PHARMATHENE, INC (PIP)

10-K

Annual report pursuant to section 13 and 15(d)
Filed on 03/08/2012
Filed Period 12/31/2011

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, 2011

☐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 Amex**

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 SSmaller 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 $104.0 million based upon the closing price of the common equity on the NYSE Amex on the last business day of the registrant's most recently completed second fiscal quarter (June 30, 2011).

The number of shares of the registrant's Common Stock, par value $0.0001 per share, outstanding as of February 29, 2012 was 48,357,010.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement for its 2012 Annual Meeting of Stockholders or Annual Report on Form 10-K/A, to be filed on or before April 30, 2012, are incorporated by reference into Part III of this Report.

TABLE OF CONTENTS

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 (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, risk 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 the Company's product candidates,*
- *funding delays, reductions in or elimination of U.S. government funding and/or non-renewal of expiring funding for one or more of our development programs,*
- *the award of government contracts to our competitors or delays caused by third parties challenging government contract awards to us,*
- *unforeseen safety issues,*
- *challenges related to the development, technology transfer, scale-up, and/or process validation of manufacturing processes for our product candidates,*
- *unexpected determinations that these product candidates prove not to be effective and/or capable of being marketed as products,*

as well as risks detailed under the caption "Risk Factors" in this Report on Form 10-K and in our other reports filed with the U.S. Securities and Exchange Commission (the "SEC") from time to time hereafter. In particular, there can be no assurance that the Company will prevail in any appeal to the Delaware Supreme Court of the ruling of the Delaware Court of Chancery awarding PharmAthene 50% of all net profits related to the sale of ST-246 and related products for 10 years following initial commercial sale of the drug once SIGA Technologies, Inc. ("SIGA") earns $40 million in net profits from the sale of ST-246 and related products. Further, the timing and amount of any future sales of ST-246 is uncertain. Significant additional non-clinical animal studies, human clinical trials, and manufacturing development work remain to be completed for all our products candidates, including Valortim®. At this point future government funding to support the development of Valortim® is unlikely in the near term and remains uncertain. It is also uncertain whether Valortim® or our other product candidates will be shown to be safe and effective and approved by regulatory authorities for use in humans. 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," "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 about potential future government contract or grant awards,*
- *potential payments under government contracts or grants,*

- *potential regulatory approvals,*

- *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.

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, 2011.

Item 1. Business.

Background of PharmAthene, Inc.

PharmAthene, Inc. was incorporated on April 25, 2005 under the laws of the State of Delaware as Healthcare Acquisition Corp. ("HAQ"), a special purchase acquisition corporation formed solely to acquire a then unidentified business. HAQ became a public company on August 3, 2005. On August 3, 2007, HAQ acquired a Delaware corporation which at the time was known as "PharmAthene, Inc." (the "Merger"); effective upon the consummation of the Merger, HAQ changed its name from "Healthcare Acquisition Corp." to "PharmAthene, Inc." and former PharmAthene changed its name to "PharmAthene US Corporation." Through February 27, 2009, our operations were conducted by PharmAthene US Corporation. Effective February 27, 2009, PharmAthene US Corporation was merged with and into PharmAthene, Inc., with PharmAthene, Inc. being the surviving corporation.

In March 2008, PharmAthene Inc., through its wholly-owned subsidiary PharmAthene UK Limited, acquired substantially all the assets and liabilities related to the biodefense vaccines business (the "Avecia Acquisition") of Avecia Biologics Limited (along with its affiliates, "Avecia").

Our executive offices are located at One Park Place, Suite 450, Annapolis, Maryland 21401 and our telephone number is 410-269-2600. Our stock trades on the NYSE Amex under the symbol "PIP."

Unless the context otherwise requires, all references in this report to the "Company", "PharmAthene", "we", "us" or "our" refers to the business of the combined company after the Merger and to the business of former PharmAthene prior to the Merger, and "HAQ" refers to the business of Healthcare Acquisition Corp. and its subsidiaries, as a combined entity, prior to the Merger. Unless the context otherwise requires, the information contained in this report gives effect to the consummation of the Merger on August 3, 2007 and the change of our name from "Healthcare Acquisition Corp." to "PharmAthene, Inc."

Overview

We are a biodefense company engaged in the development and commercialization of next generation medical countermeasures against biological and chemical threats. Our current biodefense portfolio includes the following product candidates:

- SparVax™, a second generation recombinant protective antigen ("rPA") anthrax vaccine,
- Valortim®, a fully human monoclonal antibody for the prevention and treatment of anthrax infection, and
- rBChE (recombinant butyrylcholinesterase) bioscavanger, a medical countermeasure for nerve agent poisoning by organophosphorous compounds, including nerve gases and pesticides.

In addition, we were awarded by the Delaware Court of Chancery in September 2011 the right to receive 50% of all net profits related to the sale of SIGA Technologies, Inc. ST-246 and related products for 10 years following initial commercial sale of the drug once

SIGA earns $40 million in net profits from sales of ST-246 and related products. SIGA has stated it intends to appeal this decision to the Delaware Supreme Court.

Business Concept and Strategy

Our goal is to become the premier company worldwide specializing in the development and commercialization of best-in-class prophylactic and therapeutic drugs for defense against biological and chemical threats and emerging infectious diseases. In assembling our product candidate portfolio we have adhered to a strategy emphasizing specific selection criteria to enhance the likelihood of U.S. government procurement. These selection criteria include:

- Demonstration of technical proof-of-concept in humans and/or appropriate animal models

- Advantages over existing products or technologies
- Demonstrated interest by the U.S. Government in procurement
- A defined development path and regulatory strategy

We seek to acquire and develop leading compounds and technologies targeting the highest priority U.S. Government biodefense requirements. We also look to bring products into our portfolio with dual-use potential that may serve both biodefense and commercial markets.

We have developed and will continue to develop unique biodefense product development and contracting capabilities. Development of these capabilities has required a substantial investment, which we may leverage further through possible acquisitions of additional biodefense product candidates, whether under licensing deals, mergers and acquisitions, or otherwise. We believe that product opportunities will come primarily from companies focused on commercial markets that wish to see their products or technologies exploited in biodefense.

Biodefense Industry

Market Overview

The worldwide biodefense market can generally be divided into three segments: U.S. civilian, U.S. military, and non-U.S. markets. U.S. government funding represents the vast majority of the worldwide market. According to the University of Pittsburgh Medical Center - Center for Biosecurity, U.S. government biodefense military and civilian spending peaked in fiscal year 2009 at over $8 billion and has averaged around $6.2 billion since fiscal year 2007.

U.S. Civilian: The U.S. civilian market includes funds to protect the U.S. population from biowarfare agents and is largely funded by the Project BioShield Act of 2004. Project BioShield, the U.S. government's largest biodefense initiative, seeks to accelerate the research, development and purchase of medical countermeasures ("MCMs"). $5.6 billion was allotted under Project BioShield to procure MCMs for the Strategic National Stockpile ("SNS") for the period from July 2004 through 2013. Of the $5.6 billion, $3.4 billion was made available through fiscal year 2008, and the remaining $2.2 billion became available in fiscal year 2009. At the end of calendar year 2011, of the total $5.6 billion, over $2 billion in procurement contracts had been awarded and approximately $1.8 billion had been transferred out of the Project BioShield Special Reserve fund ("SRF") for non-procurement related activities. Remaining funds in the SRF are now approximately $1.5 billion. Biomedical Advanced Research and Development Authority's ("BARDA") budget for advanced development funding for government fiscal year 2012 is $415 million. This amount is the same as it was for fiscal year 2011 and $110 million more than the $305 million BARDA budget for fiscal year 2010.

Congress is also considering legislation to reauthorize key biodefense legislation as part of the Pandemic and All Hazards Preparedness Act ("PAHPA") reauthorization. PAHPA was originally passed in 2006 and created and established funding for BARDA. Among other things, this legislation authorizes Project BioShield SRF funding for procurement activities at $2.8 billion over five years from 2014 through 2018. The U.S. House of Representatives passed this bill in November 2011. A Senate companion bill including similar provisions remains pending.

Military: The Department of Defense ("DoD") is responsible for the development and procurement of countermeasures for the military segment, which focuses on providing biowarfare protection for military personnel and civilians who are on active duty. The DoD biological defense research and development budget for fiscal year 2011 was approximately $400 million. Fiscal year 2012

funding is approximately $500 million. The overall DoD budget for fiscal year 2013 and future years is heavily dependent on congressional action on a debt reduction plan.

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

Project BioShield

Project BioShield, established under the Project BioShield Act of 2004 and the U.S. government's largest biodefense initiative, is focused on acquiring products with low technology risk that will be available for purchase in the near term. The U.S. government has identified the following threats as critical biodefense priorities: anthrax, smallpox, botulinum toxin, radiation, and nerve agent exposure. To evaluate and select the best products for these threats, the Department of Health and Human Services ("DHHS") typically issues Requests for Information followed by Requests for Proposals ("RFP"). RFPs detail product and procurement requirements including treatment types, numbers of doses and delivery timeframes. To qualify for Project BioShield funding, products must demonstrate product efficacy in an animal model and complete advanced development activities, and companies must show that they can provide sufficient manufacturing capability. As of December 31, 2011, nine awards have been made under Project BioShield, including those for the treatment or prevention of anthrax, smallpox, radiation and botulinum toxin.

Anthrax

The three general modes of infection by *Bacillus anthracis* ("*B. anthracis*"), the bacterium which causes anthrax infection, are by inhalation, ingestion or skin contact with anthrax spores. Inhalation is the form of infection most likely to be lethal. Inhalational anthrax occurs when anthrax spores become airborne and enter a person's body through the lungs. Inhalational anthrax is usually fatal if left untreated, and has approximately a 50% mortality rate or less in patients treated aggressively with antibiotics and supportive care. Persons infected by *B. anthracis* that is ingested will suffer from gastrointestinal anthrax; those whose skin comes into contact with anthrax will suffer from cutaneous anthrax. Gastrointestinal anthrax has a mortality rate of more than 40% if left untreated. Cutaneous anthrax generally causes skin infections within a week or two after exposure. Cutaneous anthrax is the least fatal. Without treatment, approximately 20% of all skin infection cases are fatal. Treated cutaneous anthrax is rarely fatal.

The DoD estimates that up to ten countries may possess anthrax weapons and an undetermined number of individuals and terrorist groups could have access to anthrax. Anthrax is an effective bioterrorism agent because the spores are stable, can be milled to a fine powder and may be dispersed widely with readily available instruments and machinery. The U.S. Congressional Office of Technology Assessment in 1993 analyzed the potential scope of an anthrax attack, calculating that there would be between 130,000 and 3 million deaths following the release of 100 kilograms of anthrax.

In light of the limited effectiveness of antibiotics and supportive care, we believe that currently available treatments for inhalational anthrax – antibiotics and vaccines - are suboptimal. Following exposure, but prior to the onset of symptoms, antibiotics like ciprofloxacin, doxycycline or penicillin can be used as post-exposure prophylaxis with the goal of preventing progression of the disease with a recommended antibiotic course of treatment of 60 days, sometimes in combination with the administration of anthrax vaccine. We believe that both compliance and side effects are problematic for anyone asked to take antibiotics for such an extended period of time. Furthermore, antibiotic resistance, whether naturally occurring or genetically engineered, is a concern. Products like our rPA-based anthrax vaccine candidate and our monoclonal human antibody treatment, Valortim® might allow for a shorter duration of antibiotic dosing to achieve adequate post-exposure prophylaxis.

Smallpox

Smallpox virus is classified as a Category 'A' agent by the U.S. Centers for Disease Control and Prevention and is considered one of the most significant threats for use as a biowarfare agent. Although declared eradicated in 1979 by the World Health Organization ("WHO"), there is a threat that a rogue nation or a terrorist group may already possess or have the capability to produce an illegal

inventory of the virus that causes smallpox. Inventories of the virus are known to be contained under extremely tight security at the CDC in Atlanta, Georgia and at the Vector laboratory in Russia.

Many scientists agree that with the scientific tools available today smallpox can be created by modifying another orthopox virus available naturally worldwide by a Ph.D. scientist with access to a modern laboratory. Studies conducted prior to the eradication of natural reservoirs of smallpox virus show that the disease has a mortality rate of 30% or higher, and survivors are scarred and suffer other permanent detriments.

Chemical Weapons and Nerve Agents

Chemical weapons use the toxic properties of chemical substances to produce physiological effects on an enemy. Classic chemical weapons, such as chlorine and phosgene, were employed during World War I and consisted primarily of commercial chemicals used as choking and blood agents, to cause respiratory damage and asphyxiation. Organophosphorous agents (nerve agents), one of the most lethal forms of chemical weapons, were developed in the 1930s in the years leading up to World War II.

Nerve agents function by binding to acetylcholinesterase, an enzyme that normally causes termination of the activity of the neurotransmitter acetylcholine. Nerve agents block the activity of acetylcholinesterase, allowing the activity of acetylcholine to continue unchecked. As a result, nerve impulses are continually transmitted, causing muscle contractions that do not stop. This effect is referred to as a "cholinergic crisis" and results in a loss of muscle control, respiratory failure, paralysis and convulsions. Nerve agent exposure that does not cause death after a short period can lead to permanent brain damage.

There is currently only one FDA-approved pre-treatment for nerve agents, pyridostigmine bromide ("PB"). PB is only approved for the pre-treatment of exposure to the nerve agent soman. It confers no protection on its own but enhances the protection conferred by post-exposure treatment. The standard of care for post-exposure treatment involves repeated doses of a cocktail of drugs including atropine, reactivators including the oxime 2-PAM, and anti-convulsants. However, this type of treatment acts primarily on the symptoms of nerve agents, not their underlying cause. We believe available pre-and post-treatment options are inadequate and that there is a need for more efficacious countermeasures, especially as evidence mounts that modified, more toxic forms of nerve agents may be used in future attacks.

PharmAthene's Product Candidates

SparVax™: Recombinant Protective Antigen (PA)-based Anthrax Vaccine

SparVax™ is a second generation, rPA anthrax vaccine designed to protect against inhalational anthrax, the most lethal form of *B. anthracis* infection in humans. The vaccine has been shown to induce anti-Protective Antigen ("PA") antibodies in clinical trials in healthy human volunteers and in animal models of inhalational anthrax. These antibodies are believed to function by targeting PA, a protein component necessary for the transportation of bacterial toxins into the cell and the subsequent toxic cascade that leads to morbidity and mortality. SparVax™ has been shown to generate a high level of protective efficacy in rabbits and non-human primates when vaccinated and subsequently exposed to lethal inhalation doses of anthrax spores. One Phase I and two Phase II clinical trials have been completed involving approximately 770 individuals. Data from these trials demonstrated that SparVax™ is generally well tolerated and immunogenic.

SparVax™ is being developed for two indications: post-exposure prophylaxis ("PEP") in conjunction with antibiotics and general use prophylaxis ("GUP"). In a PEP setting, the vaccine would be used following a suspected exposure to augment the natural immune response and provide protection once antibiotics are discontinued. In the GUP setting, the vaccine is administered in advance of any exposure and is intended to induce an immune response that will be protective should there be an exposure.

Pre-clinical Studies

Prior to an IND being filed with the FDA, SparVax™ underwent safety testing in rodents and non-human primates. SparVax™ was well tolerated with no deaths and no behavioral or clinical signs observed in any species. All of the toxicology studies were compliant with Good Laboratory Practices ("GLP") and the data were used to support the Investigational New Drug ("IND") and allowed for the initiation of clinical trials of SparVax™.

Non-clinical Studies

SparVax™ is being developed utilizing the Animal Rule (21 CFR 601.90) which allows for efficacy testing in appropriate animal models in lieu of clinical efficacy trials. To date, our animal model development and efficacy studies in both rabbits and non-human primates for both GUP and PEP indications using SparVax™ have been sponsored by the National Institute of Allergy and Infectious Diseases ("NIAID") and conducted by a contract research organization. Data from the studies conducted to date have shown that SparVax™ is immunogenic in both rabbits and non-human primates; protection has been demonstrated in vaccinated animals subjected to aerosol challenge with Ames strain anthrax spores.

Clinical Studies

The Phase I trial was a dose escalation study designed to evaluate a range of dosage levels administered with either of two different dosing schedules. There were no vaccine-related serious adverse events or changes in blood chemistries, vital signs or electrocardiograms ("ECGs") reported. The results demonstrated that the vaccine was generally well tolerated and immunogenic and that the immunogenic response was dependent on vaccine dosage.

The Phase II program was designed to evaluate the safety and immunogenicity of the two highest dosages tested in Phase I using a three dose regimen in a larger number of subjects. Two Phase II trials were conducted, both of which studied the effect of different vaccine dosage levels and schedules.

In the Phase IIa trial, SparVax™ was highly immunogenic and generally well tolerated with no vaccine-related serious adverse events or changes in blood chemistries, vital signs or ECGs reported.

The Phase IIb trial compared a longer dosing regimen at two different vaccine dosages with a smaller control group who received the currently licensed anthrax vaccine, BioThrax®. As in the Phase IIa trial, SparVax™ was highly immunogenic and generally well tolerated with no vaccine-related serious adverse events or changes in blood chemistries, vital signs or ECGs reported. The immunogenicity data showed that SparVax™ elicited a robust immune response after the primary immunization series as well as induced an anamnestic response after a booster dose given at 6 or 12 months after the primary dosing schedule. While both vaccines were immunogenic following the 3-dose series with seroconversion rates of approximately 90%, an increased proportion of individuals experienced injection site pain in the BioThrax® group (where the vaccine was administered subcutaneously) as compared to the SparVax™ groups.

Future studies will seek to confirm the dose and schedule of SparVax™ that induces antibody levels in humans which are comparable to those shown to be protective in the animal models, demonstrate the acceptability of using SparVax™ in conjunction with antibiotics, and confirm the safety of SparVax™ in a sufficient number of human subjects (as required by FDA).

Product Stability

In 2011, we announced that SparVax™ product produced from bulk drug substance manufactured at Avecia Biologics Laboratories in the United Kingdom had demonstrated 52 month stability. Moreover we have demonstrated over 36 month stability on our final drug

product vaccine formulation. The stability data were prepared utilizing a variety of analytical methods and a well characterized mouse challenge potency release assay.

Funding

To date, funding for the development of SparVax™ has occurred under two contracts from the National Institutes of Health (NIH) originally entered into in 2002 and 2003 which, not including the modification discussed below, provided for aggregate funding of up to approximately $128 million.

In April 2009, the United States Government transferred the Sparvax™ contract to the Biomedical Advanced Research and Development Authority (BARDA). In February 2010, PharmAthene and BARDA entered into negotiations to modify our existing advanced development contract for SparVax™. During the base period of performance under the contract modification, i.e., through September 1, 2013, we have been funded up to approximately $62 million on a cost-reimbursement-plus-fixed-fee basis, assuming that all milestones are achieved. The government, at its sole discretion, may also exercise three contract options during the base period of performance, under which we could receive up to an additional $17 million in funding. The government has indicated it is unlikely these options will be exercised. As of December 31, 2011, approximately $71 million in funding and options remained under the contract, of which $54 million is funded. It is unclear when BARDA will consider a new funding request. We are currently in discussions with BARDA about modifying the activities under our current contract to include a Phase II human clinical trial.

Valortim®: Anthrax Monoclonal Antibody

Valortim® is a fully human monoclonal antibody designed to protect against and treat human inhalational anthrax, as both post-exposure prophylaxis (i.e., before symptoms manifest) and post-exposure therapy (i.e., once symptoms are evident).

Valortim® functions by targeting PA, a protein component of the bacterium that attaches to and facilitates the entry of the destructive toxins Lethal Factor (LF) and Edema Factor (EF) into healthy cells in the infected person. Valortim® is designed to bind to PA and protect the cells from damage by the anthrax toxins. In non-clinical studies, animals were protected against this fatal disease when Valortim® was administered following a lethal aerosol challenge of anthrax spores, demonstrating that Valortim® induces recovery and survival in animals exposed to inhalational anthrax.

Anthrax spore challenge studies in animals have demonstrated protection by Valortim® both when given early following challenge (post-exposure prophylaxis) as well as when given at the point when animals demonstrate signs of infection after challenge (therapeutic intervention). We believe Valortim® may bind to a novel site of PA, permitting protection after toxins have already attached to the cell. In addition, other data suggest that Valortim® may augment the immune system's ability to kill anthrax spores. We believe Valortim® has unique potency and a potentially unique mechanism of action.

BMS Collaboration and Development Timeline

We are developing Valortim® in collaboration with Bristol Myers Squibb, Inc. ("BMS") pursuant to a collaboration agreement entered into in November 2004. Under the terms of the collaboration agreement, we and BMS will share operating profits according to a formula that establishes our share of the profits at between 20% and 60%, with the final split largely dependent on the amount of funding provided by us prior to sale of product to the U.S. government. Prior to distribution of operating profits, each party is entitled to reimbursement of research and development expenses incurred that were not otherwise covered by government funding.

Valortim® has received Fast Track designation from the FDA as well as orphan drug status.

Clinical and Non-clinical Studies

Valortim® is being developed for two indications: (i) post-exposure prophylaxis; and (ii) as a therapeutic.

Clinical Phase I Studies

In 2006 PharmAthene and BMS completed an initial Phase I open-label, dose-escalation clinical trial to evaluate the safety, tolerability, immunogenicity, and pharmacokinetics (the study of absorption, metabolism and action of drugs) of a single dose of Valortim® administered intravenously or intramuscularly in healthy volunteers. No drug-related serious adverse effects were reported.

In August 2009 we began a second Phase I clinical trial of Valortim® in combination with the antibiotic ciprofloxacin. During the course of the study, there were two adverse reactions in the four subjects dosed, one of which was characterized by the clinical investigators as a serious adverse event. We halted the trial and the FDA placed the study on partial clinical hold pending the outcome of an investigation. Following completion of our investigation, the FDA lifted the partial clinical hold in December 2010, and we then commenced and completed an intravenous (IV) dose-escalation study of Valortim®. We submitted the final study report for the trial in January 2012.

In December 2011 we published the results from the initial Phase I clinical trial in the journal *Clinical and Vaccine Immunology*. Forty-six healthy volunteers received either a single intravenous (IV) dose of Valortim® ranging from 0.3 to 20.0 mg/kg (10 subjects in cohorts receiving 1.0, 3.0 or 10.0 mg/kg and 3 subjects in cohorts receiving 0.3 and 20 mg/kg) or a single 100 mg intramuscular (IM) dose of Valortim® (10 subjects). The Phase I data showed that Valortim® was generally safe and well-tolerated and non-immunogenic when administered as single 0.3 mg/kg to 20 mg/kg IV infusions or as a single IM dose injection at 100 mg. No drug-related serious adverse events were reported. These results demonstrate that a single dose of Valortim® can provide levels of antibodies in humans that correspond to protective levels in animal models and is well tolerated.

Non-clinical Studies: Post-exposure Prophylaxis Indication

We have conducted studies in two animal models to evaluate the use of Valortim® as a post-exposure prophylaxis, or, in other words, to protect exposed animals from developing the signs and from dying of inhalational anthrax. Treatment in both animal models was initiated within one hour following exposure to the anthrax spores. Eighty-five percent (85%) of rabbits treated intravenously with doses of Valortim® survived following inhalation exposure to anthrax spores. One hundred percent (100%) of cynomolgus monkeys treated intramuscularly with doses of Valortim® were protected from death following exposure to inhalational anthrax spores.

Non-clinical Studies: Post-exposure Therapeutic Indication

We have conducted studies in rabbits to evaluate the use of Valortim® as a therapeutic intervention for inhalational anthrax. This indication for Valortim® would be intended to treat patients who have already developed signs and/or symptoms of inhalational anthrax. In two studies, up to 100% of the animals survived that were treated with Valortim® intravenously at the time they tested positive for the presence of PA in the blood or had significant increases in body temperature.

We have also conducted two studies in African green monkeys treated with Valortim® at the time they tested positive for the presence of PA in the blood. Up to 70% of animals treated intravenously with Valortim® survived. In contrast, the mortality rate for animals exposed to inhalational anthrax that received a saline control at the time they tested positive for the presence of PA in the blood is close to 100%.

In addition to the animal efficacy and human safety studies to advance Valortim® toward licensure under the Animal Rule, work is also ongoing to further explore and define its mechanism of action.

Funding

In 2006 and 2008, we received DoD funding for the advancement of Valortim® in the aggregate amount of $4.2 million. As of December 31, 2011, $1.4 million in contract funding remained for this program which will fund continued R&D efforts to further define the optimal dose-range in non-clinical studies and evaluate safety parameters through October 2, 2012.

On September 28, 2007, NIAID awarded us a $13.9 million contract for the advanced development of Valortim® as an anti-toxin therapeutic to treat inhalational anthrax infection. On April 29, 2009, NIAID increased the value of this contract to $15.9 million (which was reduced to $15.3 million in August 2010). Funding from NIAID ran through January 31, 2012, at which point this contract ended.

While the Company has reached out to BARDA to explore potential future funding alternatives and has submitted both a proposal for funding under a Broad Agency Announcement ("BAA") and a response to a Sources Sought for Anthrax Antitoxin Medical Countermeasures, future government funding for Valortim® is unlikely during government fiscal year 2012. There can be no assurance we will be successful in obtaining additional financial support for this program.

Recombinant Human Butyrylcholinesterase Nerve Agent Countermeasure

In 2006 we entered into a contract with the DoD to develop our Protexia® medical countermeasure for nerve agent exposure to protect the warfighter. This program utilized the recombinant enzyme butyrylcholinesterase, or "rBChE", a naturally occurring bioscavenger, as its active ingredient. This first generation program for producing rBChE utilized transgenic goats to produce the enzyme in their milk. In December 2010 the DoD elected to defer a decision on whether to fund advanced development of Protexia®, potentially for several years, due to budget constraints and potential concerns about duration of protection with the current route of Protexia® administration. As such, this first generation contract expired on December 31, 2010. We have shut down our Protexia®-related operations and sold our production facilities in December 2011.

We have also been working on a second generation approach, which we refer to as our Advanced Expression System, or "AES", that utilizes a mammalian-cell-based expression system for rBChE. While the AES technology is still at an early research stage, if our efforts are successful, we believe this cell-based approach could have significant advantages over the transgenic goat-based approach originally developed to produce Protexia®. Specifically, we believe these advantages could include:

- An established manufacturing platform, consistent with those used for other biotechnology products and with the U.S. government's recent advanced manufacturing system initiative.
- Final product with a pharmacokinetic (PK) profile that more closely resembles naturally occurring butyrylcholinesterase, or BChE, from human blood.
- Higher production yields than a transgenic goat based approach.
- Substantially lower costs of production to yield significant savings to our DoD and, potentially, civilian customers.
- A more traditional regulatory path to FDA licensure.
- Greater ability to scale up production if demand increases.

Based on data that demonstrated our ability to produce rBChE in the cell expression system and its ability to bind organophosphates, in August 2011 DoD awarded us a fixed price contract for up to approximately $5.7 million to support our on-going research into the production of rBChE using a mammalian-cell based advanced expression system (or AES).

ST-246®

ST-246® is an orally administered anti-viral drug candidate being developed by SIGA, a third party, to treat orthopox virus diseases including smallpox. Pursuant to a court ruling in September 2011, the Company is entitled to share in a portion of net profits earned by SIGA on ST-246. ST-246 acts by blocking the ability of the virus to spread to other cells, preventing it from causing disease. The FDA has designated ST-246 for "fast-track status" enabling potential expedited FDA review and approval. In addition, ST-246 has been granted Orphan Drug designation for both the treatment and prevention of smallpox.

In 2006, ST-246 demonstrated 100% protection against human smallpox virus in a primate trial conducted at the Centers for Disease Control ("CDC"). Additional studies in non-human primate models demonstrated 100% protection for animals injected with high doses of monkeypox virus. One study was sponsored by the National Institute of Allergy and Infectious Diseases at the National

Institutes of Health. The second study was conducted by the U.S. Army Medical Research Institute of Infectious Diseases and was funded by the Department of Defense’s Threat Reduction Agency.

SIGA has previously announced that between July 2006 and June 2010 it had successfully completed four human clinical trials with ST-246, which it claimed supported the safety and tolerability of the anticipated clinical dose of ST-246.

SIGA has stated publicly that there could be several potential uses for an effective smallpox antiviral drug: (1) pre-exposure prophylaxis to protect the non-immune who are at risk of exposure; (2) as a therapeutic to reduce mortality and morbidity among those individuals infected with the smallpox virus; and (3) as an adjunct to the smallpox vaccine to reduce the frequency of serious adverse events due to the live virus used for vaccination.

Consequently, based on statements made by both SIGA and the U.S. government, the market opportunity for ST-246 is among the largest of all the biodefense related markets. For example, in a "justification for other than full and open competition" initially issued in December 2010 and supplemented in May 2011, the U.S. government identified a smallpox antiviral as a potentially important secondary prophylaxis option for the 4% of the US population (12 million persons) currently estimated to have an uncertain immune response to smallpox vaccine. In May 2011 SIGA announced the execution of a 5 year contract with BARDA with a base value of $433 million for the procurement of 1.7 million courses of therapy of ST-246 and related development work and an option for the U.S. government to purchase an additional 12 million courses of therapy, bringing the total potential value of the contract at that time to approximately $2.8 billion. In a June 2011 amendment made in response to a protest filed by a third party, this option was removed from the contract, which currently provides for purchases totaling approximately $412.5 million from the U.S. government.

International recognition of the threat of smallpox was evidenced by Israel's operation Orange Flame 4 run in early 2010. This disaster scenario exercise is run every other year, and most recently looked at a smallpox exposure scenario. During this exercise the State of Israel reached out to SIGA to negotiate the hypothetical procurement of doses of ST-246.

In addition to procurement for the Strategic National Stockpile through BARDA and the CDC, the market opportunity for smallpox antivirals is potentially much broader, and could include potential purchases by the Department of Defense, state and other local governments, and even private purchasers. We believe there is also interest in ST-246 by the World Health Organization, the North Atlantic Treaty Organization and nations such as Israel and the United Kingdom, among others.

The Court Decision/ PharmAthene Impact

SIGA common stock is currently traded on the NASDAQ under the symbol "SIGA". Pursuant to an opinion issued September 22, 2011 by the Delaware Court of Chancery, we are entitled to receive 50% of the net profits over 10 years from all sales of ST-246 and related products, once SIGA earns the first $40 million in net profits. The Court also awarded us one-third of our attorneys' fees and expert witness costs.

Based on the Delaware Court's decision, we believe the potential economic value of this award to PharmAthene over the 10 year period of enforcement could be significant. A study published by the International Society for Pharmaceutical Engineering, focusing on the differences between brand name, generic and biotech companies, which did not specifically focus on SIGA or ST-246, but explored general trends in various income and expense categories of pharmaceutical companies, concluded that typical costs of goods sold total 14% of revenues for the biotech segment of the pharmaceutical industry. As a biodefense product targeted at a narrow market of national governments, we believe only modest sales and marketing effort is needed for ST-246 with correspondingly modest associated overhead costs. Notwithstanding the foregoing, we have no first-hand knowledge of, and SIGA has not publicly disclosed, any information related to the potential margins or profitability of ST-246 and related products. Moreover, even if SIGA is successful in selling ST-246 to the government, there can be no assurance that competitors, including Chimerix, Inc., will not succeed in developing and marketing smallpox antivirals that are more cost effective than ST-246.

SIGA indicated in its third quarter 2011 investor conference call that it expects that initial delivery of ST-246 to the U.S. government will begin in the first quarter of 2013. Based on public statements from SIGA in its second quarter 2011 investor conference call, SIGA has also stated that it will be capable of producing one million treatment courses per year and will be able to fulfill delivery of the 1.7 million treatment courses under the contract by 2014. However, SIGA's ability to deliver product to the SNS, and the timing thereof, is subject to a number of significant risks and uncertainties (certain of which are outlined in SIGA's filings with the SEC), as to which we have limited knowledge and which we have no ability to control, mitigate or fully evaluate.

Litigation Status

On September 22, 2011 the Delaware Court of Chancery issued its opinion in the case. SIGA has stated it intends to appeal this decision to the Delaware Supreme Court. We can provide no assurances that SIGA will not prevail on its appeal and that the Delaware Supreme Court will not overturn the trial court's decision.

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 ("FFDCA") 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 ("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 Investigational New Drug application ("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 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 ("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 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 ("GCP") regulations under protocols submitted to the FDA as part of an IND. In addition, each clinical trial is approved and conducted under the auspices of an institutional review board ("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 will 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 I, II, and III, involving an increasing number of human subjects. These phases may sometimes overlap or be combined. Phase I 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 II 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 III 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 III 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, however, 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 C.F.R. 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 preexisting requirements for establishing the safety of new drug and biological products, including Phase I through Phase II 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 or distribution or requirements to provide information to patients.

We intend to rely on the Animal Rule in seeking marketing approval for our product candidates because we cannot ethically expose humans to anthrax, nerve agents or plague. 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 the Project BioShield Act of 2004, or Project BioShield, the Secretary of the DHHS may, with the concurrence of the Secretary of the Department of Homeland Security, or DHS, and upon the approval of the President, contract to purchase unapproved countermeasures for the SNS in specified circumstances. 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 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.

Our products will 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 will meet the criteria set forth by DHHS or the FDA for procurement and Emergency Use Authorization ("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 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 REMS, 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 exists 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.

The FDA's Fast Track designation program is designed to facilitate the development and review of new drugs, including biological products that are intended to treat serious or life-threatening conditions and that demonstrate the potential to address unmet medical needs for the conditions. Fast Track designation applies to a combination of the product and the specific indication for which it is being studied. Thus, it is the development program for a specific drug for a specific indication that receives Fast Track designation. The sponsor of a product designated as being in a Fast Track drug development program may engage in early communication with the FDA, including timely meetings and early feedback on clinical trials, and may submit portions of an application on a rolling basis rather than waiting to submit a complete application. Products in Fast Track drug development programs also may receive priority review or accelerated approval, under which an application may be reviewed within six months after a complete NDA or BLA is accepted for filing or sponsors may rely on a surrogate endpoint for approval, respectively. The FDA may notify a sponsor that its program is no longer classified as a Fast Track development program if the Fast Track designation is no longer supported by emerging data or the designated drug development program is no longer being pursued.

Biologics manufacturers, distributors and their subcontractors are required to register their establishments with the FDA and state agencies and are subject to periodic inspection by the FDA and other authorities, where applicable, and must comply with the FDA's current Good Manufacturing Practices ("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 we 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 by us pursuant to FDA licenses or approvals are subject to pervasive and continuing regulation by the FDA, including:

- 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.

Adverse experiences with the product must be reported to the FDA and could result in the imposition of market restriction through labeling changes or in product removal. 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 FFDCA, 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;
- refusals to permit the import or export of products;
- product seizure; and
- injunctions or the imposition of civil or criminal penalties.

Orphan Drug Act

The Orphan Drug Act is intended to provide incentives to pharmaceutical companies to develop and market drugs and Biologics for rare diseases or conditions affecting fewer than 200,000 persons in the United States at the time of application for orphan drug designation. Orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process. Clinical testing requirements for orphan drugs are the same as those for products that have not received orphan drug designation but pharmaceutical companies may receive grants or tax credits for research, as well as protocol assistance. Further, if a drug or Biologic that receives orphan drug designation and is the first version of a particular drug to receive FDA marketing approval for the orphan designated indication, the product receives a seven-year period of marketing exclusivity during which the FDA cannot approve any application by another party to market the same drug for treatment of the same Orphan indication. There are exceptions to this exclusivity, however. For example, the FDA is allowed to approve a second product with the same active ingredient for the same indication if the sponsor of the approved orphan product consents, grants a license to the second applicant or is unable to assure an adequate supply of the drug, or if the second product has been shown to be clinically superior to the approved orphan drug. Further, orphan drug exclusivity does not block approval of a drug that, although proposed for the same indication, is considered by the FDA (applying a regulatory standard) to be a different drug than the previously approved orphan drug. In addition, the holder of orphan drug status must notify the FDA of any decision to discontinue active pursuit of drug approval or, if such approval or license is in effect, notify the FDA at least one year prior to any discontinuance of product production. If the holder of an orphan designation cannot assure the availability of sufficient quantities of the product to meet the needs of affected patients, the FDA may withdraw orphan exclusivity status.

Fraud and Abuse

We are subject to various federal and state laws pertaining to health care fraud and abuse, including anti-kickback laws, false claims laws and physician self-referral laws. Violations of these laws are punishable by criminal, civil and/or administrative sanctions, including, in some instances, imprisonment and exclusion from participation in federal and state health care programs, including Medicare, Medicaid and veterans' health programs. Because of the far-reaching nature of these laws, we cannot assure you that the occurrence of one or more violations of these laws would not result in a material adverse effect on our business, financial condition and results of operations.

Anti-Kickback Laws

Our operations are subject to federal and state anti-kickback laws. Federal law prohibits entities such as us from knowingly and willingly offering, paying, soliciting or receiving any form of remuneration (including any kickbacks, bribes or rebates) in return for the referral of items or services for which payment may be made under a federal health care program, or in return for the recommendation, arrangement, purchase, lease or order of items or services for which payment may be made under a federal health care program. Violation of the federal anti-kickback law is a felony, punishable by criminal fines and imprisonment for up to five years or both. In addition, the DHHS may impose civil penalties and exclude violators from participation in federal health care programs such as Medicare and Medicaid. Many states have adopted similar prohibitions against payments intended to induce referrals of products or services paid by Medicaid or other third party payors.

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. For example, Congress enacted comprehensive health reform legislation that, among other things, creates a licensure pathway for "follow-on" biological products shown to be biosimilar to previously licensed biological products and permits litigation of patient infringement cases between patent owners and biosimilar manufacturers prior to market entry. This legislation, known as the Biologics Price Competition and Innovation Act of 2009, or BPCIA, gives broad rulemaking discretion to the FDA for purposes of enacting the BPCIA. Until the FDA develops recommendations for the application review process and the BPCIA is implemented, it is not possible to predict the impact of the BPCIA on our business.

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

While we have no drug substance or drug product development, analytical or manufacturing facilities of our own, we believe that acceptable alternatives are available through third-party contract manufacturing organizations ("CMOs") and contract research organizations ("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.

For SparVax™, in June 2011 we announced the successful completion of the transfer of the rPA bulk drug substance manufacturing to a new CMO, Fujifilm Diosynth Biotechnologies. Subsequently in 2011 we successfully completed a 1,500 liter engineering run and a 1,500 liter cGMP run of SparVax™ bulk drug substance at the Fujifilm Diosynth Biotechnologies site. Formulation and filling of the final drug product, adjuvanted rPA, is performed at Baxter Pharmaceutical Solutions LLC, located in the United States. The final dosage presentation is in unit dose syringes. All analytical data generated to date demonstrate that the bulk drug substance manufactured at Fujifilm Diosynth Biotechnologies is comparable to bulk drug substance manufactured previously at Avecia in the UK.

For Valortim®, the cell culture and purification process was developed by BMS, and results in a commercially feasible and high purity product. We have successfully manufactured bulk drug substance at large scale following technology transfer to a CMO, Laureate Biopharma. The final drug product has been formulated and filled, tested and released for use in clinical trials and non-clinical studies.

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 inventories. 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

Our success 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 issued and non-abandoned patents and published pending applications

Patent/Patent Application	Patent Number/ Application Number	Country of Issue/Filing	Issue Date/File Date	Expiration Date
Long Half-Life Recombinant Butyrylcholinesterase	US07/017279	WO	August 2, 2007	August 3, 2027
	12/309909	U.S.	February 2, 2009	August 3, 2027
	2009-523781	Japan	February 4, 2009	August 3, 2027
	07811030.1	Europe	August 2, 2007	August 3, 2027
	2659809	Canada	February 3, 2009	August 3, 2027
	2007281998	Australia	February 10, 2009	August 3, 2027
	196,871	Israel	February 4, 2009	August 3, 2027
Method for Assaying Antigens	GB07/001353	WO	April 12, 2007	April 13, 2027
	12/226101	U.S.	October 7, 2008	April 13, 2027
	2009-504819	Japan	October 10, 2008	April 13, 2027
	2010914	Europe	November 10, 2008	April 13, 2027
	2,648,850	Canada	October 9, 2008	April 13, 2027
	2007242647	Australia	October 24, 2008	April 13, 2027
	194459	Israel	October 2, 2008	April 13, 2027
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
	09785720.5	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
	212118	Israel	October 2, 2009	October 2, 2029
Stable vaccine compositions and methods of use	12/321564	U.S.	January 22, 2009	January 23, 2029
	GB2009/050051	WO	January 22, 2009	January 23, 2029
	2011-546933	Japan	January 22, 2009	January 23, 2029
	09785211.5	Europe	January 22, 2009	January 23, 2029
	2,750,321	Canada	July 20, 2009	January 23, 2029
	2009338516	Australia	January 22, 2009	January 23, 2029

	214211	Israel	January 22, 2009	January 23, 2029
Recombinant Butyrlcholinesterase & Truncates thereof	PCT/US10/03225	WO	December 21, 2010	December 21, 2030

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. We are a party to license agreements with The Defence Science and Technology Laboratory of the United Kingdom Ministry of Defence ("DSTL") originally executed May and December 2006, and amended and restated in February 2009. These agreements allow for the licensing of certain patents and technology useful in our rPA program. Upon commercialization of a product covered by a license, 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. 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. We derive rights to the patents, patent applications and know-how relating to Valortim® through our collaboration arrangement with BMS, which owns such rights. For additional information on our license agreements, please refer to Note 10—Commitments and Contingencies—License Agreements in the Notes to our Consolidated Financial Statements.

The expiration dates for the licenses described above are as follows:

License	Expiration Date
DSTL Anthrax	No expiration specified
BMS	Two years after the earlier of the date that (a) the collaboration product is no longer exploited under the agreement or (b) Unilateral Product (as defined in our collaboration agreement with BMS) is no longer exploited under a unilateral development and commercialization agreement.

We rely 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 assigning to us all rights to any inventions and processes they develop while they are employed by us.

We intend to 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.

Research and Development Costs

During the years ended December 31, 2011 and 2010, we incurred $21.2 million and $20.9 million, respectively, of expenses related to our research and development programs.

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

With respect to the development of a recombinant PA-based vaccine, we are aware of two other companies developing competing vaccines that are in the clinical stage of development: Emergent BioSolutions, Inc., which is the sole supplier to the U.S. government of the only currently FDA-licensed anthrax vaccine - BioThrax® Anthrax Vaccine Adsorbed, and Panacea Biotec Ltd. There are a number of companies with anthrax vaccines in preclinical development including Bavarian Nordic, Dynavax, Green Cross, PaxVax, Vaxin, and Pfenex.

Monoclonal antibodies ("MAbs") directed against PA are being developed for post-exposure prophylaxis and as symptomatic therapy for anthrax infection. There are a limited number of companies we are aware of with anti-anthrax MAbs and/or polyclonal antibodies in development, including: Cangene Corporation, Human Genome Sciences, Inc., Elusys Therapeutics, Inc., Emergent BioSolutions, Inc., IQ Corporation BV, and Planet Biotechnology.

There are a number of orally available small molecule and other drugs approved and/or under development for the treatment of anthrax. These include broad spectrum antibiotics as well as anthrax specific products. Bayer AG produces ciprofloxacin, or Cipro®, which has been approved for the post-exposure prophylaxis of inhalational anthrax. In late 2004, generic versions of Cipro® were also approved by the FDA. In addition, levofloxacin, an antibiotic marketed in the United States by Ortho-McNeil Pharmaceuticals, and the generic antibiotic, doxycycline, are both approved for post-exposure prophylaxis of inhalational anthrax.

Nerve Agent Product Competition

We are aware of antidotes to nerve agents being developed by pharmaceutical companies, including Countervail Corporation, Meridian Medical Technologies, a subsidiary of Pfizer, Inc., Protalix BioTherapeutics, Inc. and Dynport Vaccine Company, LLC, in collaboration with Baxter Healthcare Corporation.

Employees

As of December 31, 2011, we employed 73 persons on a full-time basis and 2 on a part-time basis, including 44 individuals engaged in research and development activities and 31individuals engaged in general and administrative functions, such as human resources, finance, accounting, legal and investor relations. At that date, our staff included 14 employees with Ph.D. or M.D. degrees. None of our employees are party to any collective bargaining agreement, and we believe that our relationship with our employees is good. In the first quarter 2012 we completed a reduction in force that resulted in the termination of 11 employees and elimination of an additional nine vacant positions.

Information concerning our directors and executive officers can be found in Part III, Item 10 under the caption "Directors, Executive Officers and Corporate Governance."

Item 1A. Risk Factors

Investing in our securities involves risks. In addition to the other information in this annual report on Form 10-K, stockholders and potential investors should carefully consider the risks described below relating to investment in our common stock. The risks and uncertainties described 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. If any of the following risks actually occur, our business, financial condition and/or results of operations could be materially adversely affected, the trading price of our common stock could decline and a stockholder could lose all or part of his or her investment.

Risks Related to Our Financial Condition

We have a history of losses and negative cash flow, anticipate future losses and negative cash flow, and cannot provide assurances that we will achieve profitability.

We have incurred significant losses since we commenced operations. For the years ended December 31, 2011, 2010 and 2009 we incurred net losses of approximately $3.8 million, $34.8 million, and $32.3 million, respectively, and had an accumulated deficit of approximately $193.7 million at December 31, 2011. As of such date, we had working capital of approximately $15.0 million and equity of $15.9 million. Our losses to date have resulted principally from research and development costs related to the development of our product candidates, general and administrative costs related to operations, and costs related to the Avecia Acquisition. Currently our development efforts are primarily focused on one product candidate, SparVax.

If we continue to incur losses and are not able to raise adequate funds to cover those losses, we may be required to curtail significantly our development and commercialization activities. This would have a material adverse effect on our business, financial condition and/or results of operations.

We expect that we will incur substantial losses for the foreseeable future as a result of increases in our research and development costs, including costs associated with conducting preclinical testing, clinical trials and regulatory compliance activities.

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

- Timing, amount and profitability of sales of ST-246, if any;
- developing our existing products and developing and testing new product candidates;
- continuing to receive government funding and identifying new government funding opportunities;
- receiving regulatory approvals;
- carrying out our intellectual property strategy;

- establishing our competitive position;
- pursuing third-party collaborations;
- acquiring or in-licensing products; and
- manufacturing and marketing products.

Many of these factors will depend on circumstances beyond our control. We cannot guarantee that we will achieve sufficient revenues for profitability. Even if we do achieve profitability, we cannot guarantee that we can sustain or increase profitability on a quarterly or annual basis in the future. If revenues grow more slowly than we anticipate, or if operating expenses exceed our expectations or cannot be adjusted accordingly, then our business, results of operations, financial condition and cash flows will be materially and adversely affected. Because our strategy includes potential acquisitions of other businesses, acquisition expenses and any cash used to make these acquisitions will reduce our available cash.

Under the terms of our agreements with Avecia, we are required to pay Avecia (now a subsidiary of Fujifilm) $5 million within 90 days of entering into a multi-year funded development contract that was to be issued by BARDA under solicitation number RFP-BARDA-08-15 (or any substitution or replacement thereof) for the further development of SparVax^{TM}. RFP-BARDA-08-15 was cancelled by BARDA in December 2009. Accordingly, our obligation to pay the $5 million payment would mature only upon our receipt of a substitution or replacement thereof. We have received funds from BARDA and other U.S. government agencies under various development agreements between us and BARDA. Any development contract deemed to be a substitute or replacement of RFP-BARDA-08-15 could trigger our obligation to make the $5 million payment.

The renewed turmoil affecting the global financial system has resulted in extreme volatility in the capital markets and is threatening to once again tighten the credit markets. As a result, there can be no assurances that we will be successful in obtaining sufficient financing on commercially reasonable terms or at all. Our requirements for additional capital may be substantial and will be dependent on many factors, including the success of our research and development efforts, our ability to commercialize and market products, our ability to successfully pursue our licensing and collaboration strategy, the receipt of continued government funding, competing technological and marketing developments, costs associated with the protection of our intellectual property and any future change in our business strategy.

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.

If adequate funds are not available, we may be required to curtail significantly our development and commercialization activities. This would have a material adverse effect on our business, financial condition and/or results of operations.

Our interest in ST-246 and related products is subject to the risk of an appeal of the judgment by SIGA and other risks.

In addition to the risks that ordinarily accompany the development and commercialization of biodefense products, including with respect to government contracting activities (including protests filed by third parties), competition (which with respect to ST-246 includes potential competing products being developed by Chimerix, Inc.), FDA and other regulatory approval and commercialization efforts, which are described elsewhere in these risk factors, our interest in sales of SIGA's product ST-246 and related products is subject to additional risks, including, but not limited to the following.

On September 22, 2011 the Delaware Court of Chancery issued its opinion in our case against SIGA. SIGA has stated it intends to appeal this decision to the Delaware Supreme Court. We can provide no assurances that SIGA will not prevail on its appeal and that the Delaware Supreme Court will not overturn the trial court's decision awarding us a 10 year 50% net profit interest in sales of ST-246 and related products or that sales of ST-246 (if any) in the future will result in our receiving any payments from SIGA.

In addition, SIGA's ability to deliver product to the SNS (and potential foreign government purchasers), and the timing and profitability thereof, is subject to a number of significant risks and uncertainties (certain of which are outlined in SIGA's filings with the SEC) as to which we have limited knowledge and no ability to control, mitigate or fully evaluate. We have no first-hand knowledge of, and SIGA has not publicly disclosed, any information related to the potential margins or profitability of ST-246 and related products.

Risks Related to Product Development and Commercialization

We have not commercialized any products or recognized any revenues from sales. All of our product candidates are still under development, and there can be no assurance of successful commercialization of any of our products.

We have not commercialized any products or recognized any revenues from product sales. In general, our research and development programs are at early stages. There can be no assurances that one or more of our future product candidates will not fail to meet safety standards in human testing, even if those product candidates are found to be effective in animal studies. 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 these data, we will 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 will be effective or will result in the development of any drug. Currently our development efforts are primarily focused on one product candidate, SparVax™. Even if our product candidates are 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 in the biodefense industry are time-consuming and subject to delays. Even if we initially receive positive early-stage pre-clinical 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 our 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 "—Necessary Reliance on the Animal Rule in Conducting Trials is Time-Consuming and Expensive."

Any delay or adverse clinical event arising during any of our clinical trials could force us to conduct additional clinical trials in order to obtain approval from the FDA and other regulatory bodies. Our development costs will increase substantially if we experience material delays in any clinical trials or if we need to conduct more or larger trials than planned.

If delays are significant, or if any of our products do not prove to be safe, pure, and potent (including efficacy) or do not receive required regulatory approvals, we may have to abandon the product altogether and will be unable to recognize revenues from the sale of that product. In addition, our collaborative partners may not be able to conduct clinical testing or obtain necessary approvals from the FDA or other regulatory authorities for any product candidates jointly developed by us and our partners. If we fail to obtain

required governmental approvals, we and our collaborative partners will experience delays in, or be precluded from, marketing products developed through them or, as applicable, their research.

If we cannot maintain successful licensing arrangements and collaborations, enter into new licensing arrangements and collaborations, or effectively accomplish strategic acquisitions, our ability to develop and commercialize a diverse product portfolio could be limited and our ability to compete may be harmed.

A key component of our business strategy is the in-licensing of compounds and products developed by other pharmaceutical and biotechnology companies or academic research laboratories. In addition, we have entered into licensing and research and development agreements with a number of other parties and collaborators. There can be no assurances that the research and development conducted pursuant to these agreements will result in revenue generating product candidates. If our suppliers, vendors, licensors, or other collaboration partners experience financial difficulties as a result of the weak economy, or if they are acquired as part of the current wave of consolidations in the pharmaceutical industry (such as, for example, with the acquisitions of Medarex by Bristol-Myers Squibb and Diosynth Biotechnologies, Inc.'s parent company by Merck & Co., Inc. in 2009 and of Avecia's CMO subsidiary (Avecia Biologics) by Merck in 2010 and the subsequent acquisition of these two entities by Fujifilm in 2011), their priorities or our working relationship with them might change. As a result, they might shift resources away from the research, development and/or manufacturing efforts intended to benefit our products, which could lead to significant delays in our development programs and potential future sales. In addition, we currently only have a research license from our partner for the work on the AES for rBChE. There can be no assurance that we will be able to secure exclusive rights from our collaborator to develop and commercialize this technology. Finally, our current licensing, research and development, and supply agreements may expire and may not be renewable or could be terminated if we do not meet our obligations.

If we are not able to identify new licensing opportunities or enter into other licensing arrangements on acceptable terms, we may be unable to develop a diverse portfolio of products. For our future collaboration efforts to be successful, we must first identify partners whose capabilities complement and integrate well with ours. We face, and will continue to face, significant competition in seeking appropriate collaborators. Collaboration arrangements are complex and time consuming to negotiate, document and implement. We may not be successful in our efforts to establish and implement collaborations or other similar arrangements. The terms of any collaboration or other arrangements that we establish may not be favorable to us. Furthermore, technologies to which we gain access may prove ineffective, become obsolete, or unsafe or our partners may prove difficult to work with or less skilled than we originally expected. In addition, any past collaborative successes are no indication of potential future success.

We may also pursue strategic acquisitions to further our development and commercialization efforts, which could result in our incurring significant out of pocket costs as well as expending management time and those of other employees. To achieve the anticipated benefits of an acquisition, we must integrate the acquired company's business, technology and employees in an efficient and effective manner. The successful combination of companies in a rapidly changing biodefense industry may be more difficult to accomplish than in other industries. The combination of two companies requires, among other things, integration of the companies' respective technologies and research and development efforts. We cannot assure you that any integration will be accomplished smoothly or successfully. The difficulties of integration are increased by the need to coordinate geographically separated organizations and address possible differences in corporate cultures and management philosophies. The integration of certain operations will require the dedication of management resources that may temporarily distract attention from the day-to-day operations of the combined companies. The business of the combined companies may also be disrupted by employee retention uncertainty and lack of focus during integration. The inability of management to integrate successfully the operations of the two companies, in particular, to integrate and retain key scientific personnel, or the inability to integrate successfully two technology platforms, could have a material adverse effect on our business, results of operations and financial condition.

Necessary Reliance on the Animal Rule in Conducting Trials is Time-Consuming and Expensive.

As further described above under "Business—U.S. Government Regulatory Pathway—General", to obtain FDA approval for our biological warfare defense products under current FDA regulations, we are required to utilize animal model studies for efficacy and provide animal and human safety data under the "Animal Rule." For many of the biological and chemical threats, animal models are

not yet available, and as such we are developing, or will have to develop, appropriate animal models, which is a time-consuming and expensive research effort. Further, we may not be able to sufficiently demonstrate the animal correlation to the satisfaction of the FDA, as these corollaries are difficult to establish and are often unclear. The FDA may decide that our data are insufficient for approval and require additional preclinical, clinical or other studies, refuse to approve our products, or place restrictions on our ability to commercialize those products. Further, other countries 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 we will be able to make a submission for marketing approval in foreign countries based on such animal data.

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

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

We cannot assure you that any drugs resulting from our research and development efforts will become commercially available. Even if we succeed in developing and commercializing our product candidates, we 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 additional clinical trials, changes to or re-approvals of our manufacturing facilities or a change in labeling if we or others identify side effects or manufacturing problems after a product is on the market. This could harm sales of the affected products and could increase the cost and expenses of commercializing and marketing them. It could also lead to the suspension or revocation of regulatory approval for the products.

We and our CMOs will also be required to comply with the applicable FDA current Good Manufacturing Practice, or cGMP, regulations. These regulations include requirements relating to quality control and quality assurance as well as the corresponding maintenance of records and documentation. Manufacturing facilities are subject to inspection by the FDA. These facilities must be approved to supply licensed products to the commercial marketplace. We and our contract manufacturers may not be able to comply with the applicable cGMP requirements and other FDA regulatory requirements. Should we or our contract manufacturers fail to comply, we could be subject to fines or other sanctions or could be precluded from marketing our products. In particular, we engaged a new contract manufacturer, Fujifilm Diosynth Biotechnologies to replace Avecia to manufacture bulk drug substance for SparVax™ and engaged in a technology transfer process to this new contract manufacturer. Fujifilm Diosynth Biotechnologies had not manufactured this bulk drug substance before. There can be no assurance that this new contract manufacturer will be able to manufacture sufficient amounts of cGMP quality bulk drug substance necessary for us to meet our obligations to the U.S. government

We may fail to fully realize the potential of Valortim® and of our co-development arrangement with BMS, our partner in the development of Valortim®, which would have an adverse effect upon our business. Only two Phase I clinical trials for Valortim® have been completed at this point. As discussed in "—Risks Related to Our Dependence on U.S. Government Contracts" most of our immediately foreseeable future revenues are contingent upon grants and contracts from the U.S. government and we may not achieve sufficient revenues from these agreements to attain profitability.

Before we may begin selling any doses of Valortim®, we will need to conduct more comprehensive safety trials in a significantly larger group of human subjects. We will be required to expend a significant amount to finalize manufacturing capability through a contract manufacturer to provide material to conduct the pivotal safety and efficacy trials. If our contract manufacturer is unable to produce sufficient quantities at a reasonable cost, or has any other obstacles to production, then we will be unable to commence these required clinical trials and studies. Even after we expend sufficient funds to complete the development of Valortim® and if and when we enter into an agreement to supply Valortim® to the U.S. government, we will be required to share any and all profits from the sale of products with our partner in accordance with a pre-determined formula. Future government funding for Valortim® is unlikely in the near term. There can be no assurance we will be successful in obtaining additional financial support for this program.

We may become subject to product liability claims, which could reduce demand for our product candidates or 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 human clinical trials or sold commercially. We may become subject to a product liability suit if any product we 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 (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 we cannot be certain that any such protection will apply to our products or if applied what the scope of any such coverage will be." 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.

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

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

For the foreseeable future, we believe our main customer will be national governments, primarily the U.S. government. Substantially all of our revenues to date have been derived from grants and U.S. government contracts. There can be no assurances that existing government contracts will be renewed 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.

If the U.S. government makes significant contract awards to our competitors, rather than to us, for the supply to the U.S. emergency stockpile, our business will be harmed and it is unlikely that we will ultimately be able to supply that particular treatment or product to foreign governments or other third parties. Further, changes in government budgets and agendas, funding strategies, cost overruns in our programs, 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, government contracts that support the development and/or procurement of the biodefense products we are developing. For example, while RFP-BARDA-08-15 for an rPA-based anthrax vaccine for the SNS initially indicated that the government would make an award by September 26, 2008, the award was delayed multiple times and ultimately canceled in December 2009.

Funding is subject to Congressional appropriations generally made on an annual basis even for multi-year contracts. More generally, due to the ongoing economic downturn, the accompanying fall in tax revenues and the U.S. government's efforts to stabilize the economy, the U.S. government may be forced or choose further to reduce or delay spending in the biodefense field or eliminate funding of certain programs altogether, which could decrease the likelihood of future government contract awards or that the

government would procure products from us. Future funding levels for two of our key government customers, BARDA and DoD, 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 look to reduce the nation's budget deficit.

For example, due to DoD budget constraints and concerns about potential duration of protection with the current route of Protexia® administration, the DoD did not extend our September 2006 contract for Protexia®, which contract expired on December 31, 2010. As a result of DoD's decision not to continue funding Protexia® development, we closed down our Protexia®-related operations. We incurred wind-down costs in the fourth quarter of 2010 and approximately $0.5 million in 2011, for which we do not anticipate reimbursement by the government. We also wrote down the net book value of our Protexia® related assets recognizing approximately $4.6 million of impairment charges for the year ended December 31, 2010.

Further, BARDA has expressed concerns regarding our past performance and our ability to successfully complete the current objectives within the existing cost ceiling and schedules under our contract for the development of SparVax™. BARDA has requested that we submit a proposal to modify the existing activities under our current contract to reallocate funding to evaluate the safety and immunogenicity of vaccine manufactured from bulk drug substance produced at Fujifilm Diosynth Biotechnologies in a Phase II human clinical trial. These modifications may result in reduced funding of our activities by BARDA. Further, if we are unable to perform adequately under this contract, including meeting milestones within one month of their due dates, we may be at increased risk that BARDA will curtail our activities under, or terminate, that contract.

Our current development contract for Valortim® with NIAID expired January 31, 2012. While the Company has reached out to BARDA to explore potential future funding alternatives and submitted a proposal for additional funding under a BARDA BAA, future government funding is unlikely in the near term and remains uncertain. There can be no assurance we will be successful in obtaining additional financial support for this program.

U.S. government agencies have special contracting requirements that give them the ability to unilaterally control our contracts.

U.S. government contracts typically contain unilateral termination provisions for the government and are subject to audit and modification by the government at its sole discretion, which will subject us to additional risks. These risks include the ability of the U.S. government unilaterally to:

- suspend or prevent us for a set period of time from receiving new contracts or extending existing contracts based on violations or suspected violations of laws or regulations;
- terminate our contracts, including if funds become unavailable or are not provided to the applicable governmental agency;
- reduce the scope and value of our contracts 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;
- claim rights to products, including intellectual property, developed under the contract;
- change certain terms and conditions in our contracts; and
- cancel outstanding RFP solicitations (as was the case with RFP-BARDA-08-15) or BAAs.

The U.S. government will be able to terminate any of its contracts with us either for its convenience or if we default by failing 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. 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.

Due to the ongoing economic downturn, the accompanying decrease in tax revenues, and the U.S. government's efforts to stabilize the economy, the U.S. government may be forced or choose further to reduce or delay spending in the biodefense field or eliminate funding of certain programs altogether, which could decrease the likelihood of future government contract awards, the likelihood that the government will exercise its right to extend any of its existing contracts with us and/or the likelihood that the government would procure products from us.

The U.S. government's determination to award any contracts may be challenged by an interested party, such as another bidder, at the GAO or in federal court. 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 bidders and other interested parties may challenge the award of a government contract. If we are awarded a government contract, such challenges or protests could be filed even if there are not any valid legal grounds on which to base the protest. If any such protests are filed, the government agency may decide, and in certain circumstances will be statutorily required, to suspend our performance under the contract while such protests are being considered by the GAO or the applicable federal court, thus potentially delaying delivery of goods and services and payment. In addition, we could be forced to expend considerable funds to defend any potential award. If a protest is successful, the government may be ordered to terminate our contract and re-evaluate bids. The government could even be directed to award a potential contract to one of the other bidders.

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^{TM}. In March 2010 DHHS suspended performance under the modification pursuant to the automatic stay provisions of the FAR, 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. In October 2010 a losing bidder filed a successful protest with the small business administration claiming that SIGA did not qualify as a small business entitled to a contract award under RFP-BARDA-09-35 for a smallpox antiviral. When the government subsequently issued a contract to SIGA in May 2011 without the small business requirement, this same losing bidder filed a second protest, this time with the GAO. While this protest was withdrawn, in exchange for dropping the protest, the government agreed to removed an option from the contract permitting the government to purchase up to 12 million additional courses of therapy of ST-246 beyond the base purchase of 1.7 million courses of therapy.

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

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

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

- termination of contracts;
- forfeiture of profits;

- suspension of payments;
- fines; and
- suspension or prohibition from conducting business with the U.S. government.

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

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

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

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

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

- export and import control laws and regulations; and

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

Foreign governments typically also have laws and regulations governing contracts with their respective agencies. These foreign laws and regulations 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

The amount of revenue, if any, we realize from our profit split interest in ST-246 and related products is among other things, dependent on SIGA's ability to finish development and deliver ST-246 and related products to the U.S. and foreign governments.

SIGA's ability to deliver product to the SNS (and potential foreign government purchasers), and the timing and profitability thereof, is subject to a number of significant risks and uncertainties (certain of which are outlined in SIGA's filings with the SEC) as to which we have limited knowledge and no ability to control, mitigate or fully evaluate along with many of the risks related to drug development and commercialization set forth elsewhere in this "Risk Factors" Section. We have no first-hand knowledge of, and SIGA has not publicly disclosed, any information related to the potential margins or profitability of ST-246 and related products.

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

We do not have any of our own manufacturing facilities. We have therefore utilized, and intend to continue utilizing, third parties to manufacture, package and distribute our product candidates and key components of our product candidates. Any material disruption in manufacturing could cause a delay in our development programs and potential future sales. Furthermore, certain compounds, media, or other raw materials used to manufacture our drug candidates are available from any 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 our commercialization activities.

Finally, third-party manufacturers, suppliers and distributors, like most companies, have been adversely affected by the credit crisis and 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. It has, for example, become challenging for companies to secure debt capital to fund their operations as financial institutions have significantly curtailed their lending activities. 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 programs and potential future sales and jeopardize our ability to meet our obligations under our contracts with the government or other third parties.

We face, and likely will continue to face, competition from companies with greater financial, personnel and research and development resources. Our commercial opportunities will be reduced or eliminated if our competitors are more successful in the development and marketing of their products.

The biopharmaceutical industry is characterized by rapid and significant technological change. Our success will depend on our ability to develop and apply our technologies in the design and development of our product candidates and 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 are developing or may obtain FDA approval for products more rapidly. For example, the U.S. government selected a plague vaccine product candidate from a competitor for advanced development funding, causing us to wind down activities related to the development of our RypVax™ product candidate in 2010.

If we commence commercial sales of products, 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. Our 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.

While the regulatory climate for generic versions of biological products approved under a Biologics License Application (or a BLA) in the United States remains uncertain, and currently there is no formalized mechanism by which the FDA can approve a generic version of an approved biological product, Federal legislation has been introduced to establish a legal pathway for the approval of generic versions of approved biological products. If enacted, the legislation will impact the revenue projections for our products.

Even if we are 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. 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

Our commercial success will be affected significantly by 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.

The patent position of biotechnology firms generally is highly uncertain and involves 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 five 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 numerous 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 will depend significantly on our ability to operate without infringing the patents and proprietary rights of third parties. We are aware of one U.S. patent covering recombinant production of an antibody and a license may be required under such patent with respect to Valortim®, which is a monoclonal antibody and uses recombinant production technologies. Although the patent owner has granted licenses under such patent, we cannot provide any assurances that we will be able to obtain such a license or that the terms thereof will be reasonable. If we do not obtain such a license and if a legal action based on such patent was to be brought against us or our distributors, licensees or collaborators, we cannot provide any assurances that we or our distributors, licensees or collaborators would prevail or that we have sufficient funds or resources to defend such claims.

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 we cannot be certain that any such protection will apply to our products or if applied what the scope of any such coverage will be.

The U.S. Public Readiness Act was signed into law in December 2005 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 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 contracts with the U.S. government. It is also possible that these regulations could adversely affect our ability to sell our 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 Amex 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 Amex, a national securities exchange, which imposes continued listing requirements with respect to listed shares. In July 2010, we received a letter from the NYSE Amex, stating that we were not in compliance with the exchange's continued listing standards, specifically, Sections 1003(a)(i), (ii) and (iii) of the NYSE Amex Company Guide, because we had stockholders' equity of less than $6 million and continued to sustain losses from continuing operations.

On August 25, 2010, we submitted a plan to the NYSE Amex addressing how we intend to regain compliance with the continued listing standards by January 26, 2012, the end of the eighteen-month compliance period under NYSE Amex rules. The NYSE Amex has confirmed our understanding that we have regained compliance with the continuing listing standards at issue in the July 2010 letter. If, however, in the future we fail to satisfy the continued listing standards, such as, for example, the requirement that our shares not trade "for a substantial period of time at a low price per share" or that we not dispose of our principal operating assets or discontinue a substantial portion of our operations, among other requirements, the NYSE Amex may issue another non-compliance letter or initiate delisting proceedings.

If our securities are delisted from trading on the NYSE Amex and we are not able to list our securities on another exchange or to have them quoted on Nasdaq, our securities could be quoted on the OTC Bulletin Board or on the "pink sheets." 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 we expect will continue to be, subject to significant volatility. The value of our common stock may decline regardless of our operating performance or prospects. Factors affecting our market price include:

- our perceived prospects;
- 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 by us or our competitors;
- reaction to any acquisitions, 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 shareholders 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 shareholders.

In addition, as of December 31, 2011 we had outstanding options to purchase approximately 6.3 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 No. 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. We are obligated under the terms of the related registration rights agreement to keep these registration statements effective. 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, 2011, we had issued and outstanding additional warrants to purchase up to approximately 5.6 million shares of common stock.

The issuance or even the expected issuance of a large number of shares of our common stock upon 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 shareholders. 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 shareholders and depress the market price of our common stock.

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

We have not paid any dividends on our common stock in 2011, 2010, or 2009 and do not intend to declare any dividends in the foreseeable future. While subject to periodic review, our current policy is to retain all earnings, if any, primarily to finance our future growth. We make no assurances that we will ever pay 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 1.B. Unresolved Staff Comments.

Not applicable.

Item 2. Properties.

Our principal executive offices are located at One Park Place, Suite 450, Annapolis, MD 21401 and are comprised of approximately 21,900 square feet. The lease expires in 2017. We have also leased approximately 2,300 square feet of office space in Durham, North Carolina. This lease expires on December 31, 2012.

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

Item 3. Legal Proceedings.

Except as noted below, we are not a defendant in any legal proceedings.

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

In September 2011, the Court issued an opinion in the case finding that SIGA had breached certain contractual obligations to us and upholding our claims of promissory estoppel. The Court awarded us the right to receive 50% of all net profits related to the sale of ST-246 and related products for 10 years following initial commercial sale of the drug once SIGA earns $40 million in net profits from the sale of ST-246 and related products. The Court also awarded us one-third of our reasonable attorney's fees and expert witness fees.

SIGA has stated it intends to appeal this decision to the Delaware Supreme Court. We can provide no assurances that SIGA will not prevail on its appeal and that the Delaware Supreme Court will not overturn the trial court’s decision awarding us a 10 year 50% net profit interest in sales of ST-246 and related products.

Item 4. Mine Safety Disclosures

Not applicable

PART II

Item 5. Market for Registrant's Common Equity and Related Stockholder Matters

Market

Our common stock trades on the NYSE Amex under the symbol "PIP". The following table sets forth the range of high and low trading prices of our common stock on the NYSE Amex for the past two years during the fiscal periods shown.

Fiscal Year 2011	High	Low
4th Quarter Ended December 31	$ 1.88	$ 1.07
3rd Quarter Ended September 30	$ 3.35	$ 1.74
2nd Quarter Ended June 30	$ 4.08	$ 2.41
1st Quarter Ended March 31	$ 4.58	$ 3.01

Fiscal Year 2010	High	Low
4th Quarter Ended December 31	$ 4.96	$ 1.28
3rd Quarter Ended September 30	$ 1.77	$ 1.26
2nd Quarter Ended June 30	$ 1.80	$ 1.25
1st Quarter Ended March 31	$ 2.54	$ 1.40

Holders

As of February 29, 2012 in accordance with our transfer agent records, we had 78 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.

Dividends

We have not paid any dividends on our common stock in 2011 and 2010 and do not intend to declare any dividends in the foreseeable future. While subject to periodic review, the current policy of our Board of Directors is to retain all earnings, if any, primarily to finance our future growth. We make no assurances that we will ever pay 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 the Board of Directors will consider.

Purchases of Equity Securities

The table below sets forth acquisitions of our common stock by the Company and its affiliated purchasers during the quarter ended December 31, 2011.

Period	Total Number of Shares Purchased (1)	Average Price Paid Per Share (2)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares That May Yet Be Purchased Under the Plans or Programs
October 1, 2011 - October 31, 2011	-	$ -	-	-
November 1, 2011 - November 30, 2011	-	-	-	-
December 1, 2011 - December 31, 2011	7,863	1.27	-	-
Total	7,863	$ 1.27	-	-

(1) Includes 7,863 shares surrendered to the Company by an employee to satisfy individual tax withholding obligations upon vesting of previously issued shares of restricted stock.

(2) Average price paid per share reflects the closing price of PharmAthene's common stock on the trading day on which the shares were surrendered by the employee stockholder to satisfy individual tax withholding obligations.

Item 6. Selected Financial Data

Not applicable.

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, 2011 and 2010 as well as our financial positions at December 31, 2011 and 2010, 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 on Form 10-K, 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 biodefense company engaged in the development and commercialization of next generation medical countermeasures against biological and chemical threats. Our biodefense portfolio as of December 31, 2011 included the following product candidates:

- SparVax™, a second generation recombinant protective antigen ("rPA") anthrax vaccine,
- Valortim®, a fully human monoclonal antibody for the prevention and treatment of anthrax infection, and
- rBChE (recombinant butyrylcholinesterase), countermeasures for nerve agent poisoning by organophosphorous compounds, including nerve gases and pesticides.

In addition, we were awarded by the Delaware Court of Chancery in September 2011 the right to receive 50% of all net profits related to the sale of SIGA Technologies, Inc. ST-246 and related products for 10 years following initial commercial sale of the drug once SIGA earns $40 million in net profits from sales of ST-246 and related products. SIGA has appealed this decision to the Delaware Supreme Court, which appeal is still pending.

Critical Accounting Policies

Revenue Recognition

We generate our revenue from three different types of contractual arrangements: cost-plus-fee contracts, fixed price contracts and cost reimbursable grants. Costs consist primarily of actual internal labor charges and external subcontractor costs incurred plus an allocation of applied fringe benefits, overhead and general and administrative expenses as defined in the contract.

Revenues on cost-plus-fee contracts are 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 under the "milestone method of revenue recognition". Otherwise, we compute fee income 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, substantive milestone payments, including milestone payments for fees, contained in research and development arrangements under our contracts with the U.S. government 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: (1) 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, (2) it relates solely to past performance, and (3) 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.

For fixed price contracts with the U.S. government without substantive milestones as described above, revenue is recognized under the percentage-of-completion method in accordance with the applicable accounting guidance for long term contracts. The percentage-of completion method recognizes income as the contract progresses; recognition of revenue and profits 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. 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. Estimating is an integral part of our business activities, and we may have to revise estimates on contracts continually as the work progresses.

We analyze each cost reimbursable grant to determine whether we should report such reimbursements as revenue or as an offset to our expenses incurred. In 2011 and 2010, we recorded approximately $0.7 million and $2.9 million, respectively, of costs reimbursed by the government as an offset to research and development expenses.

Our revenue-generating contracts may include multiple elements, including one or more of up-front license fees, research payments, and milestone payments. In these situations, we allocate the total contract price to the multiple elements based on their relative fair values and recognize revenue for each element according to its characteristics. As revenue is recognized in accordance with the terms of the contracts, related amounts are recorded as unbilled accounts receivable, the primary component of "Other receivables (including unbilled receivables)" in our consolidated balance sheets. As specific contract invoices are generated and sent to our customers, invoiced amounts are transferred out of unbilled accounts receivable and into billed accounts receivable. Invoicing frequency and payment terms for cost-plus-fee contracts with our customers are defined within each contract, but are typically monthly invoicing with 30 to 60 day payment cycles.

At December 31, 2011, unbilled accounts receivable were $3.0 million.

Research and Development Expenses

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

Share-Based Payments

We have a long-term incentive plan (the "LTIP") under which options to purchase shares of our common stock may be granted to employees, consultants and 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 and non-employee directors pursuant to FASB ASC Topic 718, Compensation – Stock Compensation, which requires that compensation cost resulting from share-based payment transactions be recognized in the financial statements at fair value over the service period. 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-Merton 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 estimated term of the option and the estimated future volatility of the option. The estimated term and estimated future volatility of the options require our judgment.

Intangible Assets and Goodwill

In 2010 all of the patents associated with Protexia® were written down by approximately $0.8 million associated with the decision to shut down the Canadian operation upon the expiration of the Protexia® contract with the DoD. There were no patents capitalized as of December 31, 2011 and December 31, 2010.

Goodwill represents the excess of purchase price over the fair value of net identifiable assets associated with acquisitions. We review the market value of the company as set by its stock price and the number of outstanding shares as of the end of the year. If that value is greater than the net book value of the company's equity, no further analysis is needed. Changes in the Company's 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.

Results of Operations

Revenue

We recognized revenue of $24.3 million and $21.0 million during the years ended December 31, 2011 and 2010, respectively.

Our revenue was derived primarily from contracts with the U.S. government for the development of SparVax™ and Valortim®. Our revenue for the year ended December 31, 2011 changed from 2010 primarily due to the following:

- Under our contract for the development of SparVax™, we recognized approximately $19.3 million and $11.7 million of revenue for the years ended December 31, 2011 and 2010, respectively. The increase in revenue for the SparVax™ program during 2011 is attributable to additional work in preparation and execution of the scale up campaign at our U.S.-based SparVax™ bulk drug substance manufacturer as well as an increase in our billing rate to the customer. Additional activities related to the establishment of analytical and stability-indicating assays for characterization of the product. Of the revenue amounts set forth above, $3.5 million in 2011 and $1.8 million in 2010 represent substantive milestone payments that were tied to our successful achievement of certain technical activities.

- Under the September 2007 contract for the advanced development of Valortim®, we recognized approximately $3.7 million and $3.0 million of revenue for the years ended December 31, 2011 and 2010, respectively. Revenue in 2011 reflects both clinical and non clinical work following the release of the FDA partial clinical hold in December 2010. Final patient dosing in clinical trial was completed in April 2011 and the in-life portion of the trial ended in the third quarter 2011. Revenue in 2010 was largely attributable to reimbursement of costs related to clinical and non-clinical studies, including work in connection with the investigation related to the partial clinical hold and certain manufacturing-related activities. The current government contract funding from NIAID of Valortim® development activities ended January 31, 2012. BARDA has told us that it does not believe it will have funds to support further work on Valortim® during the government's fiscal year ending September 30, 2012, and thus future government funding for Valortim® is unlikely in the near term and remains uncertain. There can be no assurance we will be successful in obtaining additional financial support for this program.

- Under the September 2006 contract for the advanced development of Protexia®, we recognized approximately $ 5.8 million in the year ended December 31, 2010, of which $0.7 million in 2010 represent substantive milestone payments that were tied to our successful achievement of certain technical activities. The decline in revenue is attributed to completion of major development activities for this program in past years. We generated additional revenue of $0.7 million under the $5.7 million August 2011 fixed price contract with the DoD for the development of the AES for rBChE, our nerve agent medical countermeasure, in the year ended December 31, 2011.

Research and Development Expenses

Our research and development expenses were approximately $21.2 million and $20.9 million for the years ended December 31, 2011 and 2010, respectively. For both periods, these expenses resulted from research activities required for the development of the Valortim® and SparVax™ programs as well as to a much lesser extent from activities related to Protexia® in the first quarter 2011. 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, 2011 and 2010 were net of cost reimbursements

under certain of our government grants of $0.7 million and $2.9 million, respectively. Included in the 2010 grants were $0.9 million in therapeutic discovery tax grants.

Research and development expenses for the years ended December 31, 2011 and 2010 were attributable to research programs as follows:

($ in millions)	Years ended December 31, 2011	2010
Anthrax therapeutic and vaccines	$ 18.8	$ 15.2
Chemical nerve agent protectants	0.6	4.7
Recombinant dual antigen plague vaccine	-	0.1
Internal research and development	1.8	0.9
Total research and development expenses	$ 21.2	$ 20.9

For the year ended December 31, 2011, research and development expenses increased $0.3 million from the prior year. This change was primarily due to the increased technical activity and the achievement of key technical milestones on our SparVax™ program and the completion of the Phase I Valortim® dose escalation clinical trial partially offset by a decrease in development expenses related to the clinical nerve agent protectants program as a result of the December 31, 2010 shut down of the Protexia® 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 facilities, utilities and other administrative overhead is also included in general and administrative expenses.

Expenses associated with general and administrative functions were approximately $14.3 million and $18.0 million for the years ended December 31, 2011 and 2010, respectively.

The decrease for the year ended December 31, 2011 from the prior year period was a result of a $3.0 million reduction in bad debt expense, a property loss insurance reimbursement of $1.4 million partially offset by an increase in non-cash stock compensation expenses as well as taxes and other expenses. The bad debt expenses in 2010 consisted primarily of provisions associated with an invoice to our U.S. government customer for the work at Avecia as well as the wind down of the third generation anthrax vaccine program.

Depreciation and Intangible Amortization (including impairment charges)

Depreciation and amortization expenses were approximately $0.5 million and $5.7 million for the years ended December 31, 2011 and 2010, respectively. These expenses are lower in 2011 primarily as a result of the impairment charge taken in December 2010 of $4.6 million with the closing of our Canadian operations.

Other Income (Expense)

Other income (expense) primarily consists of income on our investments, interest expense on our debt and other financial obligations, changes in market value of our derivative financial instruments, and foreign currency transaction gains or losses.

We incurred interest expense of approximately $0.1 million and $5.9 million for the years ended December 31, 2011 and 2010, respectively. Interest expense for 2011 primarily relate to the settlement with Avecia for termination of a subcontract agreement with that organization. Interest expense for 2010 relates primarily to interest on our then-outstanding convertible notes, including the amortization of the debt discount arising from the allocation of fair value to the warrants issued in connection with such notes. In November and December 2010, our outstanding 10% convertible notes were converted into shares of common stock (with one note being redeemed for cash).

Gain on sale of assets held for sale of $0.8 million was the result of the sale of land and buildings associated with our Canadian operations, which were closed in 2010.

The change in the fair value of our derivative instruments was a decrease of our liability of approximately $7.1 million for the year ended December 31, 2011 compared to an increase of our liability of approximately $5.5 million for the year ended December 31, 2010. The fair value of these derivative instruments is estimated using the Black-Scholes option pricing model. The decrease in fair value realized as of December 31, 2011 was primarily the result of the decrease in PharmAthene's stock price from $4.23 per share on December 31, 2010 to $1.27 per share on December 31, 2011.

Liquidity and Capital Resources

Overview

Our primary cash requirements for 2012 are to fund our operations (including our research and development programs) and support our general and administrative activities. Our future capital requirements will depend on many factors, including, but not limited to, timing, amount and profitability of sales of ST-246, if any; the progress of our research and development programs; the progress of pre-clinical and clinical testing; the time and cost involved in obtaining regulatory approval; the cost of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights; changes in our existing research relationships; competing technological and marketing developments; our ability to establish collaborative arrangements and to enter into licensing agreements and contractual arrangements with others; and any future change in our business strategy. These cash requirements could change materially as a result of shifts in our business and strategy.

During 2011 and the first quarter 2012, we implemented certain cost reduction activities that we believe will reduce our net operating cash needs for 2012 and 2013 significantly as compared to 2010 and 2011. As a result we currently anticipate that our current cash on hand and collection of accounts receivables at December 31, 2011 as well as cash to be collected from 2012 contract revenue under contracts currently in place will be sufficient to meet PharmAthene's ongoing expenses and capital requirements through 2012 and into year 2013.

Since our inception, we have not generated positive cash flows from operations. To bridge the gap between payments made to us under our 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 securities and convertible notes, proceeds from loans and other borrowings. For the foreseeable future, we will continue to need these types of financing vehicles and potentially others to help fund our future operating and capital requirements.

The renewed turmoil affecting the global financial system has resulted in extreme volatility in the capital markets and is threatening to once again tighten the credit markets. As a result, there can be no assurance that future funding will be available to us on reasonably acceptable terms, or at all. In addition, due to the U.S. government's continuing substantial efforts to stabilize the economy, the U.S. government may be forced or choose to reduce or delay spending in the biodefense field, which could decrease the likelihood of future government contract awards, the likelihood that the government will exercise its right to extend any of its existing contracts with us and/or the likelihood that the government would procure products from us.

We have incurred cumulative net losses and expect to incur additional losses in conducting further research and development activities. We do not have commercial products and, given the substantial costs relating to the development of pharmaceutical products, have relatively limited existing capital resources. Our plans with regard to these matters include continued development of our products as well as seeking additional funds to support our research and development efforts. Although we continue to pursue these plans, there is no assurance that we will be successful in obtaining sufficient future financing on commercially reasonable terms or at all or that we will be able to secure additional funding through government contracts and grants. Our consolidated financial

statements have been prepared on a basis which assumes that we will continue as a going concern and which contemplates the realization of assets and the satisfaction of liabilities and commitments in the normal course of business and do not include any adjustments that might result if the carrying amount of recorded assets and liabilities are not realized.

Sources and Uses of Cash

Cash, restricted cash and cash equivalents were approximately $11.3 million and $11.9 million at December 31, 2011 and 2010, respectively. The $0.6 million decrease at December 31, 2011 was primarily due to a combination of a loss from operations of $11.7 million, of which $3.0 million were noncash, substantially offset by net proceeds of $5.8 million from a registered direct public offering of common stock and warrants, as well as $1.8 million related to the sale of assets in Canada. In April, July and November 2010, we completed various public offerings of common stock and warrants. In November and December 2010, our outstanding 10% convertible notes were converted into shares of common stock (with one note being redeemed for cash).

Operating Activities

Net cash used in operating activities was approximately $7.8 million and $14.9 million for the years ended December 31, 2011 and 2010, respectively. In 2011, PharmAthene received an insurance recovery of $1.4 million, which has been recorded as an offset to operating expenses. Additionally, cash paid for interest in 2011 decreased to $0.0 million from $1.2 million paid out in 2010. Further, revenue increased by $3.3 million in 2011 as compared to 2010, primarily due to the achievement of milestones in 2011 resulting in the recognition of $3.5 million of revenue compared to $1.8 million in 2010.

Net cash used in operations during the year ended December 31, 2011 reflects our net loss of $3.8 million, adjusted upward for the change in market value of noncash derivative instruments of $7.1 million, the sale of the assets held for sale for a net gain of $0.8 million and depreciation of $0.5 million. This was additionally impacted by non-cash stock option expense of $2.6 million, a decrease in accounts receivable of $0.2 million, decreases in unbilled accounts receivable of $1.0 million, prepaid expenses and other current assets of $1.3 million, and accounts payable of $1.7 million and an increase in accrued expenses of $0.1 million. The change in market value of the derivative instruments primarily relates to the change in our stock price from $4.23 per share at December 31, 2010 to $1.27 per share at December 31, 2011.

Cash used in operations during the year ended December 31, 2010 reflects our net loss of $34.8 million, adjusted downward for the change in market value of derivative instruments of $5.5 million, non-cash interest of $4.7 million, bad debt expense of $2.9 million, and non-cash stock compensation expenses of $2.5 million, decreases in unbilled accounts receivable of $4.6 million and in accounts receivable of $1.8 million, increases in depreciation and amortization of $5.7 million including an impairment charge of $4.6 million primarily associated with the write down of Canadian assets, and an increase in accounts payable of $1.2 million, and adjusted upward by a decrease in accrued expenses and other liabilities of $8.5 million. The combined decrease in accounts payable and accrued expenses and other liabilities of $7.3 million resulted from the use of proceeds from the 2010 financings to partially pay down these balances.

Investing Activities

The net cash provided by investing activities was approximately $1.7 million for the year ended December 31, 2011 as compared to net cash provided of approximately $2.8 million for the year ended December 31, 2010. Investing activities in 2011 consisted primarily of the sale of the Canadian farm operations. Investing activities for 2010 related primarily to liquidating investments to meet working capital requirements.

Financing Activities

Net cash provided by financing activities was $5.8 million for the year ended December 31, 2011 as compared to $21.5 million provided by financing activities for the year ended December 31, 2010.

In June 2011, we completed a public offering of 1,857,143 shares of common stock at a $3.50 per share inclusive of warrants to purchase up to an additional 371,423 shares of common stock. The warrants are exercisable immediately at an exercise price of $3.50 per share until the fifth anniversary of the date of issuance, which is June 15, 2016. We received gross proceeds of approximately $6.5 million and net proceeds of approximately $5.8 million in connection with this transaction.

Net cash provided from financing activities for the year ended December 31, 2010 was the result of the proceeds from the issuance of common stock and warrants in April and July 2010 and common stock in November 2010. In addition net cash provided from financing activities for the year ended December 31, 2010 includes the issuance of a $100,000 letter of credit in favor of a vendor.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements.

Contractual Obligations

The following are contractual commitments at December 31, 2011 primarily associated with leases and research and development arrangements:

Contractual Obligations(1)	Total	Less than 1 Year	1-3 Years	3-5 Years	More than 5 years
Operating facility leases	$ 4,394,300	$ 797,500	$ 1,572,100	$ 1,667,800	$ 356,900
Research and development agreements	$ 12,690,200	$ 11,817,500	$ 872,700	-	-
Total contractual obligations	$ 17,084,500	$ 12,615,000	$ 2,444,800	$ 1,667,800	$ 356,900

(1) This table does not include any royalty payments relating to future sales of products subject to license agreements the Company has entered into in relation to its in-licensed technology, as the timing and likelihood of such payments are not known.

Item 7A. Quantitative and Qualitative Disclosures about Market Risks

Our exposure to market risk is currently confined to our cash and cash equivalents and short-term investments. We currently do not hedge interest rate exposure or foreign currency exchange exposure, and the movement of foreign currency exchange rates could have an adverse or positive impact on our results of operations. We have not used derivative financial instruments for speculation or trading purposes. Because of the short-term maturities of our cash and cash equivalents, we do not believe that an increase in market rates would have a significant impact on the realized value of our investments.

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

Disclosure Controls and Procedures

Our management has evaluated, with the participation of our Chief Executive Officer and our Chief Financial Officer, the effectiveness of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as of December 31, 2011. Based upon this evaluation, our management has concluded that our disclosure controls and procedures were effective as of December 31, 2011.

Management's Annual Report on Internal Control Over Financial Reporting

The management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting for the Company. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) promulgated under the Securities Exchange Act of 1934.

The Company's management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2011. In making this assessment, the Company's management used the criteria set forth by the Committee of Sponsored Organization of the Treadway Commission ("COSO") in "Internal Control-Integrated Framework." Based on this assessment, management concluded that as of December 31, 2011, the Company's internal control over financial reporting is effective at the reasonable assurance level.

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 8, 2012 appears on page F-3 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 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.

The information required by this Item 10 is incorporated by reference to our definitive proxy statement or an amendment to our Annual Report on Form 10-K to be filed within 120 days of our fiscal year end.

Item 11. Executive Compensation.

The information required by this Item 11 is incorporated by reference to our definitive proxy statement or an amendment to our Annual Report on Form 10-K to be filed within 120 days of our fiscal year end.

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

The information required by this Item 12 is incorporated by reference to our definitive proxy statement or an amendment to our Annual Report on Form 10-K to be filed within 120 days of our fiscal year end.

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

The information required by this Item 13 is incorporated by reference to our definitive proxy statement or an amendment to our Annual Report on Form 10-K to be filed within 120 days of our fiscal year end.

Item 14. Principal Accountant Fees and Services.

The information required by this Item 14 is incorporated by reference to our definitive proxy statement or an amendment to our Annual Report on Form 10-K to be filed within 120 days of our fiscal year end.

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	Agreement and Plan of Merger, dated January 19, 2007, by and among Healthcare Acquisition Corp., PAI Acquisition Corp., and PharmAthene, Inc. (2)
2.2	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)
2.3	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)
3.1	Amended and Restated Certificate of Incorporation of the Company, as amended. (17)
3.2	By-laws, as amended. (7)
4.1	Specimen Unit Certificate. (1)
4.2	Specimen Common Stock Certificate. (4)
4.3	Amendment to Unit Purchase Option by and between the Registrant and Maxim Partners, LLC dated January 28, 2007. (3)
4.4	Form of Warrant in connection with Securities Purchase Agreement dated as of March 23, 2009. (15)
4.5	Form of Warrant in connection with Note and Warrant Purchase Agreement, as amended as of July 28, 2009. (14)

4.6 Form of Warrant in connection with Securities Purchase Agreement dated as of April 7, 2010. (21)

4.7 Form of Warrant in connection with Securities Purchase Agreement dated as of July 20, 2010. (22)

4.8 Form of Warrant in connection with Subscription Agreement dated as of June 10, 2011. (30)

10.4 Form of Registration Rights Agreement among the Registrant and the Initial Stockholders. (1)

10.9 Form of Registration Rights Agreement by and among Healthcare Acquisition Corp. and the former stockholders and note holders of PharmAthene, Inc. (2)

10.12 Amended and Restated 2007 Long-Term Incentive Compensation Plan. (8)

10.20 U.S. Army Space & Missile Defense Command—"Development and Licensure of Bioscavanger Increment II (Recombinant Drug Candidate)" Award/Contract No. W9113M-06-C-0189, dated September 22, 2006, by and between the Company and the U.S. Army Space & Missile Defense Command. (4) +

10.21 Cooperative Research and Development Agreement, dated September 12, 2006, by and between the Company and the U.S. Army Medical Research Institute of Infectious Diseases. (4) +

10.22 Center for Scientific Review, National Institute of Health, Research Project Cooperative Agreement, Notice of Grant Award No. 1 U01 NS058207-01, dated September 30, 2006, awarded to the Company. (4) +

10.23 Collaboration Agreement, dated November 29, 2004, by and between the Company and Medarex, Inc. (4) +

10.25 Services Agreement, dated March 2, 2007, by and between the Company and GTC Biotherapeutics, Inc. (4**)+**

10.27 Biopharmaceutical Development and Manufacturing Services Agreement, dated June 15, 2007, by and between the Company and Laureate Pharma, Inc. (4)+

10.28 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) +

10.28.2 Second Amendment to Office Lease, by and between the Company and Park Place Trust, dated September 16, 2008. (28)

10.30 Form of PharmAthene Inc. Executive Employment Agreement. (9) ++

10.30.1 Employment Agreement, dated April 18, 2008, by and between Eric Richman and the Company ++ (26)

10.30.3 Amendment, dated as of May 18, 2010, to Employment Agreement, dated as of April 18, 2008, by and between Eric I. Richman and the Company. ++ (25)

10.30.4 Employment Agreement, dated August 14, 2009, by and between Charles A. Reinhart III and the Company. ++ (28)

10.30.5 Employment Agreement, dated April 5, 2010, by and between Thomas Fuerst and the Company. ++ (28)

10.30.6 Form of Executive Restricted Stock Award Agreement.++ (29)

10.30.7 Form of Executive Stock Option Agreement. ++ (29)

10.30.8 Form of Director Stock Option Agreement. ++ (29)

10.30.9 Employment Agreement, dated June 30, 2008, by and between Jordan P. Karp and the Company.*, ++

10.30.10 Employment Agreement, dated February 7, 2012, by and between Linda Chang and the Company.*, ++

10.31 Form of PharmAthene Inc. Confidentiality and Non-Solicitation Agreement. (9)

10.32 Master Services Agreement, dated April 2, 2008, between PharmAthene UK Limited and Avecia Biologics Limited. (9) +

10.33 Master Service Agreement, dated December 15, 2004, between Avecia Limited and the Secretary of State for Defence, acting through the Defence Science and Technology Laboratory (DSTL). (10)+

10.34 Master Service Agreement, dated August 18, 2005, between Avecia Limited and DSTL. (10) +

10.35 Manufacturing Licence Agreement, dated June 20, 2006, between Avecia Limited and DSTL. (10) +

10.36.1 Amended and Restated Manufacturing and Marketing Licence Agreement between the Secretary of State for Defence as represented by the Defence Science and Technology Laboratory (Dstl) and PharmAthene UK Ltd. in respect of Recombinant [***] Vaccine, dated February 11, 2009. (13) +

10.37 Letter Agreement, dated March 20, 2008, between Avecia Biologics Limited and DSTL. (10)+

10.37.1 Amended and Restated Licence Agreement between the Secretary of State for Defence as represented by the Defence Science and Technology Laboratory (Dstl) and PharmAthene UK Ltd. in respect of Recombinant [***] Vaccine, dated February 5, 2009. (13) +

10.38 Contract Award by the National Institute of Allergy and Infectious Diseases (NIAID), dated September 25, 2008. (11)+

10.44 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) +

10.45 Amendments 1 through 13 to the NIH Prime Contract-Anthrax. (19) + , **

10.45.1 Modification (Amendment) 16 to the Contract with the National Institutes of Health for the Production and Testing of Anthrax Recombinant Protective Antigen (rPA) Vaccine (#N01-AI-30052). (18) +

10.45.2 Modification (Amendment) 18 to the Contract with the National Institutes of Health for the Production and Testing of Anthrax Recombinant Protective Antigen (rPA) Vaccine (HHSO100200900203C). (27) +

10.48 Form of Indemnification Agreement (12)

10.49 Form of Securities Purchase Agreement dated as of March 23, 2009 between the Company and the Purchasers party thereto. (15)

10.51 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)

10.52 Form of Registration Rights Agreement, dated as of July 28, 2009 by and among PharmAthene, Inc. and the investors signatories thereto. (14)

10.53 Technology Transfer and Development Services Subcontract, dated as of September 17, 2009, by and between Diosynth Biotechnologies Inc. and PharmAthene, Inc. (18) +

10.54	Variation and Settlement Agreement, dated as of June 17, 2009, by and among PharmAthene, Inc., PharmAthene UK Limited and Avecia Biologics Limited and affiliates. (16) +
10.55	Form of Securities Purchase Agreement, dated as of April 7, 2010, between PharmAthene and the Purchasers party thereto. (23)
10.56	Form of Securities Purchase Agreement, dated as of July 20, 2010, between PharmAthene and the Purchasers party thereto. (24)
10.57	Form of Subscription Agreement, dated as of June 10, 2011, between PharmAthene and the Investors party thereto. (30)
10.58	Agreement, dated December 5, 2011, between PharmAthene Canada, Inc. and Ferme Pillar Hill Enr., regarding the sale of real estate.*
21	Subsidiaries. (28)
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.*

---

(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) Incorporated by reference to the Current Report on Form 8-K filed by the Registrant on January 25, 2007.

(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) Incorporated by reference to the Current Report on Form 8-K filed by the Registrant on May 2, 2008.

(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 filed by the Registrant on August 14, 2008.

(10) Incorporated by reference to the corresponding exhibit to the Amendment to the Quarterly Report on Form 10-Q/A filed by the Registrant on August 19, 2008.

(11) Incorporated by reference to the corresponding exhibit to the Quarterly Report on Form 10-Q filed by the Registrant on November 14, 2008.

(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) Incorporated by reference to the corresponding exhibit to the Quarterly Report on Form 10-Q filed by the Registrant on May 15, 2009.

(14) Incorporated by reference to Amendment No. 1 to the Company's current report on Form 8-K filed on August 3, 2009.

(15) Incorporated by reference to Exhibits 10.1 and 10.2, respectively, to the Current Report on Form 8-K filed by the Registrant on March 27, 2009 (File No. 001-32587).

(16) Incorporated by reference to the Exhibit 10.52 to the Company's quarterly report on Form 10-Q filed on August 13, 2009.

(17) Incorporated by reference to the Company's current report on Form 8-K filed on November 4, 2009.

(18) Incorporated by reference to the Exhibits 10.45.1 and 10.52, respectively, to the Company's quarterly report on Form 10-Q filed on November 13, 2009.

(19) Incorporated by reference to the corresponding exhibit to the Company's annual report on Form 10-K for the year ended December 31, 2008.

(20) Incorporated by reference to Exhibit 10.44 to the Quarterly Report on Form 10-Q filed by the Registrant on November 14, 2008.

(21) Incorporated by reference to Exhibit 10.2 to the Company's current report on Form 8-K filed on April 8, 2010.

(22) Incorporated by reference to Exhibit 10.2 to the Company's current report on Form 8-K filed on July 20, 2010.

(23) Incorporated by reference to Exhibit 10.1 to the Company's current report on Form 8-K filed on April 8, 2010.

(24) Incorporated by reference to Exhibit 10.1 to the Company's current report on Form 8-K filed on July 20, 2010.

(25) Incorporated by reference to Exhibit 10.30.3 to the Company's current report on Form 8-K filed on May 24, 2010.

(26) Incorporated by reference to the Company's annual report on Form 10-K for the year ended December 31, 2009.

(27) Incorporated by reference to the Company's quarterly report on Form 10-Q for the quarter ended March 31, 2010.

(28) Incorporated by reference to the Company's annual report on Form 10-K for the year ended December 31, 2010.

(29) Incorporated by reference to the Company'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.

* Filed herewith.

** Amendments No. 2 and 5 to the NIH Prime Contract-Anthrax have been superseded in full by subsequent amendments filed herewith and are therefore omitted. Amendment No. 12 to the NIH Prime Contract-Anthrax and Amendment No. 8 to the NIH Prime Contract-Plague were never executed and are therefore omitted.

+ 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.

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 8th day of March, 2012.

PHARMATHENE, INC.

By: /s/ Eric I. Richman
Eric I. Richman
President & Chief Executive Officer

POWER OF ATTORNEY

BY THESE PRESENTS, each person whose signature appears below constitutes and appoints Eric I. Richman, Linda L. Chang, Thomas Fuerst, Ph.D., and Jordan P. Karp 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 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.

In accordance with the Exchange Act, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Eric I. Richman Eric I. Richman	Chief Executive Officer and Director (Principal Executive Officer)	March 8, 2012
/s/ Linda L. Chang Linda L. Chang	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	March 8, 2012
/s/ Mitchel Sayare Mitchel Sayare, Ph.D.	Chairman of the Board	March 8, 2012
/s/ John Gill John Gill	Director	March 8, 2012
/s/ Brian Markison Brian Markison	Director	March 8, 2012
/s/ Derace Schaffer Derace Schaffer, M.D.	Director	March 8, 2012

/s/ Joel McCleary		March 8, 2012
Joel McCleary	Director	
/s/ Jeffrey W. Runge		March 8, 2012
Jeffrey W. Runge, M.D.	Director	
/s/ Steven St. Peter,		March 8 , 2012
Steven St. Peter, M.D.	Director	

PHARMATHENE, INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

CONSOLIDATED FINANCIAL STATEMENTS

Board of Directors and Stockholders of

PharmAthene, Inc.

We have audited the accompanying consolidated balance sheets of PharmAthene, Inc. as of December 31, 2011 and 2010, and the related consolidated statements of operations, stockholders' equity and cash flows for each of the two years in the period ended December 31, 2011. 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, 2011 and 2010, and the consolidated results of its operations and its cash flows for each of the two years in the period ended December 31, 2011, 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, 2011, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 8, 2012 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Baltimore, Maryland

March 8, 2012

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

INTERNAL CONTROL OVER FINANCIAL REPORTING

Board of Directors and Stockholders of

PharmAthene, Inc.

We have audited PharmAthene Inc.'s internal control over financial reporting as of December 31, 2011, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (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 the accompanying "Management 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, 2011, 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, 2011 and 2010, and the related consolidated statements of

operations, stockholders' equity, and cash flows for each of the two years in the period ended December 31, 2011 and our report dated March 8, 2012 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Baltimore, Maryland

March 8, 2012

PHARMATHENE, INC.

CONSOLIDATED BALANCE SHEETS

	December 31, 2011	December 31, 2010
ASSETS		
Current assets:		
Cash and cash equivalents	$ 11,236,771	$ 11,785,327
Accounts receivable (billed)	4,874,632	5,367,130
Unbilled accounts receivable, net of allowance of $0 and $244,949 as of December 31, 2011 and 2010, respectively	3,021,208	3,976,260
Prepaid expenses and other current assets	380,395	1,354,912
Restricted cash	100,000	100,000
Assets held for sale	-	1,000,100
Total current assets	19,613,006	23,583,729
Property and equipment, net	788,666	1,178,416
Other long-term assets and deferred costs	53,384	88,447
Goodwill	2,348,453	2,348,453
Total assets	$ 22,803,509	$ 27,199,045
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 1,445,700	$ 3,128,203
Accrued expenses and other liabilities	3,169,642	3,035,284
Total current liabilities	4,615,342	6,163,487
Other long-term liabilities	449,709	461,858
Derivative instruments	1,886,652	8,362,995
Total liabilities	6,951,703	14,988,340
Stockholders' equity:		
Common stock, $0.0001 par value; 100,000,000 shares authorized; 48,236,172 and 46,238,244 shares issued and outstanding at December 31, 2011 and 2010, respectively.	4,824	4,624
Additional paid-in-capital	208,525,917	200,847,468
Accumulated other comprehensive income	1,010,522	1,250,497
Accumulated deficit	(193,689,457)	(189,891,884)
Total stockholders' equity	15,851,806	12,210,705
Total liabilities and stockholders' equity	$ 22,803,509	$ 27,199,045

See the accompanying notes to the consolidated financial statements.

PHARMATHENE, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

	Year ended December 31,	
	2011	**2010**
Contract revenue	$ 24,266,274	$ 20,993,605
	24,266,274	20,993,605
Operating expenses:		
Research and development	21,219,853	20,875,536
General and administrative	14,311,079	18,015,761
Depreciation and amortization (including $4,635,489 impairment charges in 2010)	461,073	5,655,865
Total operating expenses	35,992,005	44,547,162
Loss from operations	(11,725,731)	(23,553,557)
Other income (expenses):		
Interest income	16,660	6,955
Interest expense	(54,573)	(5,936,480)
Gain on sale of assets held for sale	781,760	-
Other income (expense)	39,328	91,355
Change in market value of derivative instruments	7,144,983	(5,457,550)
Total other income (expenses)	7,928,158	(11,295,720)
Net loss	$ (3,797,573)	$ (34,849,277)
Basic and diluted net loss per share	$ (0.08)	$ (1.08)
Weighted average shares used in calculation of basic and diluted net loss per share	47,331,763	32,309,621

See the accompanying notes to the consolidated financial statements.

PHARMATHENE, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

	Common Stock					
	Shares	Amount	Additional Paid-In Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Stockholders' Equity
Balance as of 12/31/2009	28,130,284	$ 2,813	$ 157,004,037	$ 1,188,156	$ (155,042,607)	$ 3,152,399
Net Loss	-	-	-	-	(34,849,277)	(34,849,277)
Net unrealized (losses) on short-term investments	-	-	-	(6,483)	-	(6,483)
Foreign currency translation adjustments	-	-	-	68,824	-	68,824
Comprehensive income (loss)	-	-	-	-	-	(34,786,936)
Issuance of common stock, net issuance costs	9,397,382	940	19,471,084	-	-	19,472,024
Exercise of stock purchase warrants	14,537	1	2,698	-	-	2,699
Share-based compensation - stock options	-	-	2,292,479	-	-	2,292,479
Shares issued upon exercise of stock options	22,316	2	56,206	-	-	56,208
Employee vesting of restricted shares, net	84,742	9	191,486	-	-	191,495
Conversion of July 2009 convertible debt	8,588,983	859	21,829,478	-	-	21,830,337
Balance as of 12/31/2010	46,238,244	$ 4,624	$ 200,847,468	$ 1,250,497	$ (189,891,884)	$ 12,210,705
Net Loss	-	-	-	-	(3,797,573)	(3,797,573)
Foreign currency translation adjustments	-	-	-	(239,975)	-	(239,975)
Comprehensive income (loss)	-	-	-	-	-	(4,037,548)
Issuance of common stock, net issuance costs	1,857,143	186	5,068,542	-	-	5,068,728
Share-based compensation - stock options	-	-	2,251,501	-	-	2,251,501
Shares issued upon exercise of stock options	44,464	4	118,305	-	-	118,309
Employee vesting of restricted shares, net	96,321	10	240,101	-	-	240,111
Balance as of 12/31/2011	48,236,172	$ 4,824	$ 208,525,917	$ 1,010,522	$ (193,689,457)	$ 15,851,806

See the accompanying notes to the consolidated financial statements.

PHARMATHENE, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year ended December 31,	
	2011	**2010**
Operating activities		
Net loss	$ (3,797,573)	$ (34,849,277)
Adjustments to reconcile net loss to net cash used in operating activities:		
Bad debt (recovery) expense	(40,524)	2,935,063
Change in market value of derivative instruments	(7,144,983)	5,457,550
Gain on the sale of assets held for sale	(781,760)	-
Depreciation and amortization	461,073	1,020,376
Impairment of assets held for sale	-	4,635,489
Share-based compensation expense	2,565,961	2,513,159
Non cash interest expense on debt	-	4,653,633
Changes in operating assets and liabilities:		
Accounts receivable	208,048	1,830,221
Unbilled accounts receivable	987,408	4,606,418
Prepaid expenses and other current assets	1,293,850	(399,270)
Accounts payable	(1,682,461)	1,245,975
Accrued expenses and other liabilities	122,408	(8,513,914)
Net cash used in operating activities	(7,808,553)	(14,864,577)
Investing activities		
Purchases of property and equipment	(71,439)	(374,581)
Proceeds from the disposal of assets held for sale	1,758,960	-
Proceeds from sales of short-term investments	-	3,130,588
Net cash provided by investing activities	1,687,521	2,756,007
Financing activities		
Payments of debt obligations	-	(11,439)
Change in restricted cash requirements	-	(100,000)
Net proceeds from issuance of common stock and warrants	5,781,328	21,571,891
Net cash provided by financing activities	5,781,328	21,460,452
Effects of exchange rates on cash	(208,852)	(240,122)
(Decrease) increase in cash and cash equivalents	(548,556)	9,111,760
Cash and cash equivalents, at beginning of year	11,785,327	2,673,567
Cash and cash equivalents, at end of year	$ 11,236,771	$ 11,785,327
Supplemental disclosure of cash flow information		
Cash paid for interest	$ 54,573	$ 1,234,142
Cash paid for income taxes	$ 10,630	$ -

See the accompanying notes to the consolidated financial statements.

PharmAthene, Inc.

Notes to Consolidated Financial Statements

As of and For the Year Ended December 31, 2011

Note 1 - Organization and Business

PharmAthene, Inc. (“PharmAthene” ,the “Company”, “we”, ”us” or “our”) is incorporated under the laws of the State of Delaware and is a biopharmaceutical company focused on developing biodefense countermeasure applications. We are subject to those risks associated with any biopharmaceutical company that has substantial expenditures for research and development. There can be no assurance that our research and development projects will be successful, that products developed will obtain necessary regulatory approval, or that any approved product will be commercially viable. 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.

Historically, we have performed under government contracts and grants and raised funds from investors (including additional debt and equity issued in 2009, 2010 and 2011) to sustain our operations. Our sources of funds include existing government grants and contracts. We may also elect to raise additional capital through debt and or equity to strengthen our financial position.

Note 2 - Summary of Significant Accounting Policies

Basis of Presentation

Our consolidated financial statements include the accounts of PharmAthene, Inc. and its wholly-owned subsidiaries, PharmAthene Canada, Inc, and PharmAthene UK Limited. 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. We currently operate in one business segment. Certain prior period amounts have been reclassified to conform with current period presentation.

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles in the United States 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. Actual results could differ from those estimates.

Foreign Currency Translation

The functional currency of our wholly owned foreign subsidiaries located in Canada and the United Kingdom is their local currency. Assets and liabilities of our foreign subsidiaries 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. Transaction gains or losses are included in the determination of net gain or loss, which was an approximate $0.1 million loss and an approximately $0.1 million gain for the years ending December 31, 2011 and 2010, respectively.

Comprehensive Loss and Accumulated Other Comprehensive Income

Comprehensive loss includes the total of our net loss and all other changes in equity other than transactions with owners, including (i) changes in equity for cumulative translation adjustments resulting from the consolidation of foreign subsidiaries as the financial statements of the subsidiaries located outside of the United States are accounted for using the local currency as the functional currency, and (ii) unrealized gains and losses on short term available-for-sale investments.

Accumulated Other Comprehensive Income consists of the following:

	Foreign Currency Translation	Unrealized Gains (Losses) on Investments	Accumulated Other Comprehensive Income
Balance as of December 31, 2009	$ 1,181,673	$ 6,483	$ 1,188,156
2010 other comprehensive income	68,824	(6,483)	62,341
Balance as of December 31,2010	$ 1,250,497	$ -	$ 1,250,497
2011 other comprehensive income	(239,975)	-	(239,975)
Balance as of December 31,2011	$ 1,010,522	$ -	$ 1,010,522

Cash and Cash Equivalents

Cash and cash equivalents, are stated at market value. We consider all highly liquid investments with original maturities of three months or less to be cash equivalents. Interest income earned on cash and cash equivalents and short-term investments was approximately $17,000 and $7,000 in 2011 and 2010, respectively.

Restricted Cash and Letter of Credit

As of December 31, 2011 and 2010 we had $0.1 million in restricted cash associated with a letter of credit to support our corporate credit card program.

Significant Customers and Accounts Receivable

Our primary customers are the U.S. Department of Defense (the “DoD”), Chemical Biological Medical Systems (“CBMS”), the National Institute of Allergy and Infectious Diseases (“NIAID”), the Biomedical Advanced Research and Development Authority (“BARDA”), and the National Institute of Health (“NIH”).

As of December 31, 2011 and 2010, the Company’s trade receivable balances were comprised solely of receivables from these customers. Unbilled accounts receivable totaling $3.0 million and $4.0 million as of December 31, 2011 and 2010, respectively, relate to the contracts with these same customers.

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, the impairment to be recognized is measured by the amount by which the carrying amount of assets exceeds the fair value of the assets. We have realized an impairment of certain assets in the fourth quarter of 2010 associated with the closing of our Canadian operations upon the expiration of the Protexia® contract with the DoD. We recorded an impairment charge of approximately $4.6 million included in depreciation and amortization expense in our 2010 consolidated statement of operations. In 2010 the remaining assets in Canada were reclassified as assets held for sale consisting of land and buildings of approximately $0.5 million and $0.5 million respectively. These assets were sold in the fourth quarter 2011 with a recognized gain of approximately $0.8 million.

Concentration of Credit Risk

Financial instruments that potentially subject us to concentrations of credit risk are primarily cash, restricted cash and cash equivalents, and billed and unbilled accounts receivable. We maintain our cash, restricted cash and cash equivalents in the form of money market accounts and overnight deposits with financial institutions that we believe are credit worthy.

Fair Value of Financial Instruments

Our financial instruments primarily include cash, restricted cash and cash equivalents, accounts receivable, other current assets, accounts payable, accrued and other liabilities and derivative instruments. Due to the short-term nature of the cash and cash equivalents, accounts receivable (billed and unbilled), other current assets, accounts payable and accrued and other liabilities (including derivative instruments), the carrying amounts of these assets and liabilities approximate their fair value.

Intangible Assets and Goodwill

In 2010 all of the patents associated with Protexia® were written down by approximately $0.8 million associated with the decision to shut down the Canadian operation upon the expiration of the Protexia® contract with the DoD. There were no patents capitalized as of December 31, 2011 and December 31, 2010.

Goodwill represents the excess of purchase price over the fair value of net identifiable assets associated with acquisitions. We review the market value of the company as set by our stock price and the number of outstanding shares as of the end of the year. If that value is greater than the net book value of the Company's equity, no further analysis is needed. Changes in the Company's 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.

Revenue Recognition

We generate our revenue from different types of contractual arrangements: cost-plus-fee contracts, cost reimbursable grants and fixed price contracts. Costs consist primarily of actual internal labor charges and external sub-contractor costs incurred plus an allocation of fringe benefits, overhead and general and administrative expenses as defined in the contract.

Revenues on cost-plus-fee contracts are 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, pursuant to the terms of the cost-plus fee contract, 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: (1) 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, (2) it relates solely to past performance, and (3) 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.

For fixed price contracts without substantive milestones as described above, revenue is recognized on the percentage-of-completion method in accordance with the applicable accounting guidance for long term contracts. The percentage-of completion method recognizes income as the contract progresses; recognition of revenue and profits 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. 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. Estimating is an integral part of our business activities, and there may be a necessity to revise estimates on contracts continually as the work progresses. As a result, amounts invoiced may differ from revenue recognized. Amounts invoiced to customers in excess of revenue recognized are reflected on the balance sheet as deferred revenue, a component of accrued expenses and other liabilities. We had recorded approximately $0.5 million and $0.0 million as deferred revenue as of December 31, 2011 and 2010, respectively.

As revenue is recognized in accordance with the terms of the contracts, related amounts are recorded as unbilled accounts receivable in our consolidated balance sheets. As specific contract invoices are generated and sent to our customers in accordance with a contract, invoiced amounts are transferred out of unbilled accounts receivable and into billed accounts receivable. Invoicing frequency and payment terms for cost-plus-fee contracts with our customers are defined within each contract, but are typically monthly invoicing with 30-60 day payment cycles.

We analyze each cost reimbursable grant to determine whether we should report such reimbursements as revenue or as an offset to our expenses incurred. For the years ended December 31, 2011 and 2010, we recorded approximately $0.7 million and $2.9 million, respectively, of costs reimbursed by the government as an offset to research and development expenses. Included in the 2010 grants was approximately $0.9 million in therapeutic discovery tax grants which was offset against research and development expense in 2010.

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.

Research and Development

Research and development costs are expensed as incurred; advance payments are deferred and expensed as performance occurs. Research and development costs include salaries, facilities expense, overhead expenses, material and supplies, pre-clinical expense, clinical trials and related clinical manufacturing expenses, stock-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 under our stock compensation plans. The fair value of restricted stock grants is determined based on the quoted market price of our common stock. Share-based compensation cost for stock options is determined at the grant date using an option pricing model. We have estimated the fair value of each stock option award using the Black-Scholes option pricing model. The Black-Scholes model considers, among other factors, the expected life of the award and the expected volatility of the Company's 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 restricted stock grants is determined based on the closing price of our common stock on the NYSE Amex on the award date and is ratably recognized as expense over the requisite service period. Employee share-based compensation expense is calculated based on awards ultimately expected to vest and has been reduced for estimated forfeitures.

Share-based compensation expense for 2011 and 2010, respectively, was:

	Year ended December 31,	
	2011	**2010**
Research and development	$ 754,554	$ 1,008,368
General and administrative	1,811,407	1,504,791
Total share-based compensation expense	$ 2,565,961	$ 2,513,159

During 2011, we granted 1,934,566 options to employees, non-employee directors and consultants, and made restricted stock grants of 145,000 shares. At December 31, 2011, we had total unrecognized stock based compensation expense related to unvested awards of options and restricted shares of approximately $4.0 million that we expect to recognize as expense over the next four years.

Income Taxes

We account for income taxes using the asset and liability method. Under this method, deferred tax assets and liabilities are recorded for the estimated future tax consequences attributable to differences between the financial statement carrying amounts of assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect of a tax rate change on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date. We record valuation allowances to reduce net deferred tax assets to the amount considered more likely than not to be realized. Changes in estimates of future taxable income can materially change the amount of such valuation allowances. As of December 31, 2011, we had recognized a valuation allowance to the full extent of our net deferred tax assets since the likelihood of realization of the benefit does not meet the more likely than not threshold.

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.

Basic and Diluted Net 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. A total of approximately 12.0 million and 10.7 million potential dilutive shares have been excluded in the calculation of diluted net loss per share in 2011 and 2010, respectively, because their inclusion would be anti-dilutive.

Recent Accounting Pronouncements

In October 2009, the Financial Accounting Standards Board, or the FASB, issued Accounting Standards Update 2009-13, *"Revenue Recognition (Topic 605) Multiple-Deliverable Revenue Arrangements, a consensus of the FASB Emerging Issues Task Force,"* or ASU 2009-13. ASU 2009-13 amends existing accounting guidance for separating consideration in multiple-deliverable arrangements. ASU 2009-13 establishes a selling price hierarchy for determining the selling price of a deliverable. The selling price used for each deliverable will be based on vendor-specific objective evidence if available, third party evidence if vendor-specific evidence is not available, or the estimated selling price if neither vendor-specific evidence nor third-party evidence is available. ASU 2009-13 eliminates the residual method of allocation and requires that consideration be allocated at the inception of the arrangement to all deliverables using the "relative selling price method." The relative selling price method allocates any discount in the arrangement proportionately to each deliverable on the basis of each deliverable's selling price. ASU 2009-13 requires that a vendor determine its best estimate of selling price in a manner that is consistent with that used to determine the price to sell the deliverable on a stand-alone basis. ASU 2009-13 is effective prospectively for revenue arrangements entered into or materially modified in fiscal years beginning on or after June 15, 2010, with earlier adoption permitted. We adopted ASU 2009-13 on January 1, 2011. The adoption of ASU 2009-13 did not have any material effect on our results of operation, financial position or cash flows.

In April 2010, the FASB issued Accounting Standards Update 2010-17, *"Revenue Recognition—Milestone Method (Topic 605) Milestone Method of Revenue Recognition, a consensus of the FASB Emerging Issues Task Force"* or ASU 2010-17. ASU 2010-17 provides guidance on the criteria that should be met for determining whether the milestone method of revenue recognition is appropriate. A vendor can recognize consideration that is contingent upon achievement of a milestone in its entirety as revenue in the period in which the milestone is achieved only if the milestone meets all criteria to be considered substantive. For the milestone to be considered substantive, the considerations earned by achieving the milestone should meet all of the following criteria: (i) be commensurate with either the vendor's performance to achieve the milestone or the enhancement of the value of the item delivered as a result of a specific outcome resulting from the vendor's performance to achieve the milestone, (ii) relate solely to past performance, and (iii) be reasonable relative to all deliverables and payment terms in the arrangement. An individual milestone may not be bifurcated and an arrangement may include more than one milestone. Accordingly, an arrangement may contain both substantive and non-substantive milestones. ASU 2010-17 is effective prospectively for milestones achieved in fiscal years, and interim periods within those years, beginning on or after June 15, 2010, with earlier adoption permitted. We adopted ASU 2010-17 on January 1, 2011. The adoption of ASU 2010-17 did not have any material effect on our results of operation, financial position or cash flows.

In June 2011, the FASB issued ASU 2011-05, *Comprehensive Income (Topic 220): Presentation of Comprehensive Income* (ASU 2011-05). This guidance is intended to increase the prominence of other comprehensive income in financial statements by presenting it in either a single statement or two-statement approach. ASU 2011-05 is effective for the Company beginning January 1, 2012. The adoption of ASU 2011-05 will not have a material effect on the Company's results of operation, financial position or cash flows.

In September 2011, the FASB issued ASU 2011-08, *Intangibles-Goodwill and Other (Topic 350)* (ASU 2011-08). Previous guidance required an entity to test goodwill for impairment, on at least an annual basis, by comparing the fair value of a reporting unit with its carrying amount, including goodwill. If the fair value of a reporting unit is less than its carrying amount, then a second step of the test must be performed to measure the amount of the impairment loss, if any. Under the amendments in ASU 2011-08, an entity is not required to calculate the fair value of a reporting unit unless the entity determines that it is more likely than not that its fair value is less than its carrying amount. The provisions of ASU 2011-08 become effective January 1, 2012. We do not expect the adoption of ASU 2011-08 to have a material effect on our results of operation, financial position or cash flows.

Note 3 - Exit Activities

In the fourth quarter 2010, we closed our production facility in Canada in conjunction with the completion of the Protexia® contract. In conjunction with the closure, we recorded an impairment charge of $4.6 million and leaving a remaining value of $1.0 million in Assets Held for Sale at December 31, 2010. We sold these assets in the fourth quarter of 2011 for approximately $1.8 million.

Note 4 - Fair Value Measurements

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.

We have segregated our financial assets and liabilities that are measured at fair value into the most appropriate level within the fair value hierarchy based on the inputs used to determine the fair value at the measurement date in the table below. We have no non-financial assets and liabilities that are measured at fair value at December 31, 2011.

	As of December 31, 2011			
	Level 1	**Level 2**	**Level 3**	**Balance**
Liabilities				
Derivatives	$ -	$ -	$ 1,886,652	$ 1,886,652

	As of December 31, 2010			
	Level 1	**Level 2**	**Level 3**	**Balance**

Liabilities				
Derivatives	$ -	$ -	$ 8,362,995	$ 8,362,995

The following table sets forth a summary of changes in the fair value of our Level 3 liabilities for the years ended December 31, 2011 and 2010:

Description	Balance as of December 31, 2010	New Liabilities	Unrealized (Gains)	Balance as of December 31, 2011
Stock purchase warrants	$ 8,362,995	$ 668,640	$ (7,144,983)	$ 1,886,652

Description	Balance as of December 31, 2009	New Liabilities	Unrealized Losses	Balance as of December 31, 2010
Stock purchase warrants	$ 835,299	$ 2,070,146	$ 5,457,550	$ 8,362,995

The gains on the derivative instruments are classified in other income (expenses) as the change in market value of derivative instruments in our consolidated statements of operations. The fair value of our stock purchase warrants and conversion option 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.

Note 5 - Property and Equipment

Property and equipment consisted of the following:

	December 31, 2011	December 31, 2010
Leasehold improvements	$ 758,126	$ 758,126
Furniture and office equipment	234,018	192,943
Computer and other equipment	1,409,580	1,379,216
	2,401,724	2,330,285
Less accumulated depreciation	(1,613,058)	(1,151,869)
Property and equipment, net	$ 788,666	$ 1,178,416

Depreciation expense for the years ended December 31, 2011 and 2010 was $0.5 million and $0.9 million, respectively. The Company recorded an impairment charge in 2010 of approximately $3.8 million associated with the closing of the Canadian operation upon the expiration of the Protexia® contract that is included within depreciation and amortization expense in the consolidated statement of operations. Land of approximately $0.5 million and building and leasehold improvements of approximately $0.5 million were reclassified as assets held for sale as part of the impairment associated with the closing of the Canadian operation in the fourth quarter of 2010. These assets were sold in the fourth quarter 2011.

Note 6 – Intangible Assets

In conjunction with our decision to close our Canadian operation upon the expiration of the Protexia® contract with the DoD, we wrote off the remaining value of patents in the fourth quarter of 2010 of approximately $0.8 million. This charge is included in depreciation and amortization in the accompanying 2010 consolidated statement of operations. There was no carrying value for capitalized patents as of December 31, 2011 and December 31, 2010.

Note 7 - Accrued Expenses and Other Liabilities

Accrued expenses and other liabilities consisted of the following:

	December 31,	
	2011	2010
Accrued development expenses	$ 1,479,105	$ 1,384,922
Accrued professional services	423,756	791,697
Accrued employee payroll and related expenses	752,469	778,718
Deferred Revenue	514,312	-
Other	-	79,947
Accrued expenses and other liabilities	$ 3,169,642	$ 3,035,284

Note 8 - Debt

Convertible Notes

In July 2009, we issued approximately $19.3 million of convertible notes ("Convertible Notes") and stock purchase warrants to note investors in a private placement.

In November 2010, holders of Convertible Notes in the aggregate principal amount (plus accrued interest) of approximately $17.0 million converted their notes into approximately 6.7 million shares of common stock (at the stated conversion price of $2.54 per share) pursuant to an early conversion offer we made to all holders. During the fourth quarter of 2010, we expensed approximately $1.1 million related to the early conversion offer. After we issued a redemption (call) notice in November 2010, holders of additional Convertible Notes in the aggregate principal amount (plus accrued interest) of approximately $4.8 million converted their notes into approximately 1.9 million shares. A Convertible Note with a principal amount (plus accrued interest) of approximately $11,000 was not converted: We paid the holder of that note approximately $11,000 in cash to satisfy our obligations under such note on the redemption date. As a result of these actions, none of the Convertible Notes remained outstanding as of December 31, 2010.

We incurred approximately $5.8 million of interest expense related to the Convertible Notes in 2010.

Note 9 - Commitments and Contingencies

Leases

We lease our offices in the United States under a 10 year operating lease, which commenced on May 1, 2007. We also lease offices in North Carolina with the lease term expiring in December 2012. Remaining annual minimum payments for these two leases are as follows:

2012	$	797,500
2013	$	774,400
2014	$	797,700
2015	$	821,600
2016	$	846,200
2017	$	356,900

For each of the years ended December 31, 2011 and 2010 total rent expense under operating lease agreements approximated $0.8 million and $1.0 million, respectively.

License Agreements

In connection with an acquisition in March 2005, we acquired a license agreement for the rights to certain technologies. This agreement included an option to license product processing technology necessary to perform development of Protexia® as required under our government contract with the DoD. We executed a new licensing agreement with a development company in 2007 which resulted in a license to all technology provided under the original agreement including the necessary purification technology previously included in an option and access to additional information and technology deemed to be essential for development of Protexia® and performance under the DoD contract.

In 2006 we licensed certain patent rights from a research company. The license agreement required a $50,000 up-front payment, provides for a sublicense fee of 20% and provides for milestone payments of $25,000 upon the granting of a U.S. patent, $200,000 upon the initiation of certain studies or trials, and $250,000 upon Biologic License Application approval. 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. No sublicense fee or milestone payments were incurred in 2011 or 2010.

In 2006 we entered into a research and licensing agreement allowing for the licensing of certain patent rights from a research company. The agreement includes research expense reimbursement payments and certain 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. No research expense reimbursement payments or milestone payments were incurred in 2011 or 2010.

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 ("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 and plague vaccine programs as required under the Company's government contracts with the NIAID. Upon commercialization, the license agreements require that PharmAthene 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.

SIGA Litigation

In December 2006, we filed a complaint against SIGA Technologies, Inc. ("SIGA") in the Delaware Court of Chancery. The complaint alleged, among other things, that we have the right to license exclusively development and marketing rights for SIGA's drug candidate, 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.

In September 2011, the Court issued an opinion in the case finding that SIGA had breached certain contractual obligations to us and upholding our claims of promissory estoppel. The Court awarded us the right to receive 50% of all net profits related to the sale of ST-246 and related products for 10 years following initial commercial sale of the drug once SIGA earns $40 million in net profits from the sale of ST-246 and related products. The Court also awarded us one-third of our reasonable attorney's fees and expert witness fees.

SIGA has stated it intends to appeal this decision to the Delaware Supreme Court. We can provide no assurances that SIGA will not prevail on its appeal and that the Delaware Supreme Court will not overturn the trial court's decision awarding us a 10 year 50% net profit in sales of ST-246 and related products.

Government Contracting

Payments to the Company on cost-plus-fee contracts are provisional and are subject to adjustment upon audit by the Defense Contract Audit Agency. In our opinion, adjustments that may result from audits are not expected to have a material effect on the our financial position, results of operations, or cash flows.

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 shares underlying the Convertible Notes and related warrants, which registration statements have been declared effective. We are obligated to maintain the registration statements effective until the date when all shares underlying the Convertible Notes and related warrants (and any other securities issued or issuable with respect to in exchange for such shares) have been sold.

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, 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 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 would be approximate $0.2 million for each month until the failure is cured.

Note 10 - Stockholders' Equity

Common Stock

In April 2010, we completed a public offering of 1,666,668 shares of our common stock at $1.50 per share and warrants to purchase an aggregate of 500,000 shares of our common stock at an exercise price of $1.89 per share, generating gross proceeds of approximately $2.5 million. The warrants became exercisable on October 13, 2010 and expire on October 13, 2015. Placement fees of approximately $175,000 and legal and other fees of approximately $140,000 were incurred in connection with this transaction.

In July 2010, we completed a public offering of 2,785,714 shares of our common stock at $1.40 per share and warrants to purchase an aggregate of 1,323,214 shares of our common stock at an exercise price of $1.63 per share, generating gross proceeds of approximately $3.9 million. The warrants become exercisable on January 23, 2011 and expire on January 23, 2017. Placement fees of approximately $260,000 and legal and other fees of approximately $145,000 were incurred in connection with this transaction.

In November 2010, we completed an underwritten public offering of 4,945,000 shares of our common stock at a price to the public of $3.50 per share, generating gross proceeds of approximately $17.3 million. We incurred offering expenses of approximately $1.0 million and legal and other fees of approximately $0.4 million in connection with this transaction.

In June 2011, we completed a public offering of 1,857,143 shares of common stock at a $3.50 per share inclusive of warrants to purchase up to an additional 371,423 shares of common stock. The warrants are exercisable immediately at an exercise price of $3.50 per share until the fifth anniversary of the date of issuance which is June 15, 2016. The warrants are classified as derivative instruments because they include net settlement provisions. We received gross proceeds of approximately $6.5 million and net proceeds of approximately $5.1 million for stock and $0.7 million for derivative instruments.

Long-Term Incentive Plan

In 2007, the Company's stockholders approved the 2007 Long Term Incentive Plan (the "2007 Plan") which provides for the granting of incentive and non-qualified stock options, stock appreciation rights, performance units, restricted common 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, the Company's shareholders 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 will increase automatically in each year, beginning in 2009 and continuing through 2015, according to certain limits set forth in the 2007 Plan. At December 31, 2011, there are approximately 7.1 million shares approved for issuance under the 2007 plan, of which approximately 0.2 million shares are available to be issued. 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 tables summarize the activity of the 2007 Plan for options:

	Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term
Options			
Outstanding January 1, 2010	4,913,366	$ 3.88	8.1
Granted	2,722,131	2.50	
Exercised	(22,316)	2.56	
Forfeited	(2,273,768)	3.89	
Outstanding, December 31, 2010	5,339,413	3.18	8.3
Granted	1,934,566	1.71	
Exercised	(44,464)	2.66	
Forfeited	(936,533)	3.07	
Outstanding, December 31, 2011	6,292,982	$ 2.74	8.0

	Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term
Exercisable, December 31, 2011	2,940,672	$ 3.41	6.7
Vested and expected to vest, December 31, 2011	5,890,707	$ 2.78	7.9

The aggregate intrinsic value is calculated as the difference between (i) the closing price of the common stock at December 31, 2011 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. The aggregate intrinsic value of options outstanding and exercisable was approximately $5,000 as of December 31, 2011.

At December 31, 2011, total compensation costs for unvested stock option awards outstanding approximated $3.9 million and will be recognized as stock compensation expense over the next four years.

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

The weighted–average grant date fair value for options granted in 2011 and 2010 approximated $1.17 and $1.88, respectively. The fair value for the 2011 and 2010 awards were estimated at the date of grant using the Black-Scholes option-pricing model using the following assumptions:

	December 31,	
	2011	**2010**
Weighted-average volatility	83%	87%
Risk-free rate	0.79% - 2.79%	0.28% - 3.2%
Expected annual dividend yield	-	-
Expected weighted-average life, in years	5.9	6.0

The valuation assumptions were determined as follows:

- Weighted average volatility: We determine expected volatility by using our historical volatility weighted 50% and the average historical volatility from comparable public companies with an expected term consistent with our weighted 50%.

- Risk-free interest rate: The yield on zero-coupon U.S. Treasury securities for a period that is commensurate with the expected term of the award.

- Expected annual dividend yield: The estimate for annual dividends is zero because we have not historically paid a dividend and do not intend to do so in the foreseeable future.

- Expected life: The expected term of the awards represents the period of time that the awards are expected to be outstanding. The Company estimated the expected term using the “simplified-method” as it does not have sufficient historical exercise data to provide a reasonable estimate.

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

	Shares	**Weighted-Average Grant Date Fair Value**
Restricted Shares		
Outstanding January 1, 2010	305,316	$ 3.36
Granted	35,000	$ 2.67
Vested	(101,899)	$ 3.29
Forfeited or expired	(127,286)	$ 3.95

Outstanding, December 31, 2010	111,131	$	2.92
Granted	145,000	$	1.43
Vested	(123,066)	$	2.59
Forfeited or expired	(9,168)	$	2.46
Outstanding, December 31, 2011	123,897	$	1.53

At December 31, 2011, total compensation costs for unvested Restricted Stock awards approximated $0.1 million and will be recognized over three years.

Warrants

At December 31, 2010, we had warrants outstanding to purchase 5,202,121 shares of our common stock (of which 1,323,214 were not exercisable until January 2011) as follows;

Number of Common Shares Underlying Warrants	Exercise Price	Expiration Date
705,354(1)	$ 3.00	September 2014
2,572,775	2.50	January 2015
500,000(1)	1.89	October 2015
1,323,214(1)	1.63	January 2017
100,778	3.97	March 2017

(1) The warrants to purchase the shares are accounted for as derivative liabilities. The fair value of these liabilities (see note 4) is remeasured at the end of every reporting period and the change in fair value is reported in the consolidate statements of operation as other income (expense).

The above warrants remained outstanding as of December 31, 2011. Also, in connection with the June 2011 public offering of 1,857,143 shares of common stock, we issued warrants to purchase up to an additional 371,423 shares of common stock at an exercisable price of $3.50 per share. The warrants were immediately exercisable upon issuance and expire June 2016. These warrants are classified as derivative liabilities.

Note 11 - Income Taxes

The actual income tax provision (benefit) differs from the expected income tax provision (benefit) computed at the federal statutory rate as follows:

	December 31,	
	2011	**2010**
Statutory federal tax benefit	$ (1,291,175)	$ (11,848,754)
State income tax, net of federal benefit	(232,489)	(1,284,265)
Other permanent differences	22,101	607,981
Foreign rate differential	(50,173)	2,492,478
Write-off of expired/forfeited options and conversion of notes	391,826	3,071,189
Canada transfer pricing and expiring attributes	(8,965,832)	-
Expiration (Reversal of Expiration) of Net Operating Losses	(4,745,271)	5,053,927
Other	732,322	309,840
Subtotal	(14,138,691)	(1,597,604)
Increase in valuation allowance	14,138,691	1,597,604
Income tax provision (benefit)	$ -	$ -

Our deferred tax assets (liabilities) consisted of the following:

	December 31, 2011	December 31, 2010
Deferred tax assets:		
Net operating loss carry forwards	$ 62,873,360	$ 36,611,209
Fixed assets/intangibles	49,389	3,357,098
Research and development credits/loss carryforwards	3,291,651	3,073,821
Stock based compensation	2,611,770	2,180,069
Accrued expenses and other	1,368,036	2,970,309
Total deferred tax assets	70,194,206	48,192,506
Deferred tax liabilities:		
Intercompany bad debt	(6,209,959)	-
Total deferred tax liabilities	(6,209,959)	-
Net deferred tax assets	63,984,247	48,192,506
Less: valuation allowance	(63,984,247)	(48,192,506)
Net deferred tax assets	$ -	$ -

For the years ended December 31, 2011 and 2010, we increased the valuation allowance to fully reserve for the value of deferred tax assets. Due to continued operating losses, there is no indication that it is more likely than not that we will be able to utilize our deferred tax assets. As such, there have been no recoveries of previously recorded valuation allowances in 2011 or 2010.

The U.S. federal net operating loss carryforwards of approximately $138.9 million will begin to expire in various years beginning in 2021. Under Section 382 of the U.S. Internal Revenue Code, the Company's net operating loss carryforwards may be limited due to underlying ownership of its common stock. The Canadian federal net operating loss carry forwards of approximately $12.5 million will begin to expire in 2030. The Quebec Provincial net operating loss carry forwards of approximately $12.5 million will begin to expire in 2030. The UK net operating loss carry forwards of approximately $19.3 million have an unlimited life.

In assessing the realizability of deferred tax assets, we consider whether it is more likely than not that some or all of the deferred tax asset will not be realized. The ultimate realization of the deferred tax asset is dependent upon the generation of future taxable income during the periods in which the net operating loss carryforwards are available. We consider projected future taxable income, the scheduled reversal of deferred tax liabilities and available tax planning strategies that can be implemented by us in making this assessment on a jurisdiction-by-jurisdiction basis. Based upon these factors, we have established a full valuation allowance against the net deferred tax asset in 2011, consistent with 2010.

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.

EMPLOYMENT AGREEMENT

This **EMPLOYMENT AGREEMENT** (this "**Agreement**") is made and entered into this June 30, 2008 by and between Jordan Karp (the "**Executive**") and **PharmAthene, Inc.**, a Delaware corporation (the "**Company**").

WITNESSETH:

WHEREAS, the Company desires to employ the Executive and the Executive desires to accept employment with the Company subject to the terms and conditions herein agreed upon:

NOW, **THEREFORE**, in consideration of the foregoing and of the mutual covenants and obligations hereinafter set forth, the parties hereto hereby agree as follows:

1. **Employment; Term**. The Company hereby agrees to employ the Executive and the Executive hereby accepts employment with the Company upon the terms and conditions hereinafter set forth for the period commencing on June 30, 2008 (the "**Effective Date**") and ending on the first anniversary of such date. The term of this Agreement shall be automatically extended for an additional year on each anniversary of the date hereof unless written notice of non-extension is provided by either party to the other party at least 90 days prior to such anniversary. The period of the Executive's employment under this Agreement, as it may be terminated or extended from time to time as provided herein is referred to as the "**Employment Period**."

2. **Position and Duties**.

a. **Position and Duties Generally**. The Executive shall be employed by the Company in the position of Senior Vice President, General Counsel and shall faithfully render such executive, managerial, administrative and other services as are customarily associated with and incident to such position and as the Company may from time to time reasonably require consistent with such position. The Executive shall report to the President and CEO, David P. Wright.

b. **Other Positions**. The Executive shall hold such other positions and executive offices with the Company and/or of any of the Company's subsidiaries or affiliates as may from time to time be authorized by the Board. The Executive shall not be entitled to any compensation other than the compensation provided for herein for serving during the Employment Period in any other office or position of the Company or any of its subsidiaries or affiliates, unless the Compensation Committee specifically approves such additional compensation.

c. **Devotion to Employment**. Except for vacation time taken in accordance with the Company's vacation policy in effect from time to time and in accordance with the terms of this Agreement and for absences due to temporary illness, the Executive shall be a full-time employee of the Company and shall devote full time, attention and efforts during the Employment Period to the business of the Company and the duties required of him in his position. During the Employment Period, the Executive shall not be engaged in any other business activity which, in the reasonable judgment of the Board or its designee, conflicts with the duties of the Executive hereunder, whether or not such activity is pursued for gain, profit or other pecuniary advantage.

3. Compensation; Reimbursement.

a. **Base Salary**. For the Executive's services, the Company shall pay to the Executive an annual base salary of not less than $275,000.00 per annum, payable in equal periodic installments according to the Company's customary payroll practices, but no less frequently than monthly. The Executive's base salary shall be subject to review annually by the Compensation Committee and shall be subject to increase at the option and sole discretion of the Compensation Committee.

b. **Bonus**. The Executive shall be eligible to receive at the sole discretion of the Compensation Committee, an annual cash bonus of up to an additional 30% of the Executive's base salary. In addition, the Executive may be eligible for additional bonuses at the option and sole discretion of the Compensation Committee based upon the achievement of certain pre-determined performance milestones.

c. **Benefits Generally**.

i. In addition to the salary and cash bonus described above, the Executive shall be entitled during the Employment Period to participate in such employee benefit plans and programs of the Company, and shall be entitled to such other fringe benefits, as are from time to time made available by the Company generally to employees of the level, position, tenure, salary, age, health and other qualifications of the Executive including, without limitation, medical, dental and vision insurance coverage for the Executive and the Executive's dependents, disability, death benefit and life insurance and pension plans.

ii. Without limiting the generality of the foregoing, the Executive shall be eligible for such awards, if any, including stock and stock options under the Company's 2007 Long-Term Incentive Plan or such other plan as the Company may from time to time put into effect as shall be granted to the Executive by the Compensation Committee or other appropriate designee of the Board acting in its sole discretion.

In addition, no later than July 2, 2008, the Company will grant to Executive pursuant to the Company's 2007 Long-Term Incentive Plan ("2007 Plan") a non-qualified stock option to purchase 200,000 shares of common stock, par value $0.001 per share, of the Company at an exercise price per share equal to the Fair Market Value (as defined in the 2007 Plan), with a term of ten (10) years from the Date of Grant (as defined in the 2007 Plan) and the following vesting schedule: 25% on the first anniversary of the Date of Grant and 25% on each of the next three anniversaries.

iii. The Executive acknowledges and agrees that the Company does not guarantee the adoption or continuance of any particular employee benefit plan and participation by the Executive in any such plan or program shall be subject to the rules and regulations applicable thereto.

d. **Vacation**. The Executive shall be entitled to 20 days of vacation in each calendar year.

e. **Expenses**. The Company shall reimburse the Executive in accordance with the practices in effect from time to time for other officers or staff personnel of the Company for all reasonable and necessary business and travel expenses and other disbursements incurred by the Executive for or on behalf of the Company in the performance of the Executive's duties hereunder, upon presentation by the Executive to the Company of appropriate supporting documentation.

f. **Perquisites**. The Executive shall be entitled to those perquisites as the Company shall make available from time to time to other executive officers of the Company, which shall include, without limitation, the costs associated with the use of an automobile in an amount not to exceed $1,000 per month and the costs for Executive's use of a cellular telephone and personal digital assistant to the extent such equipment is used for business purposes.

4. **Death; Disability**. In the event that the Executive dies or is incapacitated or disabled by accident, sickness or otherwise, so as to render the Executive mentally or physically incapable of performing the services required to be performed by the Executive under this Agreement for a period that would entitle the Executive to qualify for long-term disability benefits under the Company's then-current long-term disability insurance program or, in the absence of such a program, for a period of 120 consecutive days or longer (such condition being herein referred to as a "**Disability**") then (i) in the case of the Executive's death, the Executive's employment shall be deemed to terminate on the date of the Executive's death and (ii) in the case of a Disability, the Company, at its option, may terminate the employment of the Executive under this Agreement immediately upon giving the Executive notice to that effect. The determination to terminate the Executive in the event of a Disability shall be made by the Board or the Board's designee. In the case of a Disability, until the Company shall have terminated the Executive's employment hereunder in accordance with the foregoing, the Executive shall be entitled to receive compensation provided for herein notwithstanding any such physical or mental disability.

5. **Termination For Cause**. The Company may terminate the employment of the Executive hereunder at any time during the Employment Period for "cause" (such termination being herein referred to as a "**Termination for Cause**") by giving the Executive notice of such termination, which termination shall be effective on the date of such notice or such later date as may be specified by the Company. For purposes of this Agreement, "**Cause**" means (i) the Executive's willful and substantial misconduct that is materially injurious to the Company and is either repeated after written notice from the Company specifying the misconduct or is continuing and not corrected within 20 days after written notice form the Company specifying the misconduct, (ii) the Executive's repeated neglect of duties or failure to act which can reasonably be expected to affect materially and adversely the business or affairs of the Company after written notice from the Company specifying the neglect or failure to act, (iii) the Executive's material breach of any of the agreements contained in Sections 11, 12, 13 hereof or of any of the Company's policies, (iv) the commission by the Executive of any material fraudulent act with respect to the business and affairs of the Company, (v) the Executive's conviction of (or plea of nolo contendere to) a crime constituting a felony, (vi) demonstrable gross negligence, or (vii) habitual insobriety or use of illegal drugs by the Executive while performing the Executive's duties under this Agreement which adversely affects the Executives performance of the Executive's duties under this Agreement.

6. **Termination Without Cause**. The Company may terminate the employment of the Executive hereunder at any time without "cause" or fail to extend this Agreement pursuant to the terms hereof (such termination being herein referred to as "**Termination Without Cause**") by giving the Executive notice of such termination, upon the giving of which such termination shall take effect not later than 30 days from the date such notice is given.

7. **Voluntary Termination by Executive**. Any termination of the employment of the Executive by the Executive otherwise than as a result of death or Disability or for Good Reason (as defined below) (such termination being herein referred to as "**Voluntary Termination**") will be deemed to be effective immediately upon such termination.

8. **Termination by Executive for Good Reason**. Any termination of the employment of the Executive by the Executive for Good Reason which shall be deemed to be equivalent to a Termination without Cause. For purposes of this Agreement "**Good Reason**" means (i) any material breach by the Company of any of its obligations under this Agreement, (ii) any material reduction in the Executive's duties, authority or responsibilities without the Executive's consent, (iii) any assignment to the Executive of duties or responsibilities materially inconsistent with the Executive's position and duties contained in this Agreement without the Executive's consent, (iv) a relocation of the Company's principal executive offices or the Company determination to require the Executive to be based anywhere other than within 25 miles of the location at which the Executive on the date hereof performs the Executive's duties; (v) the taking of any action by the Company which would deprive the Executive of any material benefit plan (including, without limitation, any medical, dental, disability or life insurance); or (vi) the failure by the Company to obtain the specific assumption of this Agreement by any successor or assignee of the Company or any person acquiring substantially all of the Company's assets; provided, however, that the Executive may not terminate the Employment Period for Good Reason unless the Executive first provides the Company with written notice specifying the Good Reason and providing the Company with 20 days in which to remedy the stated reason.

9. **Effect of Termination of Employment**.

a. **Voluntary Termination; Termination For Cause**. Upon the termination of the Executive's employment as a result of the Executive's Voluntary Termination or a Termination For Cause, the Executive shall not have any further rights or claims against the Company under this Agreement except the right to receive (i) the unpaid portion of the base salary provided for in Section 3(a) hereof, computed on a pro rata basis to the date of termination, (ii) payment of the Executive's accrued but unpaid amounts and extension of applicable benefits in accordance with the terms of any incentive compensation, retirement, employee welfare or other employee benefit plans or programs of the Company in which the Executive is then participating in accordance with the terms of such plans or programs, and (iii) reimbursement for any expenses for which the Executive shall not have theretofore been reimbursed as provided in Section 3 hereof.

b. **Termination Without Cause; Termination for Good Reason**. Upon the termination of the Executive's employment as a result of a Termination Without Cause or for Good Reason, the Executive shall not have any further rights or claims against the Company under this Agreement except the right to receive (i) the payments and other rights provided for in Section 9(a) hereof and (ii) severance payments in the form of a continuation of the Executive's base salary as in effect immediately prior to such termination for a period of 6 (six) months following the effective date of such termination. To the extent that severance payments shall be payable under this Agreement such payments shall be in consideration for and only after the Executive executes a General Release containing terms reasonably satisfactory to the Company.

c. **Death and Disability**. Upon the termination of the Executive's employment as a result of death or Disability, neither the Executive nor the Executive's beneficiaries or estate shall have any further rights or claims against the Company under this Agreement except the right to receive the payments and other rights provided for in Section 9(a) hereof.

d. **Forfeiture of Rights**. In the event that, subsequent to termination of employment hereunder, the Executive (i) breaches any of the provisions of Sections 11, 12, 13 hereof or (ii) makes or facilitates the making of any adverse public statements or disclosures with respect to the business or securities of the Company, all payments and benefits to which the Executive may otherwise have been entitled shall immediately terminate and be forfeited, and any portion of such amounts as may have been paid to the Executive shall forthwith be returned to the Company.

10. **Disclosure of Confidential Information**. The Executive shall not, directly or indirectly, at any time during or after the Employment Period, disclose to any person, firm, corporation or other business entity, except as required by law, or use for any purpose except in the good faith performance of the Executive's duties to the Company, any Confidential Information (as herein defined). For purposes of this Agreement, "**Confidential Information**" means all trade secrets and other non-public information of a business, financial , marketing, technical or other nature pertaining to the Company or any subsidiary, including information of others that the Company or any subsidiary has agreed to keep confidential; provided, however, that Confidential Information shall not include any information that has entered or enters the public domain (other than through breach of the Executive's obligations under this Agreement) or which the Executive is required to disclose by law or legal process. Upon the Company's request at any time, the Executive shall immediately deliver to the Company all materials in the Executive's possession which contain Confidential Information.

11. **Restrictive Covenant**.

a. **Term of Restrictive Covenant**. The Executive hereby acknowledges and recognizes that, during the Employment Period, the Executive shall be privy to trade secrets and Confidential Information critical to the Company's business and the Executive further acknowledges and recognizes that the Company would find it extremely difficult or impossible to replace the Executive and, accordingly, the Executive agrees that, in consideration of the benefits to be received by the Executive hereunder, except as otherwise provided under Maryland law and the Maryland rules of Professional Responsibility the Executive shall not, from and after the date hereof, throughout the Employment Period, and for a period of 12 months following the termination of the Employment Period (i) directly or indirectly engage in the development, production, marketing or sale of products that compete (or, upon commercialization, would compete) with products of the Company being developed (so long as such development has not been abandoned), marketed or sold at the time of the termination of the Employment Period (such business or activity being herein referred to as a "**Competing Business**") whether such engagement shall be as an officer, director, owner, employee, partner, affiliate or other participant in any Competing Business, (ii) assist others in engaging in any Competing Business in the manner described in the foregoing clause (i), or (iii) induce other employees of the Company or any subsidiary thereof to terminate their employment with the Company or any subsidiary thereof or engage in any Competing Business or hire any employees of the Company or any subsidiary unless such persons have not been employees of the Company for at least 12 months.

b. **Sufficient Consideration**. The Executive understands that the foregoing restrictions may limit the ability of the Executive to earn a livelihood in a business similar to the business of the Company, but nevertheless believes that the Executive has received and shall receive sufficient consideration and other benefits, as an employee of the Company and as otherwise provided hereunder, to justify such restrictions which, in any event (given the education, skills and ability of the Executive), the Executive believes would not prevent the Executive from earning a living.

12. **Non-Disparagement**. The Executive shall not engage in conduct, through word, act, gesture or other means, or disclose any information to the public or any third party which (i) directly or indirectly discredits or disparages in whole or in part the company, its subsidiaries, divisions, affiliates and/or successors as well as the products and the respective officers, directors, stockholders and employees of each of them; (ii) is detrimental to the reputation, character or standing of these entities, their products or any of their respective officers, directors, stockholders and/or employees; or (iii) which generally reflects negatively on the management decisions, strategy or decision-making of these entities.

13. **Company Right to Inventions**. The Executive shall promptly disclose, grant and assign to the Company, for its sole use and benefit, any and all inventions, improvements, technical information and suggestions relating in any way to the business of the Company which the Executive may develop or acquire during the Employment Period (whether or not during usual working hours), together with all patent applications, letters patent, copyrights and reissues thereof that may at any time be granted for or upon any such invention, improvement or technical information. In connection therewith: (i) the Executive shall, without charge, but at the expense of the Company, promptly at all times hereafter execute and deliver such applications, assignments, descriptions and other instruments as may be necessary or proper in the opinion of the Company to vest title to any such inventions, improvements, technical information, patent applications, patents, copyrights or reissues thereof in the Company and to enable it to obtain and maintain the entire right and title thereto throughout the world, and (ii) the Executive shall render to the Company, at its expense (including a reasonable payment for the time involved in case the Executive is not then in its employ), all such assistance as it may require in the prosecution of applications for said patents, copyrights or reissues thereof, in the prosecution or defense of interferences which may be declared involving any said applications, patents or copyrights and in any litigation in which the Company may be involved relating to any such patents, inventions, improvements or technical information.

14. **Enforcement**. It is the desire and intent of the parties hereto that the provisions of this Agreement be enforceable to the fullest extent permissible under the laws and public policies applied in each jurisdiction in which enforcement is sought. Accordingly, to the extent that a restriction contained in this Agreement is more restrictive than permitted by the laws of any jurisdiction where this Agreement may be subject to review and interpretation, the terms of such restriction, for the purpose only of the operation of such restriction in such jurisdiction, shall be the maximum restriction allowed by the laws of such jurisdiction and such restriction shall be deemed to have been revised accordingly herein.

15. Remedies; Survival.

a. **Injunctive Relief**. The Executive acknowledges and understands that the provisions of the covenants contained in Sections 11, 12, 13 hereof, the violation of which cannot be accurately compensated for in damages by an action at law, are of crucial importance to the Company, and that the breach or threatened breach of the provisions of this Agreement would cause the Company irreparable harm. In the event of a breach or threatened breach by the Executive of the provisions of Sections 11, 12, 13 hereof, the Company shall be entitled to an injunction restraining the Executive from such breach. Nothing herein contained shall be construed as prohibiting the Company from pursuing any other remedies available for any breach or threatened breach of this Agreement.

b. **Survival**. Notwithstanding anything contained in this Agreement to the contrary, the provisions of the Sections 3, 9, and 11 through 17 hereof shall survive the expiration or earlier termination of this Agreement until, by their terms, such provisions are no longer operative.

16. Notices. Notices and other communications hereunder shall be in writing and shall be delivered personally or sent by air courier or first class certified or registered mail, return receipt requested and postage prepaid, addressed as follows:

if to the Company:

PharmAthene, Inc.

One Park Place, Suite 450

Annapolis, Maryland 21401

with a copy to:

Sonnenschein Nath & Rosenthal LLP

101 JFK Parkway

Short Hills, NJ 07078

Attention: Jeffrey Baumel, Esq.

If to the Executive to:

Jordan P. Karp

_____

_____

With a copy to:

_____

_____

_____

_____

All notices and other communications given to any party hereto in accordance with the provisions of this Agreement shall be deemed to have been given on the date of delivery, if personally delivered; on the business day after the date when sent, if sent by air courier; and on the third business day after the date when sent, if sent by mail, in each case addressed to such party as provided in this Section 16 or in accordance with the latest unrevoked direction from such party.

18. **Binding Agreement; Benefit**. The provisions of this Agreement shall be binding upon, and shall inure to the benefit of, the respective heirs, legal representatives and successors of the parties hereto.

19. **Governing Law; Jurisdiction**. This Agreement shall be governed by, and construed and enforced in accordance with, the laws of the State of Maryland applicable to contract made and to be performed therein. Any action to enforce any of the provisions of this Agreement shall be brought in a court of the State of Maryland or in Federal court located within that State. The parties consent to the jurisdiction of such courts and to the service of process in any manner provided by Maryland law. Each party irrevocably waives any objection which it may now or hereafter have to the laying of the venue of any such suit, action or proceeding brought in such court and any claim that such suit, action or proceeding brought in such court has been brought in an inconvenient forum and agrees that service of process in accordance with the foregoing shall be deemed in every respect effective and valid personal service of process upon such party.

20. **Waiver of Breach**. The waiver by either party of a breach of any provision of this Agreement by the other party must be in writing and shall not operate or be construed as a waiver of any subsequent breach by such other party.

21. **Entire Agreement; Amendments**. This Agreement contains the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior agreements or understandings among the parties with respect thereof. This Agreement may be amended only by an agreement in writing signed by the parties hereto.

22. **Headings**. The section headings contained in this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement.

23. **Severability**. Any provision of this Agreement that is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof, and any such prohibition or unenforceability in any jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction.

24. **409A Compliance**. The intent of the Executive and the Company is that the severance and other benefits payable to the Executive under this Agreement not be deemed "deferred compensation" under, and shall otherwise comply with, Section 409A of the Internal Revenue Code of 1986, as amended. The Executive and the Company agree to use reasonable best efforts to amend the terms of this Agreement from time to time as may be necessary to avoid the imposition of liability under Section 409A of the Code in any manner that does not materially alter the substantive rights and obligations of the parties hereunder.

25. **Executive's Acknowledgement**. The Executive acknowledges (a) that the Executive has had the opportunity to consult with independent counsel of his own choice concerning this Agreement and (b) that the Executive has read and understands the Agreement, is fully aware of its legal effect and has entered into it freely based on the Executive's own judgment.

26. **Assignment**. This Agreement is personal in its nature and the parties hereto shall not, without the consent of the other, assign or transfer this Agreement or any rights or obligations hereunder; provided, that the provisions hereof shall inure to the benefit of, and be binding upon, each successor of the Company, whether by merger, consolidation, transfer of all or substantially all of its assets or otherwise.

27. **Counterparts**. This Agreement may be executed in two or more counterparts, each of which shall for all purposes constitute one agreement which is binding on all of the parties hereto.

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the date first above written.

EXECUTIVE

/s/ Jordan P. Karp
Jordan Karp, ESQ.

PHARMATHENE, INC.

By /s/ David P. Wright
Name: David P. Wright
Title: President and Chief Executive Officer

EMPLOYMENT AGREEMENT

This **EMPLOYMENT AGREEMENT** (this "**Agreement**") is made and entered into this 7th day of February 2012 by and between Linda Chang (the "**Executive**") and **PharmAthene, Inc.**, a Delaware corporation (the "**Company**").

WITNESSETH:

WHEREAS, the Company desires to continue to employ the Executive and the Executive desires to accept continued employment with the Company subject to the terms and conditions herein agreed upon:

NOW, THEREFORE, in consideration of the foregoing and of the mutual covenants and obligations hereinafter set forth, the parties hereto hereby agree as follows:

1. Employment; Term. The Executive commenced employment with the Company November 7, 2011. The Company hereby agrees to continue to employ the Executive and the Executive hereby accepts continued employment with the Company upon the terms and conditions hereinafter set forth for the period commencing on February 7, 2012 (the "**Effective Date**") and ending on November 7, 2012 (the "**Initial End Date**"), with the term of this Agreement automatically extending for an additional year on each anniversary of the Initial End Date unless written notice of non-extension is provided by either party to the other party at least 90 days prior to such anniversary. The period of the Executive's employment under this Agreement, as it may be terminated or extended from time to time as provided herein is referred to as the "**Employment Period**."

2. Position and Duties.

a. **Position and Duties Generally; Insurance Coverage.** The Executive shall continue to be employed by the Company in the position of Senior Vice President, Chief Financial Officer and shall faithfully render such executive, managerial, administrative and other services as are customarily associated with and incident to such position and as the Company may from time to time reasonably require consistent with such position. The Executive shall report to the CEO and President, Eric I. Richman (or his designee, only to the extent as Chief Financial Officer of the Company, Executive is legally permitted to report to someone other than the CEO and President). The Company shall use commercially reasonable efforts to provide Executive such information in its control as is necessary for Executive to perform her duties as Chief Financial Officer. The Company (i) acknowledges that it currently carries directors' and officers' liability and other customary insurance coverages, which, in the Company's judgment, is appropriate for its business and (ii) shall use its commerically reasonable efforts to have Executive covered under the directors' and officers' insurance policy and other insurance policies currently, and in the future, maintained by the Company for itself, its subsidiaries and affiliates, and for its and their directors and officers in such amounts and with such coverage as the Company deems commercially reasonable. The Company will use commercially reasonable efforts to maintain such insurance coverage during the period in which Executive is employed by the Company and for a commercially reasonable time thereafter.

b. **Other Positions.** The Executive shall hold such other positions and executive offices with the Company and/or of any of the Company's subsidiaries or affiliates as may from time to time be authorized by the Board. The Executive shall not be entitled to any compensation other than the compensation provided for herein for serving during the Employment Period in any other office or position of the Company or any of its subsidiaries or affiliates, unless the Compensation Committee specifically approves such additional compensation.

c. **Devotion to Employment.** Except for vacation time taken in accordance with the Company's vacation policy in effect from time to time and in accordance with the terms of this Agreement and for absences due to temporary illness, the Executive shall be a full-time employee of the Company and shall devote full time, attention and efforts during the Employment Period to the business of the Company and the duties required of her in her position. During the Employment Period, the Executive shall not be engaged in any other business activity which, in the reasonable judgment of the Board or its designee, conflicts with the duties of the Executive hereunder, whether or not such activity is pursued for gain, profit or other pecuniary advantage.

3. Compensation; Reimbursement.

a. **Base Salary.** For the Executive's services, the Company shall pay to the Executive an annual base salary of not less than $300,000.00 per annum, payable in equal periodic installments according to the Company's customary payroll practices, but no less frequently than monthly. The Executive's base salary shall be subject to review annually by the Compensation Committee and shall be subject to increase at the option and sole discretion of the Compensation Committee.

b. **Bonus.** The Executive shall be eligible to receive at the sole discretion of the Compensation Committee, an annual cash bonus of up to an additional 30% of the Executive's base salary. In addition, the Executive may be eligible for additional bonuses at the option and sole discretion of the Compensation Committee based upon the achievement of certain pre-determined performance milestones. Executive acknowledges that she was paid a signing bonus of $25,000 (less applicable tax withholdings) shortly after commencement of employment with the Company, and if she resigns her employment with the Company for any reason other than for "Good Reason" or the Company terminates her employment for "Cause" (as defined below), in either circumstance prior to November 7, 2012, she will promptly repay the signing bonus in full (and the Company shall have the right to deduct such amount from any other monies otherwise payable to Executive).

c. **Benefits Generally.**

i. In addition to the salary and cash bonus described above, the Executive shall be entitled during the Employment Period to participate in such employee benefit plans and programs of the Company, and shall be entitled to such other fringe benefits, as are from time to time made available by the Company generally to employees of the level, position, tenure, salary, age, health and other qualifications of the Executive including, without limitation, medical, dental and vision insurance coverage for the Executive and the Executive's dependents, disability, death benefit and life insurance and pension plans.

ii. Without limiting the generality of the foregoing, the Executive shall be eligible for such awards, if any, including stock and stock options under the Company's 2007 Long-Term Incentive Plan or such other plan as the Company may from time to time put into effect as shall be granted to the Executive by the Compensation Committee or other appropriate designee of the Board acting in its sole discretion.

iii. The Executive acknowledges and agrees that the Company does not guarantee the adoption or continuance of any particular employee benefit plan and participation by the Executive in any such plan or program shall be subject to the rules and regulations applicable thereto.

iv. Executive acknowledges that she has received a non-qualified stock option to purchase up to 170,000 shares of the Company's common stock at an exercise price of $1.59/share under the Company's 2007 Long-Term Incentive Plan, which option was immediately vested as to 20,000 shares on the date of grant and as to which the remaining 150,000 shares will vest at a rate of 25% per year starting on the first anniversary of the date of grant

v. Executive acknowledges that she has received a restricted share grant of 20,000 shares of Company common stock under the Company's 2007 Long-Term Incentive Plan, which grant vests at a rate of 33 1/3rd% per year starting on the first anniversary of the date of grant.

vi. The last sentence of Section 5 of the November 7, 2011 Nonqualified Stock Option Grant for 170,000 shares (the "November 2011 Option Agreement") to the Executive is hereby amended to read in full as follows:

"If the Option is continued and remains effective, or is assumed or substituted pursuant to clauses (i) or (ii) of this Section 5, and the Participant's employment is terminated by the Company (or by the entity assuming this option agreement) within one year following the date of the Change of Control Event for any reason other than on account of cause, or the Participant terminates her employment for "Good Reason" (as defined in the Employment Agreement, dated February 7, 2012) within one year following the date of the Change of Control Event, the Option shall become fully vested and shall remain exercisable for 90 days after such termination of employment."

vii. The following is added to the end of Section 2 of the November 7, 2011 Restricted Stock Agreement for 20,000 shares (the "November 2011 Restricted Share Agreement"):

"If the Grantee's employment is terminated by the Company (or by the entity assuming this restricted share agreement) within one year following the date of a Change of Control Event for any reason other than on account of cause, or the Grantee terminates her employment for "Good Reason" (as defined in the Employment Agreement, dated February 7, 2012) within one year following the date of the Change of Control Event, the unvested Restricted Stock shall become fully vested."

viii. The provisions of the November 2011 Option Agreement and the November 2011 Restricted Share Agreement shall be binding upon, and shall inure to the benefit of, the respective heirs, estate, legal representatives and successors of the parties hereto in accordance with the terms set forth in those agreements.

d. **Vacation.** The Executive shall be entitled to 20 days of vacation in each calendar year.

e. **Expenses.** The Company shall reimburse the Executive in accordance with the practices in effect from time to time for other officers or staff personnel of the Company for all reasonable and necessary business and travel expenses and other disbursements incurred by the Executive for or on behalf of the Company in the performance of the Executive's duties hereunder, upon presentation by the Executive to the Company of appropriate supporting documentation.

f. **Perquisites.** The Executive shall be entitled to those perquisites as the Company shall make available from time to time to other executive officers of the Company, which shall include, without limitation, the costs for Executive's use of a cellular telephone and personal digital assistant to the extent such equipment is used for business purposes.

4. Death; Disability. In the event that the Executive dies or is incapacitated or disabled by accident, sickness or otherwise, so as to render the Executive mentally or physically incapable of performing the services required to be performed by the Executive under this Agreement for a period that would entitle the Executive to qualify for long-term disability benefits under the Company's then-current long-term disability insurance program or, in the absence of such a program, for a period of 120 consecutive days or longer if so provided by the Americans with Disabilities Act (such condition being herein referred to as a "**Disability**") then (i) in the case of the Executive's death, the Executive's employment shall be deemed to terminate on the date of the Executive's death and (ii) in the case of a Disability, the Company, at its option, may terminate the employment of the Executive under this Agreement immediately upon giving the Executive notice to that effect. The determination to terminate the Executive in the event of a Disability shall be made by the Board or the Board's designee. In the case of a Disability, until the Company shall have terminated the Executive's employment hereunder in accordance with the foregoing, the Executive shall be entitled to receive compensation provided for herein notwithstanding any such physical or mental disability.

5. **Termination For Cause.** The Company may terminate the employment of the Executive hereunder at any time during the Employment Period for "cause" (such termination being herein referred to as a "**Termination for Cause**") by giving the Executive notice of such termination, which termination shall be effective on the date of such notice or such later date as may be specified by the Company. For purposes of this Agreement, "**Cause**" means (i) the Executive's willful and substantial misconduct that is materially injurious to the Company and is either repeated after written notice from the Company specifying the misconduct or is continuing and not corrected within 20 days after written notice from the Company specifying the misconduct, (ii) the Executive's repeated neglect of duties or failure to act which can reasonably be expected to affect materially and adversely the business or affairs of the Company after written notice from the Company specifying the neglect or failure to act, (iii) the Executive's material breach of any of the agreements contained in Sections 10, 11, 12, or 13 hereof or of any of the Company's policies, (iv) the commission by the Executive of any material fraudulent act with respect to the business and affairs of the Company, (v) the Executive's conviction of (or plea of nolo contendere to) a crime constituting a felony, (vi) demonstrable gross negligence, or (vii) habitual insobriety or use of illegal drugs by the Executive while performing the Executive's duties under this Agreement which adversely affects the Executive's performance of the Executive's duties under this Agreement.

6. **Termination Without Cause.** The Company may terminate the employment of the Executive hereunder at any time without "cause" or fail to extend this Agreement pursuant to the terms hereof (such termination being herein referred to as "**Termination Without Cause**") by giving the Executive notice of such termination, upon the giving of which such termination shall take effect not later than 30 days from the date such notice is given.

7. **Voluntary Termination by Executive.** Any termination of the employment of the Executive by the Executive otherwise than as a result of death or Disability or for Good Reason (as defined below) shall be herein referred to as "**Voluntary Termination**". A Voluntary Termination will be deemed to be effective immediately upon such termination.

8. **Termination by Executive for Good Reason.** Any termination of the employment of the Executive by the Executive for Good Reason which shall be deemed to be equivalent to a Termination without Cause. For purposes of this Agreement "**Good Reason**" means (i) any material breach by the Company of any of its obligations under this Agreement (including material compensation obligations under this Agreement), (ii) any material reduction in the Executive's duties, authority or responsibilities without the Executive's consent, (iii) any assignment to the Executive of duties or responsibilities materially inconsistent with the Executive's position and duties contained in this Agreement without the Executive's consent, (iv) a relocation of the Company's principal executive offices or the Company determination to require the Executive to be based anywhere other than within 25 miles of the location at which the Executive on the date hereof performs the Executive's duties; (v) the taking of any action by the Company which would deprive the Executive of any material benefit plan (including, without limitation, any medical, dental, disability or life insurance); or (vi) the failure by the Company to obtain the specific assumption of this Agreement by any successor or assignee of the Company or any person acquiring substantially all of the Company's assets or liabilities; provided, however, that the Executive may not terminate the Employment Period for Good Reason unless the Executive first provides the Company with written notice specifying the Good Reason and providing the Company with 20 days in which to remedy the stated reason.

9. **Effect of Termination of Employment.**

a. **Voluntary Termination; Termination For Cause.** Upon the termination of the Executive's employment as a result of the Executive's Voluntary Termination or a Termination For Cause, the Executive shall not have any further rights or claims against the Company under this Agreement except the right to receive (i) the unpaid portion of the base salary provided for in Section 3(a) hereof, computed on a pro rata basis to the date of termination, (ii) payment of the Executive's accrued but unpaid amounts and extension of applicable benefits in accordance with the terms of any incentive compensation, retirement, employee welfare or other employee benefit plans or programs of the Company in which the Executive is then participating in accordance with the terms of such plans or programs, and (iii) reimbursement for any expenses for which the Executive shall not have theretofore been reimbursed as provided in Section 3 hereof.

b. **Termination Without Cause; Termination for Good Reason.** Upon the termination of the Executive's employment as a result of a Termination Without Cause or for Good Reason, the Executive shall not have any further rights or claims against the Company under this Agreement except the right to receive (i) the payments and other rights provided for in Section 9(a) hereof and (ii) severance payments in the form of a continuation of the Executive's base salary as in effect immediately prior to such termination for a period of nine (9) months following the effective date of such termination. To the extent that severance payments shall be payable under this Agreement such payments shall be in consideration for and only after the Executive executes a General Release containing terms reasonably satisfactory to the Company; provided that such General Release shall not in any material way reduce the benefits to the Executive or the Company, or decrease the obligations of the Executive or the Company, under this Agreement.

c. **Death and Disability.** Upon the termination of the Executive's employment as a result of death or Disability, neither the Executive nor the Executive's beneficiaries or estate shall have any further rights or claims against the Company under this Agreement except the right to receive the payments and other rights provided for in Section 9(a) hereof.

d. **Forfeiture of Rights.** In the event that, subsequent to termination of employment hereunder, the Executive (i) breaches any of the provisions of Sections 10, 11, 12, or 13 hereof or (ii) makes or facilitates the making of any adverse public statements or disclosures with respect to the business or securities of the Company, all payments and benefits to which the Executive may otherwise have been entitled shall immediately terminate and be forfeited, and any portion of such amounts as may have been paid to the Executive shall forthwith be returned to the Company.

10. Disclosure of Confidential Information. The Executive shall not, directly or indirectly, at any time during or after the Employment Period, disclose to any person, firm, corporation or other business entity, except as required by law, or use for any purpose except in the good faith performance of the Executive's duties to the Company, any Confidential Information (as herein defined). For purposes of this Agreement, "**Confidential Information**" means all trade secrets and other non-public information of a business, financial , marketing, technical or other nature pertaining to the Company or any subsidiary, including information of others that the Company or any subsidiary has agreed to keep confidential; provided, however, that Confidential Information shall not include any information that has entered or enters the public domain (other than through breach of the Executive's obligations under this Agreement) or which the Executive is required to disclose by law or legal process. Upon the Company's request at any time, the Executive shall immediately deliver to the Company all materials in the Executive's possession which contain Confidential Information.

11. Restrictive Covenant.

a. **Term of Restrictive Covenant.** The Executive hereby acknowledges and recognizes that, during the Employment Period, the Executive shall be privy to trade secrets and Confidential Information critical to the Company's business and the Executive further acknowledges and recognizes that the Company would find it extremely difficult or impossible to replace the Executive and, accordingly, the Executive agrees that, in consideration of the benefits to be received by the Executive hereunder, the Executive shall not, from and after the date hereof, throughout the Employment Period, and for a period of 12 months following the termination of the Employment Period (i) directly or indirectly engage in the research, discovery, development, production, marketing or sale of human therapeutics and vaccines for infectious diseases or bio chemical defense related products (or any other products or product candidates the Company may develop, in license, or acquire in the future up to the time of termination of Employee's employment) that are competitive with those therapeutics, vaccines or other products or product candidates being researched, discovered, developed, produced, marketed or sold at the time of termination of Employee's employment (such business or activity being herein referred to as a "**Competing Business**") whether such engagement shall be as an officer, director, owner, employee, partner, affiliate or other participant in any Competing Business, (ii) assist others in engaging in any Competing Business in the manner described in the foregoing clause (i), or (iii) induce other employees of the Company or any subsidiary thereof to terminate their employment with the Company or any subsidiary thereof or engage in any Competing Business or hire any employees of the Company or any subsidiary unless such persons have not been employees of the Company for at least 12 months. Notwithstanding the foregoing, Executive shall be permitted to own securities of a public company not in excess of five (5%) of any class of such securities and to own stock partnership interests or other securities of any entity not in excess of five (5%) of any class of such securities and such ownership shall not be considered to be competition with the Company. In the event Executive's employment is terminated by the Company without Cause or by the Executive for Good Reason, enforcement by the Company of the non-compete provisions set forth in clauses (i) and (ii) above shall be conditioned on the Company's compliance with the requirements of Section 9.b. above so long as Executive executes a General Release containing terms reasonably satisfactory to the Company pursuant to Section 9.b.

b. **Sufficient Consideration.** The Executive understands that the foregoing restrictions may limit the ability of the Executive to earn a livelihood in a business similar to the business of the Company, but nevertheless believes that the Executive has received and shall receive sufficient consideration and other benefits, as an employee of the Company and as otherwise provided hereunder, to justify such restrictions which, in any event (given the education, skills and ability of the Executive), the Executive believes would not prevent the Executive from earning a living.

12. **Non-Disparagement.** The Executive shall not engage in conduct, through word, act, gesture or other means, or disclose any information to the public or any third party which (i) directly or indirectly discredits or disparages in whole or in part the Company, its subsidiaries, divisions, affiliates and/or successors as well as the products and the respective officers, directors, stockholders and employees of each of them; (ii) is detrimental to the reputation, character or standing of these entities, their products or any of their respective officers, directors, stockholders and/or employees; or (iii) which generally reflects negatively on the management decisions, strategy or decision-making of these entities; provided that nothing herein shall be deemed to prohibit Executive from making a truthful statement of any kind or nature regarding the Company as part of any effort on Executive to enforce rights under this Agreement or in response to a subpoena or similar legal requirement to provide testimony. The Company's executive officers and directors agree not to discredit or disparage the Executive to the public or any third party; provided that nothing herein shall be deemed to prohibit the Company's executive officers or directors from making truthful statements of any kind or nature regarding the Executive as part of any effort on Company's part to enforce rights under this Agreement or in response to a subpoena or similar legal requirement to provide testimony.

13. **Company Right to Inventions.** The Executive shall promptly disclose, grant and assign to the Company, for its sole use and benefit, any and all inventions, improvements, technical information and suggestions relating in any way to the business of the Company which the Executive may develop or acquire during the Employment Period (whether or not during usual working hours), together with all patent applications, letters patent, copyrights and reissues thereof that may at any time be granted for or upon any such invention, improvement or technical information. In connection therewith: (i) the Executive shall, without charge, but at the expense of the Company, promptly at all times hereafter execute and deliver such applications, assignments, descriptions and other instruments as may be necessary or proper in the opinion of the Company to vest title to any such inventions, improvements, technical information, patent applications, patents, copyrights or reissues thereof in the Company and to enable it to obtain and maintain the entire right and title thereto throughout the world, and (ii) the Executive shall render to the Company, at its expense (including a reasonable payment for the time involved in case the Executive is not then in its employ), all such assistance as it may require in the prosecution of applications for said patents, copyrights or reissues thereof, in the prosecution or defense of interferences which may be declared involving any said applications, patents or copyrights and in any litigation in which the Company may be involved relating to any such patents, inventions, improvements or technical information.

14. **Enforcement.** It is the desire and intent of the parties hereto that the provisions of this Agreement be enforceable to the fullest extent permissible under the laws and public policies applied in each jurisdiction in which enforcement is sought. Accordingly, to the extent that a restriction contained in this Agreement is more restrictive than permitted by the laws of any jurisdiction where this Agreement may be subject to review and interpretation, the terms of such restriction, for the purpose only of the operation of such restriction in such jurisdiction, shall be the maximum restriction allowed by the laws of such jurisdiction and such restriction shall be deemed to have been revised accordingly herein.

15. **Remedies; Survival.**

a. **Injunctive Relief.** The Executive acknowledges and understands that the provisions of the covenants contained in Sections 10, 11, 12, and 13 hereof, the violation of which cannot be accurately compensated for in damages by an action at law, are of crucial importance to the Company, and that the breach or threatened breach of the provisions of this Agreement would cause the Company irreparable harm. In the event of a breach or threatened breach by the Executive of the provisions of Sections 10, 11, 12, or 13 hereof, the Company shall be entitled to an injunction restraining the Executive from such breach. Nothing herein contained shall be construed as prohibiting the Company from pursuing any other remedies available for any breach or threatened breach of this Agreement.

b. **Survival.** Notwithstanding anything contained in this Agreement to the contrary, the provisions of the Sections 3, 9 through 28 hereof shall survive the expiration or earlier termination of this Agreement until, by their terms, such provisions are no longer operative.

16. **Notices.** Notices and other communications hereunder shall be in writing and shall be delivered personally or sent by air courier or first class certified or registered mail, return receipt requested and postage prepaid, addressed as follows:

if to the Company:

PharmAthene, Inc.
One Park Place, Suite 450
Annapolis, Maryland 21401
Attention: CEO

with a copy to:

Saul Ewing LLP
Lockwood Place
500 East Pratt Street, Suite 900
Baltimore, MD 21202-3171
Attention: Harriet Cooperman, Esq.

if to the Executive to:

Linda Chang
_____
_____
_____
_____

with a copy to :

_____

_____
_____
_____
_____

All notices and other communications given to any party hereto in accordance with the provisions of this Agreement shall be deemed to have been given on the date of delivery, if personally delivered; on the business day after the date when sent, if sent by air courier; and on the third business day after the date when sent, if sent by mail, in each case addressed to such party as provided in this Section 16 or in accordance with the latest unrevoked direction from such party.

17. [intentionally omitted]

18. Binding Agreement; Benefit. The provisions of this Agreement shall be binding upon, and shall inure to the benefit of, the respective heirs, estate, legal representatives and successors of the parties hereto (which for the avoidance of doubt shall include any person or entity acquiring substantially all of the Company's assets or liabilities).

19. Governing Law; Jurisdiction. This Agreement shall be governed by, and construed and enforced in accordance with, the laws of the State of Maryland applicable to contract made and to be performed therein. Any action to enforce any of the provisions of this Agreement shall be brought in a court of the State of Maryland or in Federal court located within that State. The parties consent to the jurisdiction of such courts and to the service of process in any manner provided by Maryland law. Each party irrevocably waives any objection which it may now or hereafter have to the laying of the venue of any such suit, action or proceeding brought in such court and any claim that such suit, action or proceeding brought in such court has been brought in an inconvenient forum and agrees that service of process in accordance with the foregoing shall be deemed in every respect effective and valid personal service of process upon such party.

20. Waiver of Breach. The waiver by either party of a breach of any provision of this Agreement by the other party must be in writing and shall not operate or be construed as a waiver of any subsequent breach by such other party.

21. Entire Agreement; Amendments. This Agreement contains the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior agreements or understandings among the parties with respect thereof. This Agreement may be amended only by an agreement in writing signed by the parties hereto. Notwithstanding the foregoing, the Confidentiality and Non-Solicitation Agreement the Executive signed upon commencement of employment with the Company shall remain in full force and effect. In the event of a conflict between the terms of the Confidentiality and Non-Solicitation Agreement and this Agreement, the terms of this Agreement shall govern. Nothing in this Agreement shall be deemed to modify the Indemnification Agreement, dated November 7, 2011, between the Executive and the Company, which agreement remains in full force and effect.

22. **Headings.** The section headings contained in this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement.

23. **Severability.** Any provision of this Agreement that is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof, and any such prohibition or unenforceability in any jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction.

24. **409A Compliance.** The intent of the Executive and the Company is that the severance and other benefits payable to the Executive under this Agreement not be deemed "deferred compensation" under, and shall otherwise comply with, Section 409A of the Internal Revenue Code of 1986, as amended. The Executive and the Company agree to use reasonable best efforts to amend the terms of this Agreement from time to time as may be necessary to avoid the imposition of liability under Section 409A of the Code in any manner that does not materially alter the substantive rights and obligations of the parties hereunder.

25. **Executive's Acknowledgement.** The Executive acknowledges (a) that the Executive has had the opportunity to consult with independent counsel of her own choice concerning this Agreement and (b) that the Executive has read and understands the Agreement, is fully aware of its legal effect and has entered into it freely based on the Executive's own judgment.

26. **Assignment.** This Agreement is personal in its nature and the parties hereto shall not, without the consent of the other, assign or transfer this Agreement or any rights or obligations hereunder; provided, that the provisions hereof shall inure to the benefit of, and be binding upon, each successor of the Company, whether by merger, consolidation, transfer of all or substantially all of its assets or otherwise.

27. **Counterparts.** This Agreement may be executed in two or more counterparts, each of which shall for all purposes constitute one agreement which is binding on all of the parties hereto.

28. **Further Actions.** Each Party agrees to execute, acknowledge and deliver such further instruments, and to do all such other acts, as may be necessary or appropriate in order to carry out the purposes and intent of the Agreement.

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the date first above written.

EXECUTIVE

/s/ Linda Chang
Name: Linda Chang

PHARMATHENE, INC.

By /s/ Eric I. Richman
Name: Eric I. Richman
Title: President and Chief Executive Officer

OFFER TO PURCHASE

TO: FERME PILLAR HILL ENR.
606 Chemin Côte Saint-Georges

Saint-Télesphore, Quebec

J0P 1Y0

Attention: David McKay

Dear Sirs:

We, the undersigned, **PHARMATHENE CANADA, INC**. (the "**Vendor**") offer to sell to **FERME PILLAR HILL ENR**. (the "**Purchaser**"), all of the Vendor's right, title and interest in the real and immovable property comprised of (i) a farm land as described in Schedule "A" attached hereto together with any immovables located thereon including those bearing civic numbers 320 Chemin Saint-Georges and 210 Chemin Sainte-Anne, in the City of Saint-Télesphore, Province of Québec (the "**Quebec Property**") and (ii) the land described in Schedule "B" attached hereto (the "**Ontario Property**") (the Quebec Property and the Ontario Property being collectively referred to herein as the "**Property**"). The Purchaser also agrees to purchase from the Vendor the movables as per Schedule "C" attached hereto, which shall be included in the Purchase Price.

ARTICLE 1

PURCHASE PRICE

The purchase price of the Property will be a total of ONE MILLION EIGHT HUNDRED THOUSAND CANADIAN DOLLARS ($1,800,000) subject to adjustments in accordance with the terms hereof (the "**Purchase Price**"), paid as follows:

1.1 The amount of ONE HUNDRED THOUSAND DOLLARS ($100,000) (the "**Deposit**") by certified cheque or wire transfer to the order of Michel Leroux Notary (the "**Purchaser's Legal Counsel**"), in trust, which shall be applied on account of the Purchase Price at Closing (as hereinafter defined) or otherwise dealt with as hereinafter provided.

1.2 The balance of the Purchase Price by wire transfer or certified cheque to the order of the Purchaser's Legal Counsel in trust at Closing. The said balance as well as the Deposit will, subject to the terms hereof, be held in trust for the Vendor by the Purchaser's Legal Counsel until confirmation of the registration of the deed of sale in respect of the Quebec Property in the Index of Immovables without adverse entries, and of the registration of the transfer in respect of the Ontario Property in the Land Registry Office for the Land Titles Division of Glengarry (No. 14).

ARTICLE 2

CLOSING

2.1 Subject as herein provided, a deed of sale in respect of the Quebec Property and an acknowledgement and direction in respect of the transfer of the Ontario Property shall be executed on the first (1st) business day that is twenty (20) days following the signing of this Offer (the "**Closing**") at the offices of Blake, Cassels & Graydon LLP. If the deed of sale is not signed for any reason other than the default of the Purchaser, the Purchaser's Legal Counsel shall refund the Deposit to the Purchaser. If the deed of sale and the acknowledgement and direction in respect of the transfer of the Ontario Property are not signed for any reason, the Deposit shall be remitted to the Vendor as liquidated damages.

ARTICLE 3

ACCESS

3.1 From and after the date of execution by both parties of this Offer, the Purchaser and its agents and employees shall have free access to the Property at mutually agreed upon times at the Purchaser's sole risk and expense for the purpose of making any of the Purchaser's inspections.

3.2 All tests and inspections conducted on the Property shall be at the sole risk and expense of the Purchaser, who shall be responsible for making any repairs necessary as a result of such tests. The Purchaser shall promptly repair at its sole cost and expense, in a good and workmanlike manner, any damage to the Property caused by any tests and shall defend, indemnify and hold harmless the Vendor from and against any and all actions, causes of action, claims, demands, injuries, losses, liens, claims, judgments, liabilities, costs, expenses and damages (including legal fees) sustained by or threatened against the Vendor that result from or arise from any tests or inspections by the Vendor or its representatives pursuant to this Offer. This Section 3.2 shall survive the termination of this Offer.

ARTICLE 4

CLOSING DOCUMENTS

4.1 Subject to the provisions of this Offer, the Vendor shall execute or cause to be executed at Closing the following for the Property:

(a) A registrable deed of sale of the Quebec Property (the "**Deed of Sale**") and a registrable transfer of the Ontario Property in favour of the Purchaser (the "**Transfer**");

(b) A bill of sale for any movables comprised in the Property;

(c) A Certificate of an officer of the Vendor confirming the representations and warranties of the Vendor set forth in Section 6.1 as of the Closing date;

(d) An assignment and assumption of any contracts which the Purchaser has notified the Vendor it wishes to assume, if applicable;

(e) Statement of adjustments;

(f) Resolutions of the Board of Directors of the Vendor authorizing the sale of the Property to the Purchaser;

(g) An escrow agreement regarding disbursement of the Purchase Price pending registration of the Deed of Sale and the Transfer.

All documentation shall be in form and substance acceptable to the Purchaser and the Vendor acting reasonably and in good faith.

4.2 Subject to the provisions of this Offer, the Purchaser shall execute or cause to be executed at Closing the following:

(a) A Certificate of an officer of the Purchaser confirming the representations and warranties of the Purchaser set forth in Section 7.1 as of the Closing date;

(b) An escrow agreement regarding disbursement of the Purchase Price; and

(c) All other conveyances and other documents which are required and which the Vendor has reasonably requested on or before the Closing date to give effect to the proper transfer, assignment and conveyance of the Property and the movables by the Vendor to the Purchaser.

All documentation shall be in form and substance acceptable to the Purchaser and the Vendor acting reasonably and in good faith.

ARTICLE 5

CLEAR TITLE

5.1 The Purchaser shall be entitled to examine Vendor's title to the Property and the movables at its own expense and satisfy itself of same within ten (10) days following the signing of this Offer by both parties.

5.2 If prior to the expiry of ten (10) days following the signing of this Offer by both parties, any valid objections to title to the Property are made in writing to the Vendor and which the Vendor is unable or unwilling to remove, remedy or satisfy and which the Purchaser will not waive, notwithstanding any intermediate acts or negotiations in respect of such objections, the Purchaser shall be entitled to terminate this Offer and the Deposit shall be refunded. Notwithstanding the foregoing, the Purchaser agrees to accept title to the Property subject to the encumbrances set out in Schedule "D" attached hereto.

ARTICLE 6

VENDOR'S WARRANTIES

6.1 The Vendor hereby represents and warrants to Purchaser on and as of the date hereof and on and as of the Closing date as follows:

(a) The Vendor is a duly constituted and validly subsisting corporation and in good standing under the laws of Canada, and has the necessary corporate authority, power and capacity to enter into this Offer and the documents and transaction contemplated herein.

(b) The Vendor is not a non-resident of Canada within the meaning of Section 116 of the *Income Tax Act* (Canada) and Title III of Part II of the *Taxation Act* (Québec).

The representations and warranties of the Vendor contained in this Section 6.1 are deemed to be true and valid as of the date hereof and shall be deemed to be repeated in the Deed of Sale, which representations and warranties shall survive for a period of six (6) months after Closing.

6.2 The Purchaser acknowledges and agrees that the Property and other movable property and all other aspects of the transaction (collectively the "**Assets**") are being sold and purchased "as-is, where-is", at the Purchaser's own risk, without any representations, warranty or covenant of any kind whatsoever, as to any matter or condition pertaining to or affecting the Property or Assets, or any of them, including, without limitation, any representations or warranties in connection with title, zoning permits, charges, environmental condition, structural condition, description of the Property or Assets, physical condition, financial matters, compliance with laws, by-laws and regulations, merchantability, fitness for purpose, quantity or quality of the Property or Assets, governmental compliance, threatened claims or litigation, or in respect of any matter or thing whatsoever. For certainty and without limiting the generality of the foregoing, the parties hereby agree to exclude altogether the effect of the legal warranty provided for by article 1716 of the *Civil Code of Québec* and that the Purchaser, except to the extent specifically set forth in this agreement, is purchasing the Property at its own risk within the meaning of article 1733 of the *Civil Code of Québec*. The Purchaser shall conduct its own inspection and shall rely solely upon its own findings irrespective of any information, documentation or opinion, written or oral, provided by the Vendor or any of its agents. The Vendor may make available certain documents available to the Purchaser however the Vendor makes no representation or warranty as to the accuracy or exhaustiveness of such documentation.

ARTICLE 7

PURCHASER'S WARRANTY

7.1 The Purchaser hereby represents and warrants to Vendor on and as of the date hereof and on and as of the Closing date as follows:

(a) The Purchaser has full capacity, right, power and authority to execute, deliver and perform this Offer and all documents to be executed by Purchaser pursuant hereto, and all required action and approvals have been duly taken and obtained. The individuals signing this Offer and all other documents executed or to be executed pursuant hereto on behalf of the Purchaser and are duly authorized to sign the same on Purchaser's behalf and to bind Purchaser thereto;

(b) The Purchaser (i) is not an insolvent person within the meaning of the Bankruptcy and Insolvency Act (Canada) or the Winding-up and Restructuring Act (Canada), (ii) has not made an assignment in favour of its creditors or a proposal in bankruptcy to its creditors or any class of it, (iii) has not had any petition for a receiving order presented in respect of it, and (iv) has not initiated proceedings with respect to a compromise or arrangement with its creditors or for its winding up, liquidation or dissolution;

(c) The Purchaser is a Québec resident within the meaning of *An Act Respecting the Acquisition of Farm Land by Non-Residents* (R.S.Q., c. A-4.1);

(d) The Purchaser is registered for the purposes of Part IX of the *Excise Tax Act* (Canada) and the Vendor is not obliged to collect the goods and services tax "**GST**") or harmonized sales tax ("**HST**") from the Purchaser or to pay GST or HST. The Purchaser is registered for the purposes of the *Act respecting the Québec Sales Tax* and the Vendor is not obliged to collect Québec Sales Tax ("**QST**") from the Purchaser or to pay QST; and

The representations and warranties of the Purchaser contained in this Section 7.1 are deemed to be true and valid as of the date hereof and shall be deemed to be repeated in the deed of sale, which representations and warranties shall survive for a period of six (6) months after Closing.

ARTICLE 8

GOODS AND SERVICES TAX

8.1 The Purchaser will be responsible for the payment of any tax, land transfer tax or transfer duties applicable, the GST (and/or HST) and the QST as well as all other taxes, duties or charges, of any nature whatsoever, which may be payable in respect of the transfer of the Property and the movables.

8.2 The Purchaser agrees to indemnify and hold the Vendor harmless from and against any claim, demand, action, or cause of action relating to any amount that may be assessed or claimed from the Vendor by any competent authority having jurisdiction in respect of the GST (and/or HST) or the QST, whether as taxes, interest or penalties, resulting from the sale and transfer of the Property and the movables.

ARTICLE 9

MISCELLANEOUS

9.1 Adjustments will be made on Closing for the Deposit and other usual amounts and for taxes, utility costs and other costs of owning and operating the Property.

9.2 Each of the parties shall be responsible for its own fees and costs (including legal fees) incurred in connection with the transaction and the documentation provided for herein. The parties confirm that they have not engaged the services of any real estate broker for this proposed transaction.

9.3 The Property shall be at the risk of the Vendor until completion of the transaction contemplated by this Offer.

9.4 All references to monetary amounts in this Offer shall be to Canadian currency.

9.5 This Offer supersedes all previous agreements, negotiations, statements and undertakings between the Vendor and the Purchaser or their respective representatives or agents.

9.6 This Offer may be executed in any number of counterparts, all of which as so executed shall constitute but one and the same agreement, binding on all of the parties hereto, notwithstanding that all of the parties are not signatories to the original or the same counterpart.

9.7 The parties agree that this Offer and the transaction of purchase and sale referred to herein, and any information provided by either party to the other with respect to this transaction or the Property, shall be kept strictly confidential. Should this Offer become null and void or be terminated for any reason whatsoever, the Purchaser shall promptly return to the Vendor all information and documentation that the Vendor shall have made available to the Purchaser with respect to the Property, without retaining any copies or extracts thereof.

9.8 The parties agree that this Offer is subject to compliance with section 50 of the *Planning Act* (Ontario) in respect of the Ontario Property.

ARTICLE 10

NOTICE

All notices, demands, requests and other communications required or permitted hereunder shall be in writing and shall be communicated by personal delivery, courier or fax, to the respective addresses hereinafter set forth or such addresses which the Vendor or the Purchaser may from time to time designate by written notice to the other as herein required.

Any notice directed to the Vendor shall be addressed as follows:

PHARMATHENE CANADA, INC.
199 Bat Street, Box 25
Commerce Court West
Toronto, Ontario M5L 1A9

Attention: Jordan Karp

Any notice to the Purchaser shall be addressed as follows:

FERME PILLAR HILL ENR
606, Chemin Côte Saint-Georges
Saint-Télesphore, Québec J0P 1Y0

Attention: David McKay

ARTICLE 11

LANGUAGE

The parties hereto have requested that the present Offer be drafted in the English language only. *Les parties a ce contrat ont requis que ledit contrat soit rédigé en langue anglaise seulement.*

ARTICLE 12

GOVERNING LAWS

The present Offer and its acceptance hereof shall be governed by the laws of the Province of Quebec and shall be treated in all respects as a Quebec contract, except that the laws of the Province of Ontario shall apply in respect of the transfer of the Ontario Property.

ARTICLE 13

ACCEPTANCE

This Offer shall be open for acceptance until _____ at 5:00 p.m. For these purposes, the Purchaser shall be entitled to accept these presents by signing a copy of this Offer and returning the same within the aforesaid delay duly signed by the Purchaser. Upon receipt of the same by the Vendor, there shall be a binding agreement of purchase and sale on the terms and conditions herein set forth.

Signed at _____ this _____ day of December 2011.

PHARMATHENE CANADA, INC.

By: _____

By: _____

ACCEPTANCE

This Offer is hereby accepted this _____day of December 2011.

FERME PILLAR HILL ENR.

By: _____

EXHIBIT 23

CONSENT OF 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, and

(8) Registration Statement (Form S-3 No. 333-176607)

of our reports dated March 8, 2012, 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) for the year ended December 31, 2011.

/s/ Ernst & Young LLP

Baltimore, Maryland

March 8, 2012

Exhibit 31.1

Certification of Principal Executive Officer

Pursuant to SEC Rule 13a-14(a)/15d-14(a)

I, Eric I. Richman, certify that:

1. I have reviewed this Form 10-K of PharmAthene, Inc. for the year ended December 31, 2011;

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 statement 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 8, 2012

/s/ Eric I. Richman

Name: **Eric I. Richman**
Title: **Chief Executive Officer**

Exhibit 31.2

Certification of Principal Financial Officer

Pursuant to SEC Rule 13a-14(a)/15d-14(a)

I, Linda L. Chang, certify that:

1. I have reviewed this Form 10-K of PharmAthene, Inc. for the year ended December 31, 2011;

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 7those 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 statement 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 8, 2012

/s/ Linda L. Chang

Name: **Linda L. Chang**
Title: **Chief Financial Officer**

Exhibit 32.1

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, 2011, as filed with the Securities and Exchange Commission (the "Report"), I, Eric I. Richman, 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/ Eric I. Richman
Eric I. Richman
Chief Executive Officer
March 8, 2012

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.

Exhibit 32.2

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, 2011, as filed with the Securities and Exchange Commission (the "Report"), I, Linda L. Chang, Chief Financial 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/ Linda L. Chang
Linda L. Chang
Chief Financial Officer
March 8, 2012

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.