Delaware on November 25, 2015. (40) |
| 3.2 | By-laws, as amended. (34) |
| 4.1 | Specimen Unit Certificate. (1) |
| 4.2 | Specimen Common Stock Certificate. (4) |
| 4.3 | Form of Warrant in connection with Securities Purchase Agreement dated as of April 7, 2010. (21) |

| Exhibit No. | Description |
|----------------|--|
| 4.4 | Form of Warrant in connection with Securities Purchase Agreement dated as of July 20, 2010. (22) |
| 4.5 | Form of Warrant in connection with Subscription Agreement dated as of June 10, 2011. (30) |
| 4.6 | Form of Warrant in connection with Loan and Security Agreement, dated March 30, 2012. (31) |
| 10.1 | Controlled Equity Offering Sales Agreement, dated March 25, 2013, between PharmAthene, Inc. and Cantor Fitzgerald & Co. (32) |
| 10.2 | Amendment No. 1 to Controlled Equity Offering Sales Agreement, dated May 23, 2014, between PharmAthene, Inc. and Cantor Fitzgerald & Co. (36) |
| 10.3 | Form of Registration Rights Agreement among the Registrant and the initial stockholders of Healthcare Acquisition Corp. (1) |
| 10.4 | Form of Registration Rights Agreement by and among the Registrant and the former stockholders and note holders of PharmAthene, Inc. (2) |
| 10.5 | Amended and Restated 2007 Long-Term Incentive Compensation Plan. (8) |
| 10.6 | Office Lease, dated September 14, 2006, by and between the Company and Park Place Trust, as amended by First Amendment to Office Lease, dated January 22, 2007. (4)+ |
| 10.6.1 | Second Amendment to Office Lease, by and between the Company and Park Place Trust, dated September 16, 2008. (39) |
| 10.7 | Form of PharmAthene, Inc. Executive Employment Agreement. (9)++ |
| 10.7.1 | Employment Agreement, dated December 23, 2010, by and between Eric Richman and the Company++ (26) |
| 10.7.2 | Form of Executive Restricted Stock Award Agreement.++ (29) |
| 10.7.3 | Form of Executive Stock Option Agreement.++ (29) |
| 10.7.4 | Form of Director Stock Option Agreement.++ (29) |
| 10.7.5 | Employment Agreement, dated February 7, 2012, by and between Linda Chang and the Company. (16)++ |
| 10.7.6 | Employment Agreement, dated April 18, 2008, by and between Francesca Cook and the Company. (33)++ |
| 10.7.7 | Employment Agreement, dated April 18, 2008, by and between Wayne Morges and the Company. (38)++ |
| 10.7.8 | Employment Agreement, dated November 5, 2015, by and between John M. Gill and the Company. (41)++* |
| 10.7.9 | Separation Agreement and General Release and Waiver, dated March 9, 2015, by and between Francesca Cook and the Company. (41)++ |
| 10.7.10 | Separation Agreement and General Release and Waiver, dated March 16, 2015, by and between Eric Richman and the Company. (41)++ |
| 10.7.11 | Separation Agreement and General Release and Waiver, dated March 31, 2015, by and between Wayne Morges, Ph.D. and the Company. (41)++ |
| 10.7.12 | Separation Agreement and General Release and Waiver, dated April 30, 2015, by and between Linda Chang and the Company. (41)++ |
| 10.8 | Form of PharmAthene, Inc. Confidentiality and Non-Solicitation Agreement. (9) |

| Exhibit No. | Description |
|----------------|---|
| 10.9 | Contract with the National Institutes of Health for the Production and Testing of Anthrax Recombinant Protective Antigen (rPA) Vaccine (#N01-AI-30052) (“NIH Prime Contract-Anthrax”), dated September 29, 2003. (19)+ |
| 10.10 | Amendments 1 through 13 to the NIH Prime Contract-Anthrax. (19)+ |
| 10.10.1 | Modification (Amendment) 18 to the Contract with the National Institutes of Health for the Production and Testing of Anthrax Recombinant Protective Antigen (rPA) Vaccine (HHSO100200900103C). (27)+ |
| 10.11 | Form of Indemnification Agreement (12) |
| 10.12 | Form of Note and Warrant Purchase Agreement, dated as of July 24, 2009, by and among PharmAthene, Inc. and the investors signatories thereto, as amended by Amendment No. 1 to Note and Warrant Purchase Agreement, dated as of July 26, 2009 and Amendment No. 2 to Note and Warrant Purchase Agreement, dated as of July 28, 2009. (14) |
| 10.13 | Form of Registration Rights Agreement, dated as of July 28, 2009 by and among PharmAthene, Inc. and the investor’s signatories thereto. (14) |
| 10.14 | Form of Securities Purchase Agreement, dated as of April 7, 2010, between PharmAthene, Inc. and the Purchasers party thereto.(23) |
| 10.15 | Form of Securities Purchase Agreement, dated as of July 20, 2010, between PharmAthene, Inc. and the Purchasers party thereto.(24) |
| 10.16 | Form of Subscription Agreement, dated as of June 10, 2011, between PharmAthene, Inc. and the Investors party thereto. (30) |
| 10.17 | Loan and Security Agreement, dated March 30, 2012. (31) |
| 10.18 | Contract with the National Institute of Allergy and Infectious Diseases of the National Institutes of Health for the Development of Vaccine Formulations Effective Against NIAID Priority Pathogens, dated September 9, 2014 (Contract No. HHSN272201400040C). + (37) |
| 10.19 | Form of PharmAthene Voting Agreement dated as of January 18, 2017. (43) |
| 10.20 | Form of PharmAthene Lock-Up Agreement dated as of January 18, 2017. (44) |
| 10.21 | Form of Altimmune Lock-Up Agreement dated as of January 18, 2017. (45) |
| 10.22 | Phillip MacNeill Retention and Severance Agreement. (46)++ |
| 21 | Subsidiaries. (47) |
| 23 | Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.* |
| 31.1 | Certification of Principal Executive Officer Pursuant to SEC Rule 13a-14(a)/15d-14(a).* |
| 31.2 | Certification of Principal Financial Officer Pursuant to SEC Rule 13a-14(a)/15d-14(a).* |
| 32.1 | Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350.* |
| 32.2 | Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350.* |
| (101) | The following consolidated financial statements from the PharmAthene, Inc. annual report on Form 10-K for the year ended December 31, 2016, formatted in Extensive Business Reporting Language (“XBRL”): (i) Consolidated Balance Sheets as of December 31, 2016 and December 31, 2015, (ii) Consolidated Statements of Operations for the years ended December 31, 2016, 2015 and 2014, (iii) Consolidated Statements of Comprehensive Loss, (iv) Consolidated Statements of Stockholders’ Equity for the years ended December 31, 2016, 2015 and 2014, (v) Consolidated Statements of Cash Flows for the years ended December 31, 2016, 2015 and 2014, and (v) Notes to consolidated financial statements.* |
| 101.INS | Instance Document* |

| Exhibit No. | Description |
|----------------|---|
| 101.SCH | XBRL Taxonomy Extension Schema Document* |
| 101.CAL | XBRL Taxonomy Extension Calculation Linkbase Document* |
| 101.DEF | XBRL Taxonomy Extension Definition Linkbase Document* |
| 101.LAB | XBRL Taxonomy Extension Label Linkbase Document* |
| 101.PRE | XBRL Taxonomy Extension Presentation Linkbase Document* |
| (1) | Incorporated by reference to the Registration Statement on Form S-1 of the Registrant filed on May 6, 2005. |
| (2) | Incorporated by reference to the current report on Form 8-K filed by the Registrant on January 22, 2007. |
| (3) | Intentionally omitted. |
| (4) | Incorporated by reference to the current report on Form 8-K/A filed by the Registrant on September 24, 2007. |
| (5) | Incorporated by reference to the current report on Form 8-K filed by the Registrant on March 26, 2008. |
| (6) | Incorporated by reference to the current report on Form 8-K filed by the Registrant on April 8, 2008. |
| (7) | Intentionally omitted. |
| (8) | Incorporated by reference to Appendix B to the Proxy Statement on Schedule 14A filed by the Registrant on May 15, 2008. |
| (9) | Incorporated by reference to the corresponding exhibit to the quarterly report on Form 10-Q for the quarter ended June 30, 2008. |
| (10) | Intentionally omitted. |
| (11) | Intentionally omitted. |
| (12) | Incorporated by reference to Exhibit 10.45 to the current report on Form 8-K filed by the Registrant on January 27, 2009. |
| (13) | Intentionally omitted. |
| (14) | Incorporated by reference to Amendment No. 1 to the Company's current report on Form 8-K filed on August 3, 2009. |
| (15) | Intentionally omitted. |
| (16) | Incorporated by reference to the corresponding exhibit to the Registrant's annual report on Form 10-K for the year ended December 31, 2011. |
| (17) | Incorporated by reference to the Registrant's current report on Form 8-K filed on November 4, 2009. |
| (18) | Intentionally omitted. |
| (19) | Incorporated by reference to the corresponding exhibit to the Registrant's annual report on Form 10-K for the year ended December 31, 2008. |

| Exhibit No. | Description |
|----------------|--|
| (20) | Incorporated by reference to Exhibit 10.44 to the quarterly report on Form 10-Q for the quarter ended September 30, 2008. |
| (21) | Incorporated by reference to Exhibit 10.2 to the Registrant's current report on Form 8-K filed on April 8, 2010. |
| (22) | Incorporated by reference to Exhibit 10.2 to the Registrant's current report on Form 8-K filed on July 20, 2010. |
| (23) | Incorporated by reference to Exhibit 10.1 to the Registrant's current report on Form 8-K filed on April 8, 2010. |
| (24) | Incorporated by reference to Exhibit 10.1 to the Registrant's current report on Form 8-K filed on July 20, 2010. |
| (25) | Incorporated by reference to Exhibit 10.30.3 to the Registrant's current report on Form 8-K filed on May 24, 2010. |
| (26) | Incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed by the Registrant on December 30, 2010. |
| (27) | Incorporated by reference to the Registrant's quarterly report on Form 10-Q for the quarter ended March 31, 2010. |
| (28) | Incorporated by reference to the Registrant's annual report on Form 10-K for the year ended December 31, 2010. |
| (29) | Incorporated by reference to the Registrant's quarterly report on Form 10-Q for the quarter ended March 31, 2011. |
| (30) | Incorporated by reference to the current report on Form 8-K filed by the Registrant on June 10, 2011. |
| (31) | Incorporated by reference to the current report on Form 8-K filed by the Registrant on April 3, 2012. |
| (32) | Incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed by the Registrant on March 25, 2013. |
| (33) | Incorporated by reference to the Registrant's quarterly report on Form 10-Q for the quarter ended March 31, 2013. |
| (34) | Incorporated by reference to Exhibit 3.2 to the Registrant's Statement on Form S-4 (File No. 333-215891) filed on February 3, 2017. |
| (35) | Incorporated by reference to Exhibit 10.61 to the Registrant's quarterly report on Form 10-Q for the quarter ended September 30, 2014. |
| (36) | Incorporated by reference to Exhibit 1.2 to the Registrant's Registration Statement on Form S-3 filed on May 23, 2014. |
| (37) | Incorporated by reference to the corresponding exhibit to the Registrant's quarterly report on Form 10-Q for the quarter ended September 30, 2014. |
| (38) | Incorporated by reference to Exhibit 10.30.2 to the Registrant's annual report on Form 10-K for the year ended December 31, 2009. |

| Exhibit No. | Description |
|------------------------|---|
| (39) | Incorporated by reference to Exhibit 10.44 to the Registrant's quarterly report on Form 10-Q for the quarter ended September 30, 2008. |
| (40) | Incorporated by reference to Exhibit 3.1 to the Registrant's current report on Form 8-K filed on November 25, 2015. |
| (41) | Incorporated by reference to the Registrant's quarterly report on Form 10-Q for the quarter ended March 31, 2015. |
| (42) | Incorporated by referenced to Annex A to the Registrant's proxy statement/prospectus/consent solicitation included as part of the Registrant's Registration Statement on Form S-4 (File No. 333-215891) filed with the SEC on February 3, 2017. |
| (43) | Incorporated by reference to Exhibit 10.20 to the Registrant's Registration Statement on Form S-4 (File No. 333-215891) filed on February 3, 2017. |
| (44) | Incorporated by reference to Exhibit 10.21 to the Registrant's Registration Statement on Form S-4 (File No. 333-215891) filed on February 3, 2017. |
| (45) | Incorporated by reference to Exhibit 10.22 to the Registrant's Registration Statement on Form S-4 (File No. 333-215891) filed on February 3, 2017. |
| (46) | Incorporated by reference to Exhibit 10.23 to the Registrant's Registration Statement on Form S-4 (File No. 333-215891) filed on February 3, 2017. |
| (47) | Incorporated by reference to Exhibit 21 to the Registrant's annual report on form 10-K filed on March 11, 2016. |
| * | Filed herewith. |
| + | Certain confidential portions of this exhibit have been omitted and filed separately with the Securities and Exchange Commission pursuant to a request for confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934. |
| ++ | Management Compensation Arrangement. |

Financial Statements and Schedules of Subsidiaries and Affiliates

None.

Item 16. Form 10-K Summary.

Not applicable.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized, in the city of Annapolis, State of Maryland, on the 14th day of March, 2017.

PHARMATHENE, INC.

By: /s/ John M. Gill
John M. Gill
President & Chief Executive Officer

POWER OF ATTORNEY

BY THESE PRESENTS, each person whose signature appears below constitutes and appoints John M. Gill and Philip MacNeill his true and lawful attorney-in-fact and agents, with full power of substitution and resubstitution for him and in his name, place and stead, in any and all capacities to sign any and all amendments to this annual report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the U.S. Securities and Exchange Commission, hereby ratifying and confirming all that said attorney-in-fact or his substitute, each acting alone, may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

| <u>Signature</u> | <u>Title</u> | <u>Date</u> |
|---|---|----------------|
| <u>/s/ John M. Gill</u> John M. Gill | Chief Executive Officer and Director (Principal Executive Officer) | March 14, 2017 |
| <u>/s/ Philip MacNeill</u> Philip MacNeill | Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer) | March 14, 2017 |
| <u>/s/ Mitchel Sayare</u> Mitchel Sayare, Ph.D. | Chairman of the Board | March 14, 2017 |
| <u>/s/ Steven St. Peter</u> Steven St. Peter, M.D. | Director | March 14, 2017 |
| <u>/s/ Eric I. Richman</u> Eric I. Richman | Director | March 14, 2017 |
| <u>/s/ Jeffrey W. Runge</u> Jeffrey W. Runge, M.D. | Director | March 14, 2017 |
| <u>/s/ Derace Schaffer</u> Derace Schaffer, M.D. | Director | March 14, 2017 |

PHARMATHENE, INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

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REPORT OF ERNST & YOUNG LLP, INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM
INTERNAL CONTROL OVER FINANCIAL REPORTING

The Board of Directors and Stockholders of
PharmAthene, Inc.

We have audited PharmAthene, Inc.'s internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). PharmAthene Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in Item 9A, Management's Annual Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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

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

In our opinion, PharmAthene, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of PharmAthene, Inc. as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended December 31, 2016 and our report dated March 14, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Baltimore, Maryland
March 14, 2017

REPORT OF ERNST & YOUNG LLP, INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM
CONSOLIDATED FINANCIAL STATEMENTS

The Board of Directors and Stockholders of
PharmAthene, Inc.

We have audited the accompanying consolidated balance sheets of PharmAthene, Inc. as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended December 31, 2016. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of PharmAthene, Inc. at December 31, 2016 and 2015, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2016, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), PharmAthene Inc.'s internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated March 14, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Baltimore, Maryland
March 14, 2017

PHARMATHENE, INC.
CONSOLIDATED BALANCE SHEETS

| | December 31, | |
|---|---------------------|---------------|
| | 2016 | 2015 |
| <u>ASSETS</u> | | |
| Current assets: | | |
| Cash and cash equivalents | \$ 153,994,922 | \$ 15,569,813 |
| Short-term investments | 66,810,962 | - |
| Billed accounts receivable | 301,824 | 511,994 |
| Unbilled accounts receivable | 697,321 | 963,345 |
| Prepaid expenses and other current assets | 464,797 | 181,714 |
| Total current assets | 222,269,826 | 17,226,866 |
| Property and equipment, net | 120,944 | 233,694 |
| Other long-term assets and deferred costs | - | 53,384 |
| Goodwill | 2,348,453 | 2,348,453 |
| Total assets | \$ 224,739,223 | \$ 19,862,397 |
| <u>LIABILITIES AND STOCKHOLDERS' EQUITY</u> | | |
| Current liabilities: | | |
| Accounts payable | \$ 926,529 | \$ 521,122 |
| Dividends payable | 197,083,993 | - |
| Accrued expenses and other liabilities | 2,083,472 | 1,248,708 |
| Accrued income taxes payable | 3,157,563 | - |
| Accrued restructuring expenses - current | 109,126 | 381,950 |
| Other short-term liabilities | 11,588 | 11,250 |
| Current portion of derivative instruments | 1,465,272 | 16,411 |
| Total current liabilities | 204,837,543 | 2,179,441 |
| Accrued restructuring expenses, less current portion | - | 108,641 |
| Other long-term liabilities | 442,589 | 433,407 |
| Derivative instruments, less current portion | - | 491,791 |
| Total liabilities | 205,280,132 | 3,213,280 |
| Stockholders' equity: | | |
| Common stock, \$0.0001 par value; 100,000,000 shares authorized; 67,726,458 and 64,382,086 shares issued and outstanding at December 31, 2016 and December 31, 2015, respectively | 6,773 | 6,438 |
| Additional paid-in capital | 49,323,222 | 240,366,704 |
| Accumulated other comprehensive loss | (1,052) | - |
| Accumulated deficit | (29,869,852) | (223,724,025) |
| Total stockholders' equity | 19,459,091 | 16,649,117 |
| Total liabilities and stockholders' equity | \$ 224,739,223 | \$ 19,862,397 |

The accompanying notes are an integral part of the consolidated financial statements.

PHARMATHENE, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

| | Year Ended December 31, | | |
|--|-------------------------|-----------------------|-----------------------|
| | 2016 | 2015 | 2014 |
| Contract revenue | \$ 5,230,196 | \$ 10,640,660 | \$ 10,190,205 |
| Operating expenses: | | | |
| Research and development | 4,836,035 | 5,133,512 | 9,319,828 |
| General and administrative | 11,515,071 | 6,222,185 | 10,911,724 |
| Restructuring expense | - | 2,546,159 | - |
| Depreciation | 143,437 | 141,604 | 149,958 |
| Total operating expenses | <u>16,494,543</u> | <u>14,043,460</u> | <u>20,381,510</u> |
| Loss from operations | \$ (11,264,347) | \$ (3,402,800) | \$ (10,191,305) |
| Other income (expense): | | | |
| Interest income (expense), net | 168,150 | (54,581) | (210,399) |
| Realization of cumulative translation adjustment | - | (229,192) | - |
| Change in fair value of derivative instruments | (957,070) | 299,477 | 508,817 |
| Other income - litigation | 217,068,969 | - | - |
| Other income (expense) | 7,847 | 8,137 | (762) |
| Total other income (expense) | <u>216,287,896</u> | <u>23,841</u> | <u>297,656</u> |
| Income (loss) before income taxes | 205,023,549 | (3,378,959) | (9,893,649) |
| Income tax provision | <u>(11,169,376)</u> | <u>(61,746)</u> | <u>(61,746)</u> |
| Net income (loss) | <u>\$ 193,854,173</u> | <u>\$ (3,440,705)</u> | <u>\$ (9,955,395)</u> |
| Basic net income (loss) per share | \$ 2.97 | \$ (0.05) | \$ (0.17) |
| Diluted net income (loss) per share | \$ 2.95 | \$ (0.05) | \$ (0.17) |
| Weighted-average shares used in calculation of basic net income (loss) per share | 65,306,962 | 63,986,013 | 57,535,325 |
| Weighted-average shares used in calculation of diluted net income (loss) per share | 65,657,802 | 63,986,013 | 57,535,325 |

The accompanying notes are an integral part of the consolidated financial statements.

PHARMATHENE, INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

| | Year Ended December 31, | | |
|---|--------------------------------|----------------|----------------|
| | 2016 | 2015 | 2014 |
| Net income (loss) | \$ 193,854,173 | \$ (3,440,705) | \$ (9,955,395) |
| Other comprehensive income (loss): | | | |
| Unrealized loss on available-for-sale securities | (1,052) | - | - |
| Foreign currency translation adjustment | - | 336 | (10,818) |
| Realization of cumulative translation adjustment included in net loss | - | 229,192 | - |
| Comprehensive income (loss) | \$ 193,853,121 | \$ (3,211,177) | \$ (9,966,213) |

The accompanying notes are an integral part of the consolidated financial statements.

PHARMATHENE, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

| | Common Stock | | Additional Paid-In Capital | Accumulated Other Comprehensive Income (Loss) | Accumulated Deficit | Stockholders' Equity |
|--|-------------------|-----------------|----------------------------------|--|------------------------|-------------------------|
| | Shares | Amount | | | | |
| Balance as of 12/31/2013 | 52,304,246 | \$ 5,230 | \$ 217,877,117 | \$ (218,710) | \$ (210,327,925) | \$ 7,335,712 |
| Net loss | - | - | - | - | (9,955,395) | (9,955,395) |
| Foreign currency translation adjustments | - | - | - | (10,818) | - | (10,818) |
| Issuance of common stock, net issuance costs | 10,520,454 | 1,052 | 17,685,043 | - | - | 17,686,095 |
| Share-based compensation - stock options | - | - | 1,649,994 | - | - | 1,649,994 |
| Shares issued upon exercise of stock options | 352,718 | 35 | 455,805 | - | - | 455,840 |
| Shares issued upon exercise of warrants | 419,218 | 42 | 1,107,022 | - | - | 1,107,064 |
| Employee vesting of restricted shares | 6,667 | 1 | 5,652 | - | - | 5,653 |
| Balance as of 12/31/2014 | 63,603,303 | 6,360 | 238,780,633 | (229,528) | (220,283,320) | 18,274,145 |
| Net loss | - | - | - | - | (3,440,705) | (3,440,705) |
| Foreign currency translation adjustments | - | - | - | 336 | - | 336 |
| Realization of cumulative translation adjustment | - | - | - | 229,192 | - | 229,192 |
| Share-based compensation - stock options | - | - | 613,017 | - | - | 613,017 |
| Shares issued upon exercise of stock options | 778,783 | 78 | 973,054 | - | - | 973,132 |
| Balance as of 12/31/2015 | 64,382,086 | 6,438 | 240,366,704 | - | (223,724,025) | 16,649,117 |
| Net income | - | - | - | - | 193,854,173 | 193,854,173 |
| Unrealized losses on available-for-sale securities | - | - | - | (1,052) | - | (1,052) |
| Dividends declared | - | - | (197,083,993) | - | - | (197,083,993) |
| Share-based compensation - stock options | - | - | 2,240,015 | - | - | 2,240,015 |
| Shares issued upon exercise of stock options | 2,492,639 | 250 | 3,801,470 | - | - | 3,801,720 |
| Employee vesting of restricted shares | 851,733 | 85 | (974) | - | - | (889) |
| Balance as of 12/31/2016 | <u>67,726,458</u> | <u>\$ 6,773</u> | <u>\$ 49,323,222</u> | <u>\$ (1,052)</u> | <u>\$ (29,869,852)</u> | <u>\$ 19,459,091</u> |

The accompanying notes are an integral part of the consolidated financial statements.

PHARMATHENE, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

| | Year Ended December 31, | | |
|--|-------------------------|----------------|----------------|
| | 2016 | 2015 | 2014 |
| Operating activities | | | |
| Net income (loss) | \$ 193,854,173 | \$ (3,440,705) | \$ (9,955,395) |
| Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities: | | | |
| Realization of cumulative translation adjustment | - | 229,192 | - |
| Share-based compensation expense | 2,240,015 | 613,017 | 1,655,647 |
| Change in fair value of derivative instruments | 957,070 | (299,477) | (508,817) |
| Depreciation expense | 143,437 | 141,604 | 149,958 |
| Deferred income taxes | 61,822 | 61,746 | 61,746 |
| Amortization of premium and discount on short-term investments | 35,572 | - | - |
| Non-cash interest expense | 15,918 | (45,358) | 83,021 |
| Restructuring expense related to property and equipment | - | 36,981 | - |
| Gain on the disposal of property and equipment | (687) | (7,600) | (5,394) |
| Changes in operating assets and liabilities: | | | |
| Accounts receivable | 210,170 | (401,338) | 1,316,457 |
| Unbilled accounts receivable | 266,024 | (665,914) | 1,902,094 |
| Prepaid expenses and other current assets | (283,514) | 5,202 | (5,367) |
| Other long-term assets and deferred costs | 53,384 | - | - |
| Accounts payable | 405,407 | 129,726 | (736,776) |
| Accrued restructuring expenses | (397,383) | 481,761 | - |
| Accrued expenses and other liabilities | 789,267 | (54,818) | (2,089,493) |
| Accrued income taxes payable | 3,157,563 | - | - |
| Deferred revenue | - | - | (341,723) |
| Net cash provided by (used in) operating activities | 201,508,238 | (3,215,981) | (8,474,042) |
| Investing activities | | | |
| Purchases of available-for-sale investments | (66,847,586) | - | - |
| Purchases of property and equipment | (30,687) | (86,507) | (92,269) |
| Proceeds from the sale of property and equipment | 687 | 7,600 | 8,000 |
| Net cash used in investing activities | (66,877,586) | (78,907) | (84,269) |
| Financing activities | | | |
| Repayment of debt | - | (750,007) | (999,996) |
| Net repayment of revolving credit agreement | - | - | (1,091,740) |
| Net proceeds from exercise of warrants | - | - | 683,325 |
| Proceeds from issuance of common stock, including exercise of stock options, net of offering costs | 3,801,720 | 973,132 | 18,141,935 |
| Other | (889) | - | - |
| Net cash provided by financing activities | 3,800,831 | 223,125 | 16,733,524 |
| Effects of exchange rates on cash and cash equivalents | (6,374) | (1,775) | (12,841) |
| Increase (decrease) in cash and cash equivalents | 138,425,109 | (3,073,538) | 8,162,372 |
| Cash and cash equivalents, at beginning of year | 15,569,813 | 18,643,351 | 10,480,979 |
| Cash and cash equivalents, at end of year | \$ 153,994,922 | \$ 15,569,813 | \$ 18,643,351 |
| Supplemental disclosure of cash flow information | | | |
| Cash paid for interest | \$ - | \$ 108,391 | \$ 128,073 |

The accompanying notes are an integral part of the consolidated financial statements.

PHARMATHENE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF AND FOR THE YEAR ENDED DECEMBER 31, 2016

Note 1 - Organization and Business

We have been engaged in the biodefense business through our predecessor entity since our inception in 2001.

We are incorporated under the laws of the State of Delaware and are a biodefense company focused on developing next generation medical countermeasures against biological and chemical threats. We are subject to those risks associated with any biopharmaceutical company that has substantial expenditures for research and development. In addition, we operate in an environment of rapid technological change and are largely dependent on the services and expertise of our employees, consultants and other third parties.

Since 2006, we were engaged in legal proceedings with SIGA Technologies, Inc. ("SIGA"). On December 23, 2015, the Delaware Supreme Court affirmed the Delaware Court of Chancery's judgment against SIGA which provided an estimated total award of approximately \$208.7 million plus additional interest.

We received approximately \$217.1 million from SIGA during the year ended December 31, 2016, comprised of principal payments of approximately \$208.7 million as final satisfaction of the judgment and \$8.4 million of payments calculated by SIGA as interest on the judgment.

On November 17, 2016, the Company's Board of Directors declared a special one-time cash dividend of \$2.91 per share of common stock, payable on February 3, 2017 to holders of record as of January 24, 2017. The special dividend, totaling an aggregate payment of approximately \$200 million, which represents approximately 98% of the after tax net cash proceeds received from SIGA, was approved by the Company's Board of Directors following the Company's receipt of \$83.9 million as final payment from SIGA in satisfaction of the judgment owed by it to PharmAthene

On September 9, 2014, we signed a contract with the National Institutes of Allergy and Infectious Diseases ("NIAID") for the development of a next generation lyophilized anthrax vaccine ("SparVax-L") based on the Company's proprietary technology platform which contributes the recombinant protective antigen ("rPA") bulk drug substance that is used in the liquid SparVax[®] formulation. The contract is incrementally funded. Over the base period of the contract, we were awarded initial funding of approximately \$5.2 million, which includes a cost reimbursement component and a fixed fee component payable upon achievement of certain milestones. NIAID has exercised four options under this agreement to provide additional funding of approximately \$8.8 million and an extension of the period of performance through December 31, 2017. The contract has a total value of up to approximately \$28.1 million, if all technical milestones are met and all eight contract options are exercised by NIAID. If NIAID exercises all options, the contract would last approximately five years. If NIAID does not exercise any additional options, the contract would expire by its terms on December 31, 2017.

On March 9, 2015, our Board of Directors approved our realignment plan (the "Realignment Plan") with the goal of preserving and maximizing, for the benefit of our stockholders, the value of the proceeds from our litigation with SIGA and our existing anthrax vaccine programs. We intend to maintain sufficient resources and personnel so that we can seek partners, co-developers or acquirers for our anthrax vaccine programs and continue to execute under our government contract with NIAID.

On July 6, 2015, we signed a license agreement with ImmunoVaccine Technologies ("IMV") for the exclusive use of the DepoVax[™] vaccine platform ("DPX"), to develop an anthrax vaccine utilizing PharmAthene's rPA. On June 23, 2016, we terminated this license agreement.

As of December 31, 2016, our cash and cash equivalents balance was \$154.0 million, our short-term investments balance was \$66.8 million, our accounts receivable (billed and unbilled) balance was \$1 million, and our current liabilities, which included dividends payable of \$197.1 million, were \$204.8 million. Our excess cash balances have been placed in low risk U.S. Government money market funds, short-term U.S. Treasury securities and short-term government-sponsored enterprise securities in an effort to preserve capital and fund the dividend payable when due on February 3, 2017.

Historically, the Company has performed under government contracts and grants and raised funds from investors (including additional debt and equity issued in 2015 and 2014) to sustain our operations. The Company has spent substantial funds in the research, development, clinical and preclinical testing in excess of revenues, to support the Company's product candidates and to market and sell its products. We have incurred losses since we commenced operations, and have an accumulated deficit of \$29.9 million as of December 31, 2016. The Company's accumulated losses have been reduced by the SIGA related payments received in 2016.

We believe, based on the operating cash requirements and capital expenditures expected for 2017, the Company's cash on hand at December 31, 2016, excluding amounts allocated to pay the one-time special dividend, is adequate to fund operations for at least twelve months from the date of this report.

Note 2 - Summary of Significant Accounting Policies

Basis of Presentation

Our consolidated financial statements include the accounts of PharmAthene, Inc. and its wholly owned subsidiary. All significant intercompany transactions and balances have been eliminated in consolidation. Our consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States ("U.S. GAAP"). We currently operate in one business segment.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Our consolidated financial statements include significant estimates for share-based compensation, deferred tax assets, liabilities and valuation allowances, the expected economic life and value of our tangible assets and value of our indefinite lived intangible asset, and the value of our financial instruments, among other things. Because of the use of estimates inherent in the financial reporting process, actual results could differ significantly from those estimates.

Foreign Currency Translation

The functional currency of our wholly owned foreign subsidiary, PharmAthene UK Limited, is its local currency. Assets and liabilities of our foreign subsidiary are translated into United States dollars based on exchange rates at the end of the reporting period. Income and expense items are translated at the weighted-average exchange rates prevailing during the reporting period. Translation adjustments for subsidiaries that have not been sold, substantially liquidated or otherwise disposed of are accumulated in other comprehensive loss, a component of stockholders' equity. Transaction gains or (losses) are included in the determination of net income or loss.

In June 2015, we substantially liquidated PharmAthene UK Limited, which we had acquired in 2008. Prior to substantially liquidating the UK subsidiary, currency fluctuations were recorded as foreign currency translation adjustments, a component of other comprehensive income. As a result of the substantial liquidation, we realized a loss of approximately \$0.2 million in our consolidated statements of operations for the year ended December 31, 2015, which represents the amount of previously recorded foreign currency translation adjustments related to our UK subsidiary.

Comprehensive Income (Loss) and Accumulated Other Comprehensive Loss

Comprehensive income (loss) includes the total of our net income (loss) and all other changes in equity, other than transactions with owners, which includes changes in equity for unrealized losses on available-for-sale securities and cumulative translation adjustments resulting from the consolidation of foreign subsidiaries, as the financial statements of the subsidiary located outside of the United States are accounted for using the local currency as the functional currency for the periods prior to its substantial liquidation.

Cash and Cash Equivalents

Cash and cash equivalents are stated at cost which approximates fair value and include investments in U.S. Government money market. We consider all highly liquid instruments with maturities of three months or less when purchased to be cash equivalents. The Company maintains cash balances with financial institutions in excess of insured limits. The Company does not anticipate any losses on such cash balances.

Short-Term Investments

Investments are classified as available-for-sale pursuant to the accounting standards for investments in debt and equity securities. Investments with maturities of less than one year are classified as short-term and consist of investment grade U.S. Treasury debt securities and government-sponsored enterprise debt securities, all of which are due within six months. Investments are carried at fair value with unrealized gains and losses included as a component of other comprehensive income (loss), until such gains and losses are realized. If a decline in the fair value is considered other-than-temporary, based on available evidence, the unrealized loss is transferred from other comprehensive income to the statement of operations. Management reviews investments for other-than-temporary impairment whenever the fair value of an investment is less than the amortized cost and evidence indicates that an investment's carrying amount is not recoverable within a reasonable period of time. We assess the risk of impairment related to securities held in our investment portfolio on a regular basis. There were no investments with a fair value that was significantly lower than the amortized cost basis as of December 31, 2016.

Cash and cash equivalents and short-term investments consist of the following:

| Description | Amortized Cost December 31, 2016 | Unrealized (Losses) Gains | Fair Value December 31, 2016 |
|--|---|--------------------------------------|---|
| Cash and cash equivalents: | | | |
| Cash and money market funds | \$ 12,125,898 | \$ - | \$ 12,125,898 |
| Government-sponsored enterprise securities (original maturities within three months) | 141,869,024 | - | 141,869,024 |
| Total cash and cash equivalents | \$ 153,994,922 | \$ - | \$ 153,994,922 |
| Short-term investments: | | | |
| U.S. Treasury securities | \$ 20,018,323 | \$ (1,273) | \$ 20,017,050 |
| Government-sponsored enterprise securities (original maturities within six months) | 46,793,691 | 221 | 46,793,912 |
| Total short-term investments | \$ 66,812,014 | \$ (1,052) | \$ 66,810,962 |
| Total cash, cash equivalents and short-term investments | \$ 220,806,936 | \$ (1,052) | \$ 220,805,884 |

Concentration of Credit Risk

Financial instruments that potentially subject us to concentrations of credit risk are primarily cash and cash equivalents, short-term investments, and billed and unbilled accounts receivable. We maintain our cash and cash equivalents in the form of U.S. Government money market accounts, U.S. Treasury Bills and U.S. government-sponsored enterprise debt. Because our billed and unbilled accounts receivable consist of amounts due from the U.S. Government, there is minimal credit risk.

Significant Customers and Accounts Receivable

For the years ended December 31, 2016 and 2015, our primary customer was NIAID and the Biomedical Advanced Research and Development Authority ("BARDA"). As of December 31, 2016 and 2015, the Company's billed and unbilled receivable balances were comprised solely of receivables from NIAID. The receivable balances are reported at amounts expected to be collected in future periods. No allowance for doubtful accounts is necessary given the circumstances.

Property and Equipment

Property and equipment consist of leasehold improvements, furniture and office equipment and computer and other equipment and are recorded at cost. Leasehold improvements are amortized over the economic life of the asset or the lease term, whichever is shorter. Property and equipment are depreciated using the straight-line method over the estimated useful lives of the respective assets as follows:

| Asset Category | Estimated Useful Life (in Years) |
|--------------------------------|---|
| Leasehold improvements | 8-10 |
| Furniture and office equipment | 5 |
| Computer and other equipment | 3-5 |

Impairment of Long-Lived Assets

Long-lived assets consist primarily of property and equipment. We review long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to future undiscounted net cash flows expected to be generated by the asset. Recoverability measurement and estimating of undiscounted cash flows is done at the lowest possible level for which we can identify assets. If such assets are considered to be impaired, impairment is recognized as the amount by which the carrying amount of assets exceeds the fair value of the assets.

Goodwill

Goodwill represents the excess of purchase price over the fair value of net identifiable assets associated with acquisitions. We review the recoverability of goodwill annually at the end of our fiscal year and whenever events or changes in circumstances indicate that it is more likely than not that impairment exists. Recoverability of goodwill is reviewed by comparing our market value (as measured by our stock price multiplied by the number of outstanding shares as of the assessment date) to the net book value of our equity. If our market value exceeds our net book value, no further analysis is required. We completed our annual impairment assessment of goodwill on December 31, 2016 and determined that there was no impairment as of that date. Changes in our business strategy or adverse changes in market conditions could impact the impairment analyses and require the recognition of an impairment charge equal to the excess of the carrying value over its estimated fair value.

Accrued Restructuring Expense

The remaining accrued liability relating to our restructuring expense as of December 31, 2016 is as follows:

| Description | Balance as of December 31, 2015 | Paid 2016 | Amortized 2016 | Balance as of December 31, 2016 |
|-------------------------------------|--|----------------------|---------------------------|--|
| Accrued severance expense | \$ 131,822 | \$ 131,822 | \$ - | \$ - |
| Accrued sublease expense | 358,769 | - | 249,643 | 109,126 |
| Total accrued restructuring expense | <u>\$ 490,591</u> | <u>\$ 131,822</u> | <u>\$ 249,643</u> | <u>\$ 109,126</u> |

Fair Value of Financial Instruments

Our financial instruments, and/or embedded features contained in those instruments, often are classified as derivative liabilities and are recorded at their fair values. The determination of fair value of these instruments and features requires estimates and judgments. Some of our stock purchase warrants are considered to be derivative liabilities due to the presence of net settlement features and/or non-standard anti-dilution provisions; the fair value of our warrants is determined based on the Black-Scholes option pricing model. Use of the Black-Scholes option-pricing model requires the use of unobservable inputs such as the expected term, anticipated volatility and expected dividends. See Note 3 – *Fair Value Measurements* for further details.

Revenue Recognition

Our revenue for the years presented is generated from cost-plus-fee contracts and fixed price contracts.

Revenue on cost-plus-fee contracts is recognized in an amount equal to the costs incurred during the period plus an estimate of the applicable fee earned. The estimate of the applicable fee earned is determined by reference to the contract: if the contract defines the fee in terms of risk-based milestones and specifies the fees to be earned upon the completion of each milestone, then the fee is recognized when the related milestones are earned, as further described below; otherwise, we estimate the fee earned in a given period by using a proportional performance method based on costs incurred during the period as compared to total estimated project costs and application of the resulting fraction to the total project fee specified in the contract.

Under the milestone method of revenue recognition, milestone payments (including milestone payments for fees) contained in research and development arrangements are recognized as revenue when: (i) the milestones are achieved; (ii) no further performance obligations with respect to the milestone exist; (iii) collection is reasonably assured; and (iv) substantive effort was necessary to achieve the milestone.

Milestones are considered substantive if all of the following conditions are met:

- it is commensurate with either our performance to meet the milestone or the enhancement of the value of the delivered item or items as a result of a specific outcome resulting from our performance to achieve the milestone,
- it relates solely to past performance, and
- the value of the milestone is reasonable relative to all the deliverables and payment terms (including other potential milestone consideration) within the arrangement.

If a milestone is deemed not to be substantive, the Company recognizes the portion of the milestone payment as revenue that correlates to work already performed using the proportional performance method; the remaining portion of the milestone payment is deferred and recognized as revenue as the Company completes its performance obligations.

Revenue on fixed price contracts (without substantive milestones as described above) is recognized on the percentage-of-completion method. The percentage-of-completion method recognizes income as the contract progresses (generally related to the costs incurred in providing the services required under the contract). The use of the percentage-of-completion method depends on the ability to make reasonable dependable estimates and the fact that circumstances may necessitate frequent revision of estimates does not indicate that the estimates are unreliable for the purpose for which they are used.

Revenue on fixed price contracts with substantive milestones as described above is recognized as each milestone is achieved. Revenue may be recognized upon completion of the contract, when substantive delivery is achieved, transfer of title takes place and payment is reasonably assured.

As a result of our revenue recognition policies and the billing provisions contained in our contracts, the timing of customer billings may differ from the timing of recognizing revenue. Amounts invoiced to customers in excess of revenue recognized are reflected on the balance sheet as deferred revenue. Amounts recognized as revenue in excess of amounts billed to customers are reflected on the balance sheet as unbilled accounts receivable.

Collaborative Arrangements

Even though most of our products are being developed in conjunction with support by the U.S. Government, we are an active participant in that development, with exposure to significant risks and rewards of commercialization relating to the development of these pipeline products. In collaborations where we are deemed to be the principal participant of the collaboration, we recognize costs and revenues generated from third parties using the gross basis of accounting; otherwise, we use the net basis of accounting. Cost paid to us by other collaborative arrangement members are recognized pursuant to their terms.

Research and Development

Research and development costs are expensed as incurred; up-front payments are deferred and expensed as performance occurs. Research and development costs include salaries, facilities expense, overhead expenses, material and supplies, preclinical expense, clinical trials and related clinical manufacturing expenses, share-based compensation expense, contract services and other outside services.

Share-Based Compensation

We expense the estimated fair value of share-based awards granted to employees, non-employee directors and consultants under our stock compensation plans.

The fair value of stock options granted to employees and non-employee directors is determined at the grant date using the Black-Scholes option-pricing model, which considers, among other factors, the expected life of the award and the expected volatility of our stock price. The value of the award that is ultimately expected to vest is recognized as expense on a straight-line basis over the employee's requisite service period.

The fair value of stock options granted to consultants is determined at the grant date using the Black-Scholes option-pricing model and remeasured at each quarterly reporting date over their requisite service period. The value of the award that is ultimately expected to vest is recognized as expense on a straight-line basis over their requisite service period.

The fair value of restricted stock grants granted to employees and non-employee directors is determined based on the closing price of our common stock on the award date and is recognized as expense ratably over the requisite service period.

The fair value of restricted stock grants granted to consultants is determined based on the closing price of our common stock on the award date, is remeasured at each quarterly reporting date and is recognized as expense ratably over the requisite service period.

Share-based compensation expense in 2016, 2015 and 2014 is calculated based on awards ultimately expected to vest and is reduced for estimated forfeitures.

Share-based compensation expense for 2016, 2015 and 2014 is as follows:

| | Year Ended December 31, | | |
|--|-------------------------|-------------------|---------------------|
| | 2016 | 2015 | 2014 |
| Research and development | \$ 146,489 | \$ 122,412 | \$ 452,870 |
| General and administrative | 2,093,526 | 544,346 | 1,202,777 |
| Restructuring benefit | - | (53,741) | - |
| Total share-based compensation expense | <u>\$ 2,240,015</u> | <u>\$ 613,017</u> | <u>\$ 1,655,647</u> |

During the year ended December 31, 2016, 805,994 shares of restricted stock and options to purchase 70,000 shares of common stock vested as a result of the achievement of performance conditions. In addition, options to purchase 385,330 shares of common stock vested as a result of the November 17, 2016 declaration of a special one-time cash dividend.

As a result of the restructuring and termination of employees, during the year ended December 31, 2015, we recognized approximately \$75,000 of share-based compensation expense resulting from our agreement to extend the exercise period of the vested stock options for several of the executives who were terminated. In addition, approximately \$129,000 of previously recognized share-based compensation expense was reversed for unvested stock options forfeited as a result of the restructuring and termination of employees. The \$53,741 net reversal of share-based compensation expense is reflected in restructuring benefit in the above table.

During the years ended December 31, 2016, 2015 and 2014, we received proceeds of approximately \$3.8 million, \$1.0 million and \$0.5 million from stock options exercised, respectively.

Income Taxes

We account for income taxes using the asset and liability approach, which requires the recognition of future tax benefits or liabilities on the temporary differences between the financial reporting and tax bases of our assets and liabilities. A valuation allowance is established when necessary to reduce deferred tax assets to the amounts expected to be realized. We also recognize a tax benefit from uncertain tax positions only if it is “more likely than not” that the position is sustainable based on its technical merits.

Income tax expense was approximately \$11.2 million for the year ended December 31, 2016. The receipt of the award from SIGA generated substantial taxable income to the Company, a portion of which was offset by the Company's domestic net operating loss carryforwards. Due to 382 limitations, approximately \$1 million of the Company's domestic NOL was limited and could not be used to offset current year income. As of December 31, 2016, we recognized a valuation allowance of \$6.9 million on our remaining net domestic and foreign deferred tax assets until such point in time the likelihood of realization of our tax deferred assets would not meet the more likely than not threshold. See Note 9 - *Income Taxes* for further information.

The Company recognized income tax expense of \$0.1 million for each of the years ended December 31, 2015 and 2014, relating exclusively to the generation of a deferred tax liability associated with the tax amortization of goodwill, which is included as a component of other long-term liabilities on our consolidated balance sheets.

We file a U.S. federal income tax return as well as returns for various state and foreign jurisdictions. Our income taxes have not been examined by any tax jurisdiction since our inception. Uncertain tax positions taken on our tax returns are accounted for as liabilities for unrecognized tax benefits. We recognize interest and penalties, if any, related to unrecognized tax benefits in other income (expense) in the consolidated statements of operations.

An excess tax expense (“shortfall”) for the Company’s share-based awards is recorded as an additional provision expense to additional paid-in-capital, rather than an income tax benefit from continuing operations. A windfall benefit occurs when the tax deduction is in excess of the share-based compensation expense recognized in the financial statements.

Basic and Diluted Net Income (Loss) Per Share

Income (loss) per share: Basic income (loss) per share is computed by dividing consolidated net income (loss) by the weighted-average number of common shares outstanding during the period, excluding unvested restricted stock.

For periods of net income when the effects are not anti-dilutive, diluted earnings per share is computed by dividing our net income by the weighted average number of shares outstanding and the impact of all potential dilutive common shares, consisting primarily of stock options, unvested restricted stock and stock purchase warrants. The dilutive impact of our dilutive potential common shares resulting from stock options and stock purchase warrants is determined by applying the treasury stock method.

For the periods of net loss, diluted loss per share is calculated similarly to basic loss per share because the impact of all dilutive potential common shares is anti-dilutive due to the net losses.

Our unvested restricted shares contain non-forfeitable rights to dividends, and therefore are considered to be participating securities. There were no unvested restricted shares outstanding as of December 31, 2016, and therefore there were no participating securities included in the computation.

A reconciliation of the numerators and denominators of the basic and diluted per share computations for the year ended December 31, 2016 is as follows (a reconciliation is not required for the years ended December 31, 2015 and 2014 since the Company recorded a net loss for those years):

**Year Ended
December 31, 2016**

| <u>Numerator</u> | |
|---|-----------------------|
| Net income | \$ 193,854,173 |
| Net income allocated to participating securities | - |
| Numerator for basic income per share | <u>193,854,173</u> |
| Incremental allocation of net income to participating securities | - |
| Change in fair value of dilutive warrants | - |
| Numerator for diluted income per share | <u>\$ 193,854,173</u> |
| <u>Denominator</u> | |
| Weighted-average outstanding common shares for basic income per share | 65,306,962 |
| Dilutive effect of stock options | 350,840 |
| Dilutive effect of warrants | - |
| Denominator for diluted income per share | <u>65,657,802</u> |

For the year ended December 31, 2016, outstanding stock options to purchase approximately 1.5 million shares of common stock and warrants to purchase approximately 0.8 million shares of common stock were excluded from the calculation of basic and diluted net income per share, because their inclusion would be anti-dilutive.

Approximately 6.5 million and 11.9 million potentially dilutive securities have been excluded from the calculation of diluted net loss per share in 2015 and 2014, respectively, because their inclusion would be anti-dilutive.

Recent Accounting Pronouncements Adopted

In August 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2014-15, Presentation of Financial Statements, Going Concern (Subtopic 205-40) which requires management to evaluate on a regular basis whether any conditions or events have arisen that could raise substantial doubt about the entity's ability to continue as a going concern. The guidance 1) provides a definition for the term “substantial doubt,” 2) requires an evaluation every reporting period, interim periods included, 3) provides principles for considering the mitigating effect of management's plans to alleviate the substantial doubt, 4) requires certain disclosures if the substantial doubt is alleviated as a result of management's plans, 5) requires an express statement, as well as other disclosures, if the substantial doubt is not alleviated, and 6) requires an assessment period of one year from the date the financial statements are issued. The amendments in this Update are effective for the annual period ending after December 15, 2016, and for annual periods and interim periods thereafter. The Company adopted this pronouncement as of December 31, 2016; however, have concluded this pronouncement did not have an impact on our financial statement disclosures.

In April 2015, the FASB issued ASU No. 2015-05, Intangibles, Goodwill and Other Internal-Use Software which includes guidance as to whether a cloud computing arrangement (e.g., software as a service, platform as a service, infrastructure as a service, and other similar hosting arrangements) includes a software license and, based on that determination, how to account for such arrangements. If a cloud computing arrangement includes a software license, then the customer should account for the software license element of the arrangement consistent with the acquisition of other software licenses. If a cloud computing arrangement does not include a software license, the customer should account for the arrangement as a service contract. The guidance is effective for reporting periods beginning after December 15, 2015, and can be adopted on either a prospective or retrospective basis. The Company adopted this guidance during the first quarter ended March 31, 2016, on a prospective basis. The adoption of this new guidance did not have a material impact on the Company's financial statements.

In November 2015, the FASB issued ASU No. 2015-17, Income Taxes, or ASU No. 2015-17. To simplify the presentation of deferred income taxes, the amendments in this Update require that deferred tax liabilities and assets be classified as noncurrent in a classified statement of financial position. The amendments in this Update apply to all entities that present a classified statement of financial position. The current requirement that deferred tax liabilities and assets of a tax-paying component of an entity be offset and presented as a single amount is not affected by the amendments in this Update. The amendments in this Update are effective for financial statements issued for annual periods beginning after December 15, 2016, and interim periods within those annual periods. Earlier application is permitted. The amendments in this Update may be applied either prospectively to all deferred tax liabilities and assets or retrospectively to all periods presented. We have adopted ASU No. 2015-17 on our consolidated financial statements. However the adoption had no impact on the current or prior presentation, as our recorded deferred tax liability was a noncurrent liability.

Recent Accounting Pronouncements Pending Adoption

In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers (Topic 606) (“ASU No. 2014-09”). ASU No. 2014-09 supersedes the previous revenue recognition requirements, along with most existing industry-specific guidance. The guidance requires an entity to review contracts in five steps: 1) identify the contract, 2) identify performance obligations, 3) determine the transaction price, 4) allocate the transaction price, and 5) recognize revenue. The new standard will result in enhanced disclosures regarding the nature, amount, timing, and uncertainty of revenue arising from contracts with customers. In August 2015, the FASB issued guidance approving a one-year deferral, making the standard effective for reporting periods beginning after December 15, 2017, with early adoption permitted only for reporting periods beginning after December 15, 2016. In March 2016, the FASB issued guidance to clarify the implementation guidance on principal versus agent considerations for reporting revenue gross rather than net, with the same deferred effective date. In April 2016, the FASB issued guidance to clarify the identification of performance obligations and licensing arrangements. In May 2016, the FASB issued guidance to clarify the collectability criterion, the presentation of sales taxes and other similar taxes collected from customers, noncash consideration, contract modifications at transition, completed contracts at transition, and required disclosures for entities that retrospectively apply Topic 606 to each prior reporting period. In preparation for the adoption of the new standard, we have begun to evaluate our existing arrangement; however, have not yet determined the impact of the new standard on our consolidated financial statements or whether we will adopt on a prospective or retrospective basis.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842) to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. Topic 842 affects any entity that enters into a lease, with some specified scope exemptions. The guidance in this Update supersedes Topic 840, Leases. The core principle of Topic 842 is that a lessee should recognize the assets and liabilities that arise from leases. A lessee should recognize in the statement of financial position a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term. For public companies, the amendments in this Update are effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. We are currently evaluating the impact of adopting ASU No. 2016-02 on our consolidated financial statements.

In March 2016, the FASB issued ASU No. 2016-09, Compensation – Stock Compensation simplifying the accounting for and financial statement disclosure of stock-based compensation awards. Under the guidance, all excess tax benefits and tax deficiencies related to stock-based compensation awards are to be recognized as income tax expenses or benefits in the income statement and excess tax benefits should be classified along with other income tax cash flows in the operating activities section of the statement of cash flows. Under the guidance, companies can also elect to either estimate the number of awards that are expected to vest or account for forfeitures as they occur. In addition, the guidance amends some of the other stock-based compensation awards guidance to more clearly articulate the requirements and cash flow presentation for withholding shares for tax-withholding purposes. The guidance is effective for reporting periods beginning after December 15, 2016 and early adoption is permitted, though all amendments of the guidance must be adopted in the same period. The adoption of certain amendments of the guidance must be applied prospectively, and adoption of the remaining amendments must be applied either on a modified retrospective basis or retrospectively to all periods presented. We are currently evaluating the impact that this guidance will have on our consolidated financial statements.

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments – Credit Losses (Topic 326), Measurement of Credit Losses on Financial Instruments. The amendments affect entities holding financial assets and net investment in leases that are not accounted for at fair value through net income. The amendments affect loans, debt securities, trade receivables, net investments in leases, off-balance-sheet credit exposures, reinsurance receivables, and any other financial assets not excluded from the scope that have the contractual right to receive cash. The amendments in this Update require a financial asset (or a group of financial assets) measured at amortized cost basis to be presented at the net amount expected to be collected. Credit losses relating to available-for-sale debt securities should be recorded through an allowance for credit losses. For public companies that are SEC filers, the amendments in this Update are effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. All entities may adopt the amendments in this Update earlier as of the fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. We are currently evaluating the impact of adopting ASU No. 2016-13 on our consolidated financial statements.

In August 2016, the FASB issued amended guidance on the classification of certain cash receipts and cash payments in the statement of cash flows, including related to debt prepayment or debt extinguishment costs, contingent consideration payments made after a business combination, proceeds from the settlement of insurance claims, proceeds from the settlement of corporate-owned life insurance, and distributions received from equity method investees. The guidance is effective for reporting periods beginning after December 15, 2017 and early adoption is permitted. The guidance must be adopted on retrospective basis and must be applied to all periods presented, but may be applied prospectively if retrospective application would be impracticable. We are currently evaluating the impact, if any, that this guidance will have on our consolidated financial statements.

In January 2017, the FASB issued amended guidance on the concept of impairment from the condition that exists when the carrying amount of goodwill exceeds its implied fair value to the condition that exists when the carrying amount of a reporting unit exceeds its fair value. An entity no longer will determine goodwill impairment by calculating the implied fair value of goodwill by assigning the fair value of a reporting unit to all of its assets and liabilities as if that reporting unit had been acquired in a business combination. The guidance is effective for reporting periods beginning after December 15, 2020 and early adoption is permitted. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. We are currently evaluating the impact, if any, that this guidance will have on our consolidated financial statements.

Note 3 - Fair Value Measurements

The carrying amounts of our short-term financial instruments, which primarily include cash and cash equivalents, short-term investments, accounts receivable (billed and unbilled), and accounts payable, approximate their fair values due to their short-term maturities. We define fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the measurement date. We report assets and liabilities that are measured at fair value using a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. This hierarchy maximizes the use of observable inputs and minimizes the use of unobservable inputs. The three levels of inputs used to measure fair value are as follows:

- Level 1 - Quoted prices in active markets for identical assets or liabilities.
- Level 2 - Observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data.
- Level 3 - Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. This includes certain pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs.

An asset's or liability's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. At each reporting period, we perform a detailed analysis of our assets and liabilities that are measured at fair value. All assets and liabilities for which the fair value measurement is based on significant unobservable inputs or instruments which trade infrequently and therefore have little or no price transparency are classified as Level 3.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

The following table represents the fair value hierarchy for our financial assets and liabilities measured at fair value on a recurring basis:

| | As of December 31, 2016 | | | |
|--|--------------------------------|-----------------------|---------------------|-----------------------|
| | Level 1 | Level 2 | Level 3 | Balance |
| Financial Assets | | | | |
| Cash equivalents | \$ 11,972,733 | \$ 141,869,024 | \$ - | \$ 153,841,757 |
| Short-term investments | - | 66,810,962 | - | 66,810,962 |
| Total financial assets measured at fair value | <u>\$ 11,972,733</u> | <u>\$ 208,679,986</u> | <u>\$ -</u> | <u>\$ 220,652,719</u> |
| Financial Liabilities | | | | |
| Current portion of derivative instruments related to stock purchase warrants | \$ - | \$ - | \$ 1,465,272 | \$ 1,465,272 |
| Total financial liabilities measured at fair value | <u>\$ -</u> | <u>\$ -</u> | <u>\$ 1,465,272</u> | <u>\$ 1,465,272</u> |
| As of December 31, 2015 | | | | |
| | Level 1 | Level 2 | Level 3 | Balance |
| Financial Assets | | | | |
| Cash equivalents | \$ 6,430,561 | \$ - | \$ - | \$ 6,430,561 |
| Total financial assets measured at fair value | <u>\$ 6,430,561</u> | <u>\$ -</u> | <u>\$ -</u> | <u>\$ 6,430,561</u> |
| Financial Liabilities | | | | |
| Current portion of derivative instruments related to stock purchase warrants | \$ - | \$ - | \$ 16,411 | \$ 16,411 |
| Non-current portion of derivative instruments related to stock purchase warrants | - | - | 491,791 | 491,791 |
| Total financial liabilities measured at fair value | <u>\$ -</u> | <u>\$ -</u> | <u>\$ 508,202</u> | <u>\$ 508,202</u> |

The Company's cash equivalents are comprised of U.S. Treasury money market funds and government-sponsored enterprise debt securities with original maturities of three months or less when purchased. The Company's short-term investments are comprised of U.S. Treasury securities and government-sponsored enterprise securities, which at the time of purchase, had a maturity of greater than three months. These investments have been initially valued at the transaction price and subsequently valued at the end of each reporting period, utilizing other market observable data.

The following table sets forth a summary of changes in the fair value of the Company's Level 3 liabilities for the years ended December 31, 2016, 2015 and 2014:

| Description | Balance as of December 31, 2015 | Unrealized Losses 2016 | Exercised Stock Purchase Warrants 2016 | Balance as of December 31, 2016 |
|---|---------------------------------------|------------------------------|---|---------------------------------------|
| Derivative liabilities related to stock purchase warrants | \$ 508,202 | \$ 957,070 | \$ - | \$ 1,465,272 |

| Description | Balance as of December 31, 2014 | Unrealized (Gains) 2015 | Exercised Stock Purchase Warrants 2015 | Balance as of December 31, 2015 |
|---|---------------------------------------|-------------------------------|---|---------------------------------------|
| Derivative liabilities related to stock purchase warrants | \$ 807,679 | \$ (299,477) | \$ - | \$ 508,202 |

| Description | Balance as of December 31, 2013 | Unrealized (Gains) 2014 | Exercised Stock Purchase Warrants 2014 | Balance as of December 31, 2014 |
|---|---------------------------------------|-------------------------------|---|---------------------------------------|
| Derivative liabilities related to stock purchase warrants | \$ 1,740,235 | \$ (508,817) | \$ (423,739) | \$ 807,679 |

At December 31, 2016, 2015 and 2014, derivative liabilities are comprised of warrants to purchase 903,996, 1,275,419 and 1,775,419 shares of common stock, respectively. Warrants to purchase 371,423 shares of common stock expired during the year ended December 31, 2016 without being exercised, all of which were classified as derivative liabilities.

The warrants are considered to be derivative liabilities due to the presence of net settlement features and/or non-standard anti-dilution provisions, and as a result, are recorded at fair value at each balance sheet date. The fair value of our warrants is determined based on the Black-Scholes option-pricing model. Use of the Black-Scholes option-pricing model requires the use of unobservable inputs such as the expected term, anticipated volatility and expected dividends. Changes in any of the assumptions related to the unobservable inputs identified above may change the stock purchase warrants' fair value; increases in expected term, anticipated volatility and expected dividends generally result in increases in fair value, while decreases in the unobservable inputs generally result in decreases in fair value. Gains and losses on the fair value adjustments for these derivative instruments are classified in other income (expense) as the change in fair value of derivative instruments in our consolidated statements of operations.

Quantitative Information about Level 3 Fair Value Measurements

| Fair Value at December 31, 2016 | Valuation Technique | Unobservable Inputs |
|---------------------------------|------------------------------------|---|
| \$ 1,465,272 | Black-Scholes option-pricing model | Expected term Expected dividends Anticipated volatility |

Assets and Liabilities Measured at Fair Value on a Non-Recurring Basis

The Company measures its long-lived assets, including property, plant and equipment, intangible assets and goodwill, at fair value on a non-recurring basis. These assets are recognized at fair value when they are deemed to be other-than-temporarily impaired. During the year ended December 31, 2015, the Company recorded an impairment charge for property and equipment in the amount of \$36,981, and included as part of restructuring expense. These assets were written down to their fair value of \$0 in conjunction with the sublease of the Company's leased office space (see Note 7 – *Commitments and Contingencies – Leases*). As of December 31, 2016 and 2015, the Company had no other assets or liabilities that were measured at fair value on a nonrecurring basis. No such fair value impairment was recognized in the years ended December 31, 2016 or 2014.

Note 4 - Property and Equipment

Property and equipment consisted of the following:

| | December 31, | |
|--------------------------------|-------------------|-------------------|
| | 2016 | 2015 |
| Leasehold improvements | \$ 593,739 | \$ 593,739 |
| Furniture and office equipment | 234,018 | 234,018 |
| Computer and other equipment | 1,285,350 | 1,263,193 |
| | <u>2,113,107</u> | <u>2,090,950</u> |
| Less accumulated depreciation | (1,992,163) | (1,857,256) |
| Property and equipment, net | <u>\$ 120,944</u> | <u>\$ 233,694</u> |

Included in Computer and other equipment is approximately \$0.04 million of unamortized computer software costs. Depreciation expense was \$0.1 million for each of the years ended December 31, 2016, 2015 and 2014.

Note 5 - Accrued Expenses and Other Liabilities

Accrued expenses and other liabilities consisted of the following:

| | December 31, | |
|---|---------------------|---------------------|
| | 2016 | 2015 |
| Accrued research and development expenses | \$ 895,438 | \$ 451,805 |
| Accrued professional fees | 987,426 | 600,390 |
| Accrued employee and payroll related expenses | 159,554 | 102,632 |
| Other | 41,054 | 93,881 |
| Accrued expenses and other liabilities | <u>\$ 2,083,472</u> | <u>\$ 1,248,708</u> |

Note 6 - Debt

Term Loan and Revolving Line of Credit

On March 30, 2012, the Company entered into a Loan Agreement with GE Capital. The Loan Agreement provided for a senior secured debt facility including a \$2.5 million term loan and a revolving line of credit of up to \$5.0 million based on our outstanding qualified accounts receivable.

On September 3, 2015, we satisfied in full our remaining obligations under the GE Capital Loan Agreement. The Loan Agreement was scheduled to terminate on September 29, 2015. The termination of the Loan Agreement released PharmAthene from further obligations under the Loan Agreement, which were collateralized by a security interest in substantially all of our assets.

In connection with the Loan Agreement, in 2012 we issued to GE Capital a warrant to purchase 46,584 shares of the Company's common stock at an exercise price of \$1.61 per share. The warrant, which expires in March 2022, was not affected by the termination. The warrant was exercisable immediately and subject to customary and standard anti-dilution adjustments. The warrant is classified in equity and, as a result, the fair value of the warrant was charged to additional paid-in-capital resulting in a debt discount at the date of issuance. The debt discount was amortized over the term of the Loan Agreement using the effective interest method.

Note 7 - Commitments and Contingencies

Leases

We lease our office in Maryland under a 10 year operating lease, which commenced on May 1, 2007 and will end on May 31, 2017. Remaining annual minimum payments of approximately \$0.4 million are due in 2017. Minimum payments have not been reduced by the minimum sublease rentals of \$0.1 million due in the future under noncancellable subleases.

For the years ended December 31, 2016, 2015 and 2014, total rent expense under the operating lease agreement approximated \$0.8 million, \$0.7 million and \$0.8 million, respectively. Total rent expense is allocated to research and development and general and administrative expenses on the consolidated statements of operations.

On September 2, 2015, the Company entered into a sublease agreement with a third party with respect to a portion of its leased office space at an amount less than the Company's leased amount. As a result, we realized a loss of \$0.4 million in restructuring expense on our consolidated statements of operations for the year ended December 31, 2015.

The present value at December 31, 2016 of the Company's remaining net lease liability for the subleased office space (net of the sublease rental income) is approximately \$0.1 million and is reflected on the balance sheet as accrued restructuring expenses – current.

License Agreements

In connection with an acquisition in 2008, we acquired license agreements with The Defence Science and Technology Laboratory of the United Kingdom Ministry of Defence, or DSTL, for the rights to certain technologies. These agreements allow for the licensing of certain patents and technology necessary to perform development of the rPA vaccine program as required under the Company's government contracts. Upon commercialization, the license agreements require that we make royalty payments equal to a specified percentage of future sales of products for both government procurement and commercial markets. No royalty payments on these licenses have been incurred.

In 2012 we entered into a commercial licensing agreement allowing for the licensing of certain patent and other intellectual property rights from a research company related to BChE. The agreement includes certain annual maintenance and other development milestone payments. Upon commercialization, the license agreement requires royalty payments equal to a specified percentage of future sales of products for both government procurement and commercial market sales subject to the license through the expiration of the licensed patents. Maintenance fees of \$0.1 million were incurred during each of the years ended December 31, 2015 and 2014. Maintenance fees of \$0.04 million were incurred during the year ended December 31, 2013. This agreement was terminated in 2015.

On July 6, 2015, we signed a license agreement with ImmunoVaccine Technologies ("IMV") for the exclusive use of the DepoVaxTM vaccine platform ("DPX"), to develop an anthrax vaccine utilizing PharmAthene's rPA. On June 23, 2016, we terminated this license agreement.

SIGA Litigation

In December 2006, we filed a complaint against SIGA in the Delaware Court of Chancery. The complaint alleged, among other things, that we have the right to license exclusively the development and marketing rights for SIGA's drug candidate, Tecovirimat, also known as ST-246[®], pursuant to a merger agreement between the parties that was terminated in 2006. The complaint also alleged that SIGA failed to negotiate in good faith the terms of such a license pursuant to the terminated merger agreement with us.

In September 2014, SIGA filed a voluntary petition for relief under Chapter 11 of the United States Bankruptcy Code in the U.S. Bankruptcy Court for the Southern District of New York (the "Bankruptcy Court"). SIGA's petition for bankruptcy initiated a process whereby its assets were protected from creditors, including PharmAthene.

In January 2015, after years of litigation, the Delaware Court of Chancery issued a Final Order and Judgment, finding that we were entitled to receive a lump sum award of \$194.6 million, or the Total Judgment, comprised of (1) expectation damages of \$113.1 million for the value of the Company's lost profits for Tecovirimat, plus (2) pre-judgment interest on that amount from 2006 and varying percentages of the Company's reasonable attorneys' and expert witness fees, totaling \$81.5 million. Under the Final Order and Judgment, PharmAthene was also entitled to post-judgment simple interest.

On December 23, 2015, the Delaware Supreme Court affirmed the Delaware Court of Chancery's decision as a result of which, with additional post-judgment interest, if calculated based on the original decision, would provide for an estimated total award in excess of \$205 million.

On April 8, 2016, the Bankruptcy Court entered an order confirming SIGA's Plan effective April 12, 2016 which provides for among other things, the process by which SIGA may emerge from bankruptcy, which includes the process by which our Judgment may be satisfied.

We received approximately \$217.1 million from SIGA during the year ended December 31, 2016, comprised of principal payments of approximately \$208.7 million as final satisfaction of the judgment and approximately \$8.4 million of payments calculated by SIGA as interest on the judgment, all of which has been recorded in other income – litigation on the consolidated statement of operations.

Government Contracting

Payments to the Company on cost-plus-fee contracts are provisional. The accuracy and appropriateness of costs charged to U.S. Government contracts are subject to regulation, audit and possible disallowance by the Defense Contract Audit Agency, or DCAA, and other government agencies such as BARDA. Accordingly, costs billed or billable to U.S. Government customers are subject to potential adjustment upon audit by such agencies. We have finalized incurred cost audits with DCAA for 2006 through 2011. BARDA audited indirect costs or rates charged by us on the SparVax[®] contract for the years 2008 through 2014. As a result of the BARDA audits, we recorded additional revenue of \$0.8 million and \$5.8 million during the years ended December 31, 2016 and 2015, respectively.

Changes in government policies, priorities or funding levels through agency or program budget reductions by the U.S. Congress or executive agencies could materially adversely affect the Company's financial condition or results of operations. Furthermore, contracts with the U.S. Government may be terminated or suspended by the U.S. Government at any time, with or without cause. Such contract suspensions or terminations could result in unreimbursable expenses or charges or otherwise adversely affect the Company's financial condition and/or results of operations.

Registration Rights Agreements

We entered into a Registration Rights Agreement with the investors who participated in the July 2009 private placement of convertible notes and related warrants. We subsequently filed two registration statements on Form S-3 with the Securities and Exchange Commission to register the resale of the shares issuable upon conversion of the convertible notes and exercise of the related warrants, which have been declared effective. We are obligated to maintain the registration statements effective until the date when such shares (and any other securities issued or issuable with respect to or in exchange for such shares) have been sold or are eligible for resale without restrictions under Rule 144. The convertible notes were converted or extinguished in 2010. The warrants expired on January 28, 2015.

We have separate registration rights agreements with investors, under which we have obligations to keep the corresponding registration statements effective until the registrable securities (as defined in each agreement) have been sold, and under which we may have separate obligations to file registration statements in the future on either a demand or "piggy-back" basis or both.

Under the terms of the convertible notes, which were converted or extinguished in 2010, if after the 2nd consecutive business day (other than during an allowable blackout period) on which sales of all of the securities required to be included on the registration statement cannot be made pursuant to the registration statement (a "Maintenance Failure"), we will be required to pay to each selling stockholder a one-time payment of 1.0% of the aggregate principal amount of the convertible notes relating to the affected shares on the initial day of a Maintenance Failure. Our total maximum obligation under this provision at December 31, 2016, which is not probable of payment, would be approximately \$0.2 million.

Following a Maintenance Failure, we will also be required to make to each selling stockholder monthly payments of 1.0% of the aggregate principal amount of the convertible notes relating to the affected shares on every 30th day after the initial day of a Maintenance Failure, in each case prorated for shorter periods and until the failure is cured. Our total maximum obligation under this provision, which is not probable of payment, would be approximately \$0.2 million for each month until the failure, if it occurs, is cured.

Note 8 - Stockholders' Equity

Dividend

On November 17, 2016, the Company's Board of Directors declared a special one-time cash dividend of \$2.91 per share of common stock, payable on February 3, 2017 to holders of record as of January 24, 2017.

Stockholder Rights Plan

On November 25, 2015, the Company's Board of Directors adopted a stockholder rights plan ("Rights Plan") in an effort to preserve the value of its net operating loss carryforwards ("NOLs") under Section 382 of the Internal Revenue Code (the "Code"). The description and terms of the rights are set forth in a Section 382 Rights Agreement, dated as of November 25, 2015 (the "Section 382 Rights Agreement"), by and between the Company and Continental Stock Transfer & Trust Company, as Rights Agent.

In connection with the adoption of the Rights Plan, on November 25, 2015 (the "Rights Dividend Declaration Date"), the Board declared a non-taxable dividend distribution of one share purchase right ("Right") for each outstanding share of common stock to the Company's stockholders of record as of the close of business on December 9, 2015. The Section 382 Rights Plan is intended to act as a deterrent to any person (an "Acquiring Person") acquiring (together with all affiliates and associates of such person) beneficial ownership of 4.99% or more of the Company's outstanding common stock within the meaning of Section 382 of the Code, without the approval of the Board of Directors. Stockholders who beneficially owned 4.99% or more of the Company's outstanding common stock as of the Rights Dividend Declaration Date are not be deemed to be an Acquiring Person, but such person will be deemed an Acquiring Person if such person (together with all affiliates and associates of such person) becomes the beneficial owner of securities representing a percentage of the Company's common stock that exceeds by 0.5% or more the lowest percentage of beneficial ownership of the Company's common stock that such person had at any time since the Rights Dividend Declaration Date. In its discretion, the Board may exempt certain persons whose acquisition of securities is determined by the Board not to jeopardize the availability to the Company's NOLs or other tax benefits and may also exempt certain transactions.

Controlled Equity Offering

On March 25, 2013, we entered into a controlled equity offering sales agreement with a sales agent, and filed with the SEC a prospectus supplement, dated March 25, 2013 to our prospectus dated July 27, 2011, or the 2011 Prospectus, pursuant to which we could offer and sell, from time to time, through the agent shares of our common stock having an aggregate offering price of up to \$15.0 million.

On May 23, 2014, we entered into an amendment, or the 2014 Amendment, to the controlled equity offering sales agreement with the sales agent, pursuant to which we may offer and sell, from time to time, through the agent shares of our common stock having an aggregate offering price of up to an additional \$15.0 million. On that day, we filed a prospectus supplement to the 2011 Prospectus for use in any sales of these additional shares of common stock through July 26, 2014, the date the underlying registration statement (File No. 333-175394) expired. As a result of this expiration, the 2011 Prospectus, as supplemented on March 25, 2013 and May 23, 2014, may no longer be used for the sale of shares of common stock under the controlled equity offering sales agreement, as amended. On May 23, 2014, we also filed a new universal shelf registration statement (File No. 333-196265) containing, among other things, a prospectus, or the 2014 Prospectus, for use in sales of the common stock under the 2014 Amendment. This registration statement was declared effective on May 30, 2014. Since the expiration of the 2011 Prospectus, all sales under the controlled equity offering sales agreement, as amended, are being effected under the 2014 Prospectus.

Under the controlled equity offering sales agreement, as amended, the agent may sell shares by any method permitted by law and deemed to be an "at-the-market" offering as defined in Rule 415 promulgated under the Securities Act of 1933, as amended, including sales made directly on NYSE MKT, or any other existing trading market for our common stock or to or through a market maker. Subject to the terms and conditions of that agreement, the agent will use commercially reasonable efforts, consistent with its normal trading and sales practices and applicable state and federal law, rules and regulations and the rules of NYSE MKT, to sell shares from time to time based upon our instructions. We are not obligated to sell any shares under the arrangement. We are obligated to pay the agent a commission of 3.0% of the aggregate gross proceeds from each sale of shares under the arrangement.

As of December 31, 2016, shares having an aggregate offering price of \$3.0 million remained available under the controlled equity offering sales agreement, as amended. During the years ended December 31, 2016 and 2015, we did not sell any shares of our common stock under this arrangement. During the year ended December 31, 2014, we sold 10,520,454 shares of our common stock under this arrangement resulting in net proceeds to us of approximately \$17.8 million. During the year ended December 31, 2014, we incurred offering costs of approximately \$0.1 million in connection with the controlled equity offering sales agreement, as amended.

Long-Term Incentive Compensation Plan

In 2007, the Company's stockholders approved the 2007 Long-Term Incentive Compensation Plan (the "2007 Plan") which provides for the granting of incentive and non-qualified stock options, stock appreciation rights, performance units, restricted stock awards and performance bonuses (collectively "awards") to Company officers and employees. Additionally, the 2007 Plan authorizes the granting of non-qualified stock options and restricted stock awards to Company directors and to independent consultants.

In 2008, our stockholders approved amendments to the 2007 Plan, increasing from 3.5 million shares to 4.6 million shares the maximum number of shares authorized for issuance under the plan and adding an evergreen provision pursuant to which the number of shares authorized for issuance under the plan would increase automatically in each year, beginning in 2009, in accordance with certain limits set forth in the 2007 Plan. Under the terms of the evergreen provision, the annual increases were to continue through 2015, subject, however, to an aggregate limitation on the number of shares that could be authorized for issuance pursuant to such increases. This aggregate limitation was reached on January 1, 2014, so that the number of shares authorized for issuance under the plan did not automatically increase on January 1, 2015. At December 31, 2016, there are approximately 10.3 million shares approved for issuance under the 2007 Plan, of which approximately 3.4 million shares are available for grant. The Board of Directors in conjunction with management determines who receives awards, the vesting conditions and the exercise price. Options may have a maximum term of ten years.

The following table summarizes the activity of the 2007 Plan for options:

| | <u>Shares</u> | <u>Weighted-Average Exercise Price</u> | <u>Weighted-Average Remaining Contractual Term</u> |
|--|---------------|--|--|
| Options | | | |
| Outstanding, December 31, 2013 | 5,974,039 | \$ 2.52 | 6.5 |
| Granted | 2,547,585 | 1.81 | |
| Exercised | (352,718) | 1.29 | |
| Forfeited | (635,424) | 2.61 | |
| Expired | (143,588) | 3.04 | |
| Outstanding, December 31, 2014 | 7,389,894 | \$ 2.31 | 6.9 |
| Granted | 369,814 | 1.66 | |
| Exercised | (778,783) | 1.25 | |
| Forfeited | (2,712,613) | 2.43 | |
| Expired | (77,308) | 3.26 | |
| Outstanding, December 31, 2015 | 4,191,004 | \$ 2.36 | 6.0 |
| Granted | 200,000 | 2.20 | |
| Exercised | (2,492,639) | 1.70 | |
| Forfeited | (166,000) | 1.69 | |
| Expired | (12,336) | 3.80 | |
| Outstanding, December 31, 2016 | 1,720,029 | \$ 3.36 | 4.2 |
| Exercisable, December 31, 2016 | 1,348,842 | \$ 3.80 | 3.2 |
| Vested and expected to vest, December 31, 2016 | 1,675,487 | \$ 3.40 | 4.1 |

The aggregate intrinsic value is calculated as the difference between (i) the closing price of the common stock at December 31, 2016 and (ii) the exercise price of the underlying awards, multiplied by the number of options that had an exercise price less than the closing price on the last trading day. Our outstanding and exercisable options had an aggregate intrinsic value of approximately \$0.3 million and \$0.7 million as of December 31, 2016 and 2015, respectively.

At December 31, 2016, total compensation costs for unvested stock option awards outstanding approximated \$0.4 million, net of estimated forfeitures, which we expect to recognize as stock compensation expense over a weighted-average period of 1.7 years.

Valuation assumptions used to determine fair value of share-based compensation

The weighted-average grant date fair value for options granted in 2016, 2015 and 2014 was \$1.28, \$1.13 and \$1.30, respectively. The aggregate intrinsic value of options exercised during the years ended December 31, 2016, 2015 and 2014 was approximately \$2.8 million, \$0.3 million and \$0.2 million, respectively. The total fair value of awards vested during 2016, 2015 and 2014 was approximately \$0.9 million, \$0.8 million and \$1.4 million, respectively.

The fair value for the 2016, 2015 and 2014 awards were estimated at the date of grant using the Black-Scholes option-pricing model using the following assumptions:

| | December 31, | | |
|--|---------------|---------------|---------------|
| | 2016 | 2015 | 2014 |
| Weighted-average volatility | 65% | 70% | 84% |
| Risk-free rate | 1.45% - 1.59% | 1.50% - 2.25% | 1.51% - 2.25% |
| Expected annual dividend yield | - | - | - |
| Expected weighted-average life, in years | 5.8 | 5.7 | 6.1 |

The following table summarizes the activity of the 2007 Plan for restricted shares:

| | Shares | Weighted-Average Grant Date Fair Value | Aggregate Intrinsic Value |
|--------------------------------|-----------|--|---------------------------|
| Restricted shares | | | |
| Outstanding, December 31, 2013 | 6,667 | \$ 1.59 | \$ 12,401 |
| Granted | - | - | |
| Vested | (6,667) | 1.59 | |
| Forfeited or expired | - | - | |
| Outstanding, December 31, 2014 | - | \$ - | \$ - |
| Granted | 877,244 | 1.77 | |
| Vested | - | - | |
| Forfeited or expired | (25,000) | 1.71 | |
| Outstanding, December 31, 2015 | 852,244 | \$ 1.78 | \$ 1,619,264 |
| Vested | (852,244) | 1.76 | |
| Outstanding, December 31, 2016 | - | \$ - | \$ - |

During the year ended December 31, 2016, 852,244 shares of restricted stock vested. The shares vested upon the earliest to occur of (i) certain performance conditions or (ii) service conditions. The service conditions either vest in full two years from the grant date or 50% vest annually starting one year from the grant date. At December 31, 2016 all shares of restricted stock awards were vested based on the achievement of the performance conditions and we had no unrecognized share-based compensation related to these shares.

Warrants

At December 31, 2016 there were warrants outstanding to purchase 1,051,358 shares of our common stock. At December 31, 2015 and 2014, there were warrants outstanding to purchase 1,422,781 and 4,495,556 shares of our common stock, respectively. The warrants outstanding as of December 31, 2016 were as follows:

| Number of Common Shares Underlying Warrants | Issue Date/Exercisable Date | Exercise Price | Expiration Date |
|--|------------------------------------|-----------------------|------------------------|
| 100,778(1) | March 2007/March 2007 | \$ 3.97 | March 2017 |
| 903,996(2) | July 2010/January 2011 | \$ 1.63 | January 2017 |
| 46,584(1) | March 2012/March 2012 | \$ 1.61 | March 2022 |
| <u>1,051,358</u> | | | |

- (1) These warrants to purchase common stock are classified as equity.
- (2) Because of the presence of net settlement provisions, these warrants to purchase common stock are classified as derivative liabilities. The fair value of these liabilities (see Note 3 – *Fair Value Measurements*) is remeasured at the end of every reporting period and the change in fair value is reported in the accompanying consolidated statements of operations as other income (expense).

Warrants to purchase 371,423 shares of common stock expired during the year ended December 31, 2016 without being exercised, all of which were classified as derivative liabilities.

Note 9 - Income Taxes

The provision for income taxes consists of the following:

| | Year ended December 31, | | |
|-----------------------------|--------------------------------|------------------|------------------|
| | 2016 | 2015 | 2014 |
| Current taxes | | | |
| Federal | \$ 8,595,085 | \$ - | \$ - |
| State | 2,512,469 | - | - |
| Foreign | - | - | - |
| Total current taxes | <u>11,107,554</u> | <u>-</u> | <u>-</u> |
| Deferred taxes | | | |
| Federal | 53,240 | 53,221 | 53,221 |
| State | 8,582 | 8,525 | 8,525 |
| Foreign | - | - | - |
| Total deferred taxes | <u>61,822</u> | <u>61,746</u> | <u>61,746</u> |
| Total tax provision | <u>\$ 11,169,376</u> | <u>\$ 61,746</u> | <u>\$ 61,746</u> |

A reconciliation of the U.S. statutory rate with the effective tax rate is as follows:

| | Year Ended December 31, | | |
|--|--------------------------------|------------------|--------------------|
| | 2016 | 2015 | 2014 |
| Statutory federal tax provision (benefit) | \$ 71,758,245 | \$ (1,148,846) | \$ (3,363,841) |
| State income tax (benefit), net of federal benefit | 10,323,810 | (124,626) | (450,656) |
| Other permanent differences | 6,211 | 6,909 | (6,274) |
| Foreign rate differential | 4,150 | 68,482 | 7,913 |
| Write-off of expired/forfeited options and conversion of notes | 181,958 | 1,049,765 | 380,689 |
| Rate change | (1,429,996) | 1,218 | 794,807 |
| Lobbying costs | 198,491 | 1,047 | 57,517 |
| Write-off of tax basis in UK subsidiary | (6,288,553) | - | - |
| Research and development tax credit | (817,832) | - | - |
| Other prior year adjustments | - | 2,949 | (308) |
| Subtotal | <u>73,936,484</u> | <u>(143,102)</u> | <u>(2,580,153)</u> |
| (Decrease) increase in valuation allowance | (62,767,108) | 204,848 | 2,641,899 |
| Income tax provision | <u>\$ 11,169,376</u> | <u>\$ 61,746</u> | <u>\$ 61,746</u> |
| Federal statutory rate | 35% | 34% | 34% |

Our effective tax rate for 2016 differs from the U.S. federal statutory rate of 35% due principally to \$6.3 million of discrete tax benefits primarily associated with a worthless stock deduction related to the dissolution of one of the Company's international subsidiaries for tax purposes and \$0.8 million of discrete tax benefits recognized upon the completion of a research and development tax credit study that determined federal tax credits available for all open tax years.

For December 31, 2016, the reconciliation to the Federal statutory rate includes a change from using a Federal statutory rate of 34% to 35%. Deferred tax assets have been recorded historically at the Federal statutory tax rate of 34% and, based on the expected lack of taxable income at a level sufficient to warrant the 35% tax rate in years after 2016, the deferred tax assets and liabilities continue to be valued using the Federal statutory rate of 34%. As a result of our significant income during 2016, our usage of net operating losses provided a benefit at a Federal statutory rate of 35%. The reconciling item accounts for the current benefit of 35% on previously deferred tax items valued at 34%. In addition to the U.S. Federal statutory rate change, the UK income tax rate will reduce in 2017 from 20% to 19% and, as a result, deferred tax assets on net operating losses carrying forward in the UK have been revalued to reflect the new tax rate.

Deferred tax assets and liabilities are comprised of the following:

| | Year Ended December 31, | | |
|---|-------------------------|---------------------|---------------------|
| | 2016 | 2015 | 2014 |
| Deferred tax assets: | | | |
| Net operating loss ("NOLs") carryforwards | \$ 3,405,069 | \$ 65,635,003 | \$ 64,361,842 |
| Fixed assets | 149,099 | 139,883 | 166,205 |
| Research and development credits/loss carryforwards | 6,849 | 8,900 | 3,834 |
| Share-based compensation | 1,407,280 | 2,352,660 | 3,458,334 |
| Intangible asset | 1,139,746 | 218,300 | 251,524 |
| Accrued expenses and other | 817,080 | 253,655 | 434,294 |
| Total deferred tax assets | 6,925,123 | 68,608,401 | 68,676,033 |
| Deferred tax liabilities: | | | |
| Intangibles | (442,589) | (380,777) | (319,021) |
| Total deferred tax liabilities | (442,589) | (380,777) | (319,021) |
| Net deferred tax assets | 6,482,534 | 68,227,624 | 68,357,012 |
| Less: Valuation allowance | (6,925,123) | (68,608,401) | (68,676,033) |
| Net deferred tax liabilities | \$ (442,589) | \$ (380,777) | \$ (319,021) |

The classification of deferred tax assets and liabilities for 2015 and 2014 have been conformed to be consistent with the 2016 presentation in the table above.

During the year ended December 31, 2016, previously unrecognized deferred tax assets, primarily related to net operating loss carryforwards, were recognized and utilized against current taxable income generated by payments received from the SIGA lawsuit. Due to the Company's history of net operating losses and the nonrecurring nature of payments received from SIGA, a valuation allowance of \$6.9 million continues to be recorded on remaining net deferred tax assets until such point in time the likelihood of realization would not meet the more likely than not threshold.

Due to prior changes in the stock ownership of the Company, net operating losses are subject to a limitation under Section 382 of the U.S. Internal Revenue Code. As a result of this limitation, approximately \$1 million of net operating losses were not available to offset current year taxable income and must be carryforward for use in future years. These losses will begin to expire in 2023. The Company's UK net operating loss carryforwards of approximately \$16 million may be carried forward indefinitely.

Accounting Standard Update 2015-17 requires that all deferred tax assets and deferred tax liabilities be classified as noncurrent. Previous to adopting this accounting standard, we have only reported a non-current deferred tax liability on our balance sheet; therefore, the application of this standard had no effect on our current or historic financials statements.

We have analyzed tax positions in all jurisdictions where the Company is required to file an income tax return and have concluded that we do not have any material unrecognized tax benefits. As such, we believe that any of our uncertain tax positions would not result in adjustments to our effective income tax rate.

Note 10 - Supplemental Financial Information (Unaudited)

Quarterly financial information for the years ended December 31, 2016 and 2015 is presented in the following tables:

| | Three Months Ended | | | |
|--------------------------------------|---------------------------|-----------------|----------------------|---------------------|
| | March 31, | June 30, | September 30, | December 31, |
| Fiscal year 2016 | | | | |
| Revenue | \$ 1,005,694 | \$ 2,111,254 | \$ 993,885 | \$ 1,119,363 |
| Loss from operations | (1,254,436) | (507,744) | (3,989,789) | (5,512,378) |
| Net income (loss) | (1,226,906) | 8,044,474 | 109,235,013 | 77,801,592 |
| Net income (loss) per share, basic | (0.02) | 0.12 | 1.68 | 1.16 |
| Net income (loss) per share, diluted | (0.02) | 0.12 | 1.67 | 1.15 |
| Cash dividends declared per share | - | - | - | 2.91 |
| Fiscal year 2015 | | | | |
| Revenue | \$ 7,068,746 | \$ 1,149,570 | \$ 1,155,839 | \$ 1,266,505 |
| Income (loss) from operations | 1,161,084 | (1,964,867) | (1,658,548) | (940,469) |
| Net income (loss) | 1,463,395 | (2,340,932) | (1,324,768) | (1,238,400) |
| Net income (loss) per share, basic | 0.02 | (0.04) | (0.02) | (0.02) |
| Net income (loss) per share, diluted | 0.02 | (0.04) | (0.02) | (0.02) |

Note 11 - Subsequent Events***Merger Agreement***

On January 18, 2017, PharmAthene, entered into an Agreement and Plan of Merger and Reorganization (the “Merger Agreement”), pursuant to which its wholly owned subsidiary, Mustang Merger Sub, Inc., will be merged with and into Altimmune, Inc., a Delaware corporation (“Altimmune”), with Altimmune as the surviving subsidiary (“Merger 1”), and immediately thereafter, Altimmune will be merged with and into Mustang Merger Sub LLC, with Mustang Merger Sub LLC as the surviving entity in such merger (“Merger 2”, and together with Merger 1, the “Mergers”). Following the consummation of the Mergers, PharmAthene will change its name to “Altimmune, Inc.”.

Pursuant to the terms and conditions of the Merger Agreement, at the effective time of Merger 1 (the “Effective Time”), each of Altimmune’s outstanding shares of common stock and preferred stock (excluding Altimmune treasury shares, shares of Altimmune owned by PharmAthene or its subsidiaries or dissenting shares) will be converted into the right to receive a number of shares of PharmAthene common stock such that the holders of outstanding equity of Altimmune immediately prior to the Effective Time will own 58.2% of the outstanding equity of PharmAthene immediately following the Effective Time and holders of outstanding equity of PharmAthene immediately prior to the Effective Time will own 41.8% of the outstanding equity of PharmAthene immediately following the Effective Time (the “Exchange Ratio”), in each case, on an as converted and fully diluted basis. No fractional shares of PharmAthene common stock will be issued in connection with the Mergers as a result of the conversion described above, and any fractional share of PharmAthene common stock that would thereby be issuable will be rounded up to the next whole share. In addition, all outstanding Altimmune options, as well as Altimmune’s 2001 Employee Stock Option Plan and its Non-Employee Stock Option Plan, each as amended from time to time, will be assumed by PharmAthene. Each option or warrant to purchase one share of Altimmune common stock will be converted into an option or warrant, as the case may be, to purchase a number of shares of PharmAthene common stock representing the number of Altimmune shares for which the exchanged option or warrant was exercisable multiplied by the Exchange Ratio. The exercise price will be proportionately adjusted.

The Merger Agreement provides that at, and immediately after, the Effective Time the size of PharmAthene’s Board of Directors (the “Board”) will initially consist of seven directors. This Board will be comprised of four directors designated by Altimmune and three directors designated by PharmAthene. Altimmune’s current Chief Executive Officer, Bill Enright, is expected to serve as the Chief Executive Officer of the combined company, and Altimmune’s current Chief Financial Officer, Elizabeth Czerepak, is expected to serve as its Chief Financial Officer.

The Merger Agreement also obligates PharmAthene to submit to its stockholders, at a special stockholder meeting, a proposal to approve the Mergers, approve and adopt an amendment to its Certificate of Incorporation to authorize its Board of Directors to effect a reverse stock split prior to the Effective Time at a reverse stock split ratio in the range mutually agreed to by Altimune and PharmAthene's Board of Directors, and approve certain other related proposals specified in the Merger Agreement.

Warrant Exercise

Warrants to purchase 903,996 shares of common stock were exercised on January 6, 2017 at an exercise price of \$1.63 per share. The fair value of the exercised warrants, which were classified as derivative liabilities, was approximately \$1.6 million at the date of exercise.

Dividend Payment

On November 17, 2016, PharmAthene declared a special one-time cash dividend of \$2.91 per share of common stock. The special dividend was paid on February 3, 2017 to stockholders of record as of January 24, 2017. The one-time special dividend was funded with approximately 98% of the after tax net cash proceeds that the Company received from SIGA in satisfaction of a judgment owed to PharmAthene by SIGA. In total, PharmAthene received payment of approximately \$217.1 million (including interest) from SIGA in connection with the judgment.

CONSENT OF ERNST & YOUNG LLP, INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the following Registration Statements:

- (1) Registration Statement (Form S-3 No. 333-146463),
- (2) Registration Statement (Form S-3 No. 333-155692),
- (3) Registration Statement (Form S-8 No. 333-156371) pertaining to the 2007 Long-Term Incentive Compensation Plan,
- (4) Registration Statement (Form S-3 No. 333-156997),
- (5) Registration Statement (Form S-3 No. 333-124712),
- (6) Registration Statement (Form S-3 No. 333-161587),
- (7) Registration Statement (Form S-3 No. 333-175394),
- (8) Registration Statement (Form S-3 No. 333-176607),
- (9) Registration Statement (Form S-3 No. 333-196265),
- (10) Registration Statement (Form S-4 No. 333-215891), and
- (11) Registration Statement (Form S-8 No. 333-214765);

of our reports dated March 14, 2017, with respect to the consolidated financial statements of PharmAthene, Inc. and the effectiveness of internal control over financial reporting of PharmAthene, Inc. included in this Annual Report (Form 10-K) of PharmAthene, Inc. for the year ended December 31, 2016.

/s/ Ernst & Young LLP

Baltimore, Maryland

March 14, 2017

**Certification of Principal Executive Officer
Pursuant to SEC Rule 13a-14(a)/15d-14(a)**

I, John M. Gill, certify that:

1. I have reviewed this Form 10-K of PharmAthene, Inc. for the year ended December 31, 2016;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: March 14, 2017

/s/ John M. Gill

Name: **John M. Gill**

Title: **President and Chief Executive Officer**

**Certification of Principal Financial Officer
Pursuant to SEC Rule 13a-14(a)/15d-14(a)**

I, Philip MacNeill, certify that:

1. I have reviewed this Form 10-K of PharmAthene, Inc. for the year ended December 31, 2016;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: March 14, 2017

/s/ Philip MacNeill

Name: **Philip MacNeill**

Title: **Vice President, Chief Financial Officer, Treasurer and Secretary**

**Certification Pursuant to Section 1350 of Chapter 63
of Title 18 of the United States Code**

In connection with the Annual Report on Form 10-K of PharmAthene, Inc. (the "Company") for the year ended December 31, 2016, as filed with the Securities and Exchange Commission (the "Report"), I, John M. Gill, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934.
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ John M. Gill

John M. Gill

President and Chief Executive Officer

March 14, 2017

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

This certification is being furnished pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that section. This certification will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934.

**Certification Pursuant to Section 1350 of Chapter 63
of Title 18 of the United States Code**

In connection with the Annual Report on Form 10-K of PharmAthene, Inc. (the "Company") for the year ended December 31, 2016, as filed with the Securities and Exchange Commission (the "Report"), I, Philip MacNeill, Chief Financial Officer, Treasurer and Secretary of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

3. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934.
4. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Philip MacNeill

Philip MacNeill

Vice President, Chief Financial Officer, Treasurer and Secretary

March 14, 2017

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

This certification is being furnished pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that section. This certification will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934.
