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

FORM 10-K

(Mark One)

x **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2010

☐ **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)

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

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 x
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 x
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 x	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 x Smaller Reporting Company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No x

The aggregate market value of voting and non-voting common equity held by non-affiliates of the registrant was approximately $28.1 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, 2010).

The number of shares of the registrant's Common Stock, par value $0.0001 per share, outstanding as of March 24, 2011 was 46,370,591.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement for its 2011 Annual Meeting of Stockholders or Annual Report on Form 10-K/A, to be filed on or before April 30, 2011, are incorporated by reference into Part III of this Report.

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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 its lawsuit against Siga, or that even if the court rules in the Company's favor, the court will award monetary damages or other remedies adequate to fully compensate the Company for its losses. Further, significant additional non-clinical animal studies, human clinical trials, and manufacturing development work remain to be completed for Valortim®. At this point there can be no assurance that the U.S. government will renew its contract with us to fund the development of Valortim® beyond September 2011 or that Valortim® 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, 2010.

Item 1. Business.

Background of PharmAthene, Inc.

PharmAthene, Inc. was incorporated under the laws of the State of Delaware as Healthcare Acquisition Corp. ("HAQ") on April 25, 2005, 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 of 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 medical countermeasures against biological and chemical weapons. Our current lead product candidates are:

- 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 agents and pesticides.

Recent Developments

Canadian Exit Activities

Due to U.S. Department of Defense, or 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 at this time, our management decided to shut down our Protexia®-related operations in Canada. We are in the process of closing down these operations. We incurred wind-down costs in the fourth quarter of 2010 of approximately $0.6 million (related to one-time termination benefits and severance payments) and will incur additional wind-down costs in the first half of 2011, for which we do not anticipate reimbursement by the government. We estimate the unreimbursed wind-down costs in 2011 to be approximately $0.1 million. We also wrote down the net book value of our Protexia® related assets (consisting primarily of farmland, buildings and related improvements, furniture, fixtures, equipment and patents) of approximately $4.6 million as of December 31, 2010.

Litigation Against Siga Technologies

Trial on all counts in PharmAthene's suit against Siga Technologies commenced on January 3, 2011 and was completed on January 21, 2011. Post-trial briefs are due and closing arguments will be held prior to the end of April 2011.

Business Concept and Strategy

Our goal is to become the premier company worldwide specializing in the development and commercialization of prophylactic and therapeutic drugs for defense against bioterrorism and emerging infectious diseases. Our strategy to achieve this objective includes the following elements:

Maximize the value of our current product candidate portfolio as well as products that we may acquire in the future. Our products target areas that the U.S. government has identified as having critical biodefense needs and preclinical data indicates that our products can meet those needs. We intend to develop these products aggressively while fulfilling the requirements of the U.S. government's contracting processes. Development and contracting requirements of biodefense products are unique, and we continue to build capabilities to meet the requirements while developing our products. We are also looking to bring products into our portfolio that have both biodefense and commercial applications.

Continue to build and leverage core capabilities in biodefense. 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 expect to leverage by acquiring additional biodefense product candidates through licensing and mergers and acquisitions. 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 2005 at over $8 billion and has averaged around $5.4 billion since fiscal year 2007. Funding in fiscal year 2011 is still in flux as the government is currently operating under a continuing resolution at fiscal year 2010 levels.

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, governs and funds with $5.6 billion the procurement of biodefense countermeasures 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 2009, of the total $5.6 billion, approximately $2 billion in procurement contracts had been awarded and approximately $1 billion had been transferred out of the Project BioShield Special Reserve funds ("SRF") for non-procurement related activities. Remaining funds in the SRF are now approximately $2.4 billion. Funding available for advanced development of medical countermeasures is unclear for fiscal year 2011. The President's budget included $476 million to be transferred from the SRF, an increase of $171 million over fiscal year 2010. However, because a budget for fiscal year 2011 has not been completed, our government customers are operating at fiscal year 2010 levels.

Military: The 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 biodefense budget for fiscal year 2010 was approximately $680 million, similar to amounts for 2010 and 2009. We anticipate that annual funding for these programs in the near-term will increase slightly as DoD rolls out its advanced development and manufacturing initiative in fiscal year 2012.

Non-U.S. Markets: Non-U.S. markets address protection against biowarfare agents for both civilians and military personnel in foreign countries. We anticipate that foreign countries will want to procure biodefense products as they are developed and validated by 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 priorities: anthrax, smallpox, botulinum toxin, radiation, and nerve agent exposure. To evaluate and select the best products for these threats, the DHHS typically issues Requests for Information ("RFI") 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, 2010, 11 awards have been made under Project BioShield, including those for 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 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 25% to 60% mortality rate if left untreated. Cutaneous anthrax generally causes skin infections within a week or two after exposure. Cutaneous anthrax is the least fatal. Without treatment, up to 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 World Health Organization estimates that 50 kilograms of *B. anthracis* spores released upwind of a city of 500,000 people could result in up to 95,000 fatalities, with an additional 125,000 persons being incapacitated.

In light of the limited effectiveness of the use of antibiotics and supportive care, we believe that this currently available treatment for inhalational anthrax is 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®, with a prolonged half-life, might allow for a shorter duration of antibiotic dosing to achieve adequate post-exposure prophylaxis.

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.

Nerve agents that are liquid at room temperature, such as VX, are generally lethal far more quickly and in far lower quantities than classic chemical weapons, and are effective both when inhaled and when absorbed through the skin. These agents can be delivered through explosive devices, spray tanks or most liquid or gas dispersion devices and machinery.

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 to initiate the toxic cascade and cell entry of toxins produced by the bacterium. SparVax™ has been shown to be protective in rabbit and non-human primate models when animals are vaccinated and then exposed to lethal inhalation doses of anthrax spores. One Phase I and two Phase II clinical trials have been completed in 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 IND and allowed for the initiation of clinical trials of SparVax™.

Non-clinical Studies

SparVax™ is being developed utilizing the Animal Rule (21 CFR 609.1(a)(1-4)) 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 NIAID and conducted by a commercial 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 spores.

Clinical Studies

The Phase I trial was a dose escalation study designed to evaluate a range of dose levels administered in two different 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.

The Phase II program was designed to include larger subject numbers and a three-dose schedule at the two highest dose levels tested in Phase I. Two Phase II trials were conducted, both of which studied the effect of different dose levels and different dosing schedules.

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

The Phase IIb trial compared a longer dosing regimen at two different dose levels with a smaller control group who received the currently licensed anthrax vaccine, BioThrax®. Here, too, SparVax™ was 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 a comparable level of response was achieved with both vaccines and with both doses of SparVax™. While both vaccines were immunogenic following the 3-dose series with response rates of approximately 90%, an increased proportion of individuals experienced injection site pain in the BioThrax® group 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).

Funding

To date, funding for the development of SparVax™ has occurred under two contracts from the NIH originally entered into in 2002 and 2003 which, not including the modification discussed below, provided for aggregate funding of up to approximately $117.7 million.

In February 2010, we entered into a contract modification to our existing advanced development contract for SparVax™. During the base period of performance under the contract modification, i.e., through September 1, 2013, we could receive payments of up to approximately $61 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 March 2010, a third party filed a bid protest with the U.S. Government Accountability Office ("GAO"), challenging the decision by HHS to enter into the contract modification. On March 19, 2010 HHS suspended performance under the modification pursuant to the automatic stay provisions of the FAR, pending a decision by the GAO on the protest. The GAO denied the protest and the related stop work order was lifted on June 8, 2010.

In February 2010, we submitted a White Paper under an open Broad Area Announcement ("BAA") requesting further funding to support our advanced development efforts for SparVax™. BARDA has informed us that while it remains committed to the development of a stable rPA anthrax vaccine, it has requested re-submission of the Company's funding proposal after completion of the SparVax™ manufacturing technology transfer process and successful production of the bulk drug substance at the Company's U.S. manufacturer, Merck RTP. Transfer of the manufacturing process from the prior UK site to the U.S. is on target and scheduled for completion in mid-2011. It is currently unclear precisely when BARDA will consider a new funding request. Scale-up and other advanced development activities related to SparVax™ will continue under the Company's existing contract with BARDA. We are currently in discussions with BARDA about modifying the activities under our current contract to focus primarily on the production of current Good Manufacturing Practices ("cGMP") material, conducting another human clinical study, and demonstrating product stability.

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 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). Valortim® binds 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 potency and a potentially unique mechanism of action of Valortim® may differentiate it from competing products.

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 made an initial $2.0 million payment to BMS to fund planned development activities in 2004, and we are responsible for funding all research and development and commercialization activities that exceed current and future government funding. The collaboration agreement provides that BMS and PharmAthene will share operating profits according to a formula that establishes our share of the profits at between 20% and 60%, generally as follows: (i) upon execution of the collaboration agreement and the $2.0 million initial payment, our profit share was 20%; (ii) to maintain our 20% profit share we are required to contribute funding in an amount equivalent to the funding provided by the U.S. government to BMS via grants awarded to fund Valortim® development work (approximately $7.2 million); (iii) our share of operating profits will increase to 50% if a contract for the procurement of Valortim® is entered into with the U.S. government and we have satisfied our obligation to fund the additional $7.2 million (which condition we believe we have satisfied); and (iv) our share of the operating profits can increase by 10% for every $5 million of funding we provide over and above the initial payment of $2.0 million and the amount that we provide as funding in excess of the $7.2 million in matching funds provided to BMS. Our aggregate share of the operating profits is capped at 50% if the condition under clause (iii) is not satisfied and 60% if it is satisfied. Should the parties enter into a contract for the procurement of Valortim® with the U.S. government prior to our satisfying our obligation under clause (ii) above, we are required to make a milestone payment to BMS in an amount up to $1.5 million in order to achieve a 50% profit share in the program. 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.

Additional animal model development and testing of Valortim® for therapeutic efficacy in African green monkeys is being carried out under a Collaborative Research and Development Agreement with the U.S. Army Medical Research Institute of Infectious Diseases. We had an end-of-Phase I meeting with the FDA in October 2007 during which the FDA agreed that the African green monkey model is acceptable as one of the two required species for licensure of Valortim® under the Animal Rule. In October 2008, we announced results from a pilot study, funded by NIH, designed to refine a rabbit model as a predictive therapeutic model for anthrax inhalation and which showed that Valortim® enhanced survival as compared to a control group in this animal model. We presented additional confirmatory data in both the African green monkey and New Zealand white rabbit models in 2009.

Valortim® has received Fast Track designation from the FDA, which generally indicates that the FDA will facilitate the development and expedite the regulatory review of the product depending on the FDA's resources. However, we can provide no assurance that the review will be successful. In addition, the FDA may withdraw its approval of a Fast-Track product on a number of grounds, including the sponsor's failure to conduct any required post-approval study with due diligence and failure to continue to meet criteria for designation. Valortim® has also been granted orphan drug status, a designation for drugs developed for diseases which affect less than 200,000 persons in the United States and provides for reduced fees to the FDA, market exclusivity for seven years, and other FDA-related privileges**.**

Clinical and Non-clinical Studies

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

Clinical Phase I Studies

PharmAthene and BMS have completed dosing in a 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®. This trial involved the use 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. While both adverse reactions resolved after cessation of the administration of Valortim® and appropriate medical treatment, and neither of the subjects appears to have experienced any further or lasting adverse consequences, we temporarily halted the trial in accordance with the requirements of the clinical trial protocol and informed the FDA, NIAID and BARDA of these developments. The FDA placed the Valortim®/ciprofloxacin study on partial clinical hold pending the outcome of an investigation.

Following completion of our investigation, which included a subcutaneous skin testing study with five subjects, including the two subjects who had the adverse reactions, that showed no positive skin test reactions, the FDA lifted the partial clinical hold in December 2010. That same month, we commenced an intravenous (IV) dose-escalation study of Valortim® with a slower infusion rate than that used in the Valortim®/Ciprofloxacin study. To date, no serious adverse reactions have been observed in this trial, the in-life portion of which we anticipate will be completed in the third quarter of 2011.

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 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 test positive for PA in the blood. Up to 70% of animals treated intravenously with Valortim® survived. In general, the mortality rate for control animals exposed to inhalational anthrax 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. On September 28, 2007, NIAID awarded to PharmAthene 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 under this program runs through September 29, 2011. While the Company has reached out to BARDA to explore potential future funding alternatives, future government funding for Valortim® beyond the current contract term remains uncertain.

Recombinant Human Butyrylcholinesterase Nerve Agent Countermeasure

In 2006 we entered into a contract with the DoD to develop a medical countermeasure for nerve agent exposure to protect the warfighter. This program utilizes the recombinant enzyme butyrylcholinesterase, or “rBChE”, a naturally occurring bioscavenger, as its active ingredient. Our first generation program for producing rBChE, which we refer to as Protexia®, utilizes transgenic goats to produce the enzyme in their milk. 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 plasma.
- 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.
- Potential to deliver an rBChE product on a timeline consistent with, and possibly shorter than, that for Protexia®.

In December 2010 the DoD elected to defer a decision on whether to fund advanced development of Protexia® for the time being, potentially for several years, due to budget constraints and potential concerns about duration of protection with the current route of Protexia® administration as compared to the human blood plasma derived BChE product. As such, our September 2006 contract for the advanced development of Protexia® expired on December 31, 2010. We have shut down our Protexia®-related operations and entered into an agreement with a third party to store the materials necessary for production of Protexia® should the government decide to reinitiate funding in the future.

We currently anticipate the DoD to award to us shortly a fixed price contract for up to approximately $5.7 million to support on-going research we have been conducting and funding related to the production of rBChE using a mammalian-cell based advanced expression system (or AES).

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 HHS may, with the concurrence of the Secretary of the Department of Homeland Security, or DHS, and upon the approval of the President, to 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 HHS must determine that there is 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. This legislation will also allow unlicensed products to be procured for the SNS so that they are available at the time an emergency is declared. 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 EUA, respectively.

Project BioShield also allows the Secretary of HHS to authorize the emergency use of medical products that have not yet been approved by the FDA. To exercise this authority, the Secretary of HHS must conclude that:

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

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

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 HHS 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, last year, 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, which the FDA must present to Congress by January 15, 2012, and until 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™, we are in the process of finalizing the transfer of the rPA bulk drug substance manufacturing to a new CMO, Merck RTP. 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.

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

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			Filed	
	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 27, 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
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
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, 2010 and 2009, we incurred $20.9 million and $30.2 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 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, Paxvax, 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., and IQ Corporation BV.

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, 2010, we employed 85 persons on a full-time basis and 2 on a part-time basis, including 53 individuals engaged in research and development activities and 34 individuals engaged in general and administrative functions, such as human resources, finance, accounting, legal and investor relations. Our staff includes 20 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.

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, 2010, 2009 and 2008 we incurred net losses of approximately $34.8 million, $32.3 million, and $36.4 million, respectively and had an accumulated deficit of approximately $189.9 million at December 31, 2010. As of such date, we had working capital of approximately $17.4 million and equity of $12.2 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.

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 PharmAthene will incur substantial losses for the foreseeable future as a result of increases in its 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:

- 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 Merck & Co., Inc.) $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™. RFP-BARDA-08-15 was cancelled by BARDA in December 2009. Accordingly, our obligation to pay Avecia 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 continuing turmoil affecting the banking system and financial markets and the possibility that financial institutions may consolidate or cease operations has resulted in a tightening in the credit markets, a low level of liquidity in many financial markets and volatility in fixed income, credit, currency and equity 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 complaint against SIGA may not yield a favorable outcome.

In December 2006, we filed a complaint against Siga Technologies, Inc., or SIGA, in the Delaware Chancery Court. The complaint alleges, among other things, that we have the right to license exclusively development and marketing rights for SIGA's drug candidate, SIGA-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. We are seeking alternatively a judgment requiring SIGA to enter into an exclusive license agreement with the Company for SIGA-246 in accordance with the terms of the term sheet attached to the merger agreement or monetary damages.

In January 2008, the Delaware Chancery Court issued a ruling denying a motion by SIGA to dismiss the complaint. SIGA filed a counterclaim against the Company alleging that we breached our duty to engage in good-faith negotiations by, among other things, presenting SIGA with a bad-faith initial proposal for a license agreement that did not contain all necessary terms, demanding SIGA prepare a complete draft of a partnership agreement and then unreasonably rejecting that agreement, and unreasonably refusing to consider economic terms that differed from those set forth in the license agreement term sheet attached to the merger agreement. SIGA is seeking recovery of its reliance damages from this alleged breach; at trial, SIGA submitted evidence of such damages amounting to approximately $144,000. SIGA has also denied that it breached the agreement and has asserted that we have no basis for any recovery.

Discovery in the case closed in February 2010. In March 2010 SIGA filed a motion for summary judgment, and subsequently we filed an answering brief in April 2010 and SIGA filed its reply brief. Oral argument on SIGA's motion for summary judgment was held in the Delaware Court of Chancery in July 2010. The court issued a ruling in November 2010 denying in full SIGA's motion for partial summary judgment. Trial on all counts in PharmAthene's complaint commenced on January 3, 2011 and was completed on January 21, 2011. Post-trial briefs are due and closing arguments will be held prior to the end of April 2011. The outcome of the case is uncertain. The court could rule against us and find that SIGA did not breach that agreement. Furthermore, even if the Court rules in our favor, there can be no assurance that the associated remedy will be significant.

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. 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 RTP, Inc.'s parent company by Merck & Co., Inc. in 2009 and of Avecia's CMO subsidiary (Avecia Biologics) by Merck & Co., Inc. in 2010 and the subsequent recently announced pending sale of these two entities by Merck to Fuji Film), 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 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. 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 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 do not, at this time, have established criteria for review and approval of these types of products outside their normal review process; i.e., there is no "Animal Rule" equivalent, and consequently 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 have engaged a new contract manufacturer, Merck RTP, to replace Avecia to manufacture bulk drug substance for SparVax™ and are engaged in a technology transfer process to this new contract manufacturer. Merck RTP has not manufactured this bulk drug substance before. There can be no assurance that we will be successful in our technology transfer efforts or 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. We have completed only one Phase I clinical trial for Valortim® with our development partner, BMS, 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.

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 current economic downturn, the accompanying fall in tax revenues and the U.S. government's efforts to stabilize the economy, the U.S. government may be forced or choose to reduce or delay spending in the biodefense field 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 U.S. Department of Defense, or 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 at this time, we are in the process of closing down our Protexia®-related operations. We incurred wind-down costs in the fourth quarter of 2010 of approximately $0.6 million and will incur additional wind-down costs in the first half of 2011, for which we do not anticipate reimbursement by the government. We estimate the unreimbursed wind-down costs in 2011 to be approximately $0.1 million. We also wrote down the net book value of our Protexia® related assets of approximately $4.6 million as of 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$_{TM}$. We are in discussions with BARDA about modifying the activities under our current contract to focus primarily on the production of cGMP material, conducting another human clinical study, and demonstrating product stability. 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® runs through September 29, 2011. While the Company has reached out to BARDA to explore potential future funding alternatives, future government funding beyond the term of the current contract remains uncertain.

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 current economic downturn, the accompanying fall in tax revenues, and the U.S. government's efforts to stabilize the economy, the U.S. government may be forced or choose to reduce or delay spending in the biodefense field 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 HHS to modify its existing research and development contract with us for the development of SparVax™. In March 2010 HHS 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 HHS "stop work" order canceled in June 2010, the protest contributed to a reduction in revenues and cash and cash equivalents over the period that work could not be performed under the modification. In addition, we incurred unexpected general and administrative expenses to intervene in the protest.

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

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

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 hold two U.S. patents, 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 reproduction of antibodies. 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.

In particular, as noted above in “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 are transferring the manufacturing process for the bulk rPA drug substance from Avecia in the United Kingdom to Merck RTP, a U.S.-based contract manufacturer. There can be no assurance that we will be able to recruit and hire the necessary staff in the U.S. to complete the transfer of the manufacturing process in a timely and cost effective manner.

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 are unable to make progress with respect to our plan to regain compliance with the minimum stockholders' equity requirements imposed by the NYSE Amex within the required timeframes, 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 are 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 have stockholders' equity of less than $2.0 million, $4.0 million and $6.0 million and losses from continuing operations and net losses in two of our three most recent fiscal years, three of our four most recent fiscal years and our five most recent fiscal years, respectively.

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. Based on the information in our compliance plan and related discussions with exchange staff, the NYSE Amex determined that we had made a reasonable demonstration of our ability to regain compliance with Sections 1003(a)(i), (ii) and (iii) of the NYSE Amex Company Guide by January 26, 2012 and that it would continue the listing of our common stock subject to conditions. The conditions currently include (a) the requirement to provide exchange staff with updates on the initiatives included in our compliance plan, at least once each quarter concurrent with our corresponding periodic SEC filing, and (b) the periodic review of our compliance with the plan by exchange staff. If we do not show progress consistent with our compliance plan, or we do not meet the continued listing standards by January 26, 2012, the NYSE Amex could initiate delisting proceedings.

Furthermore, if we fail to satisfy any other continued listing standard, such as the requirements that issuers have more than 200,000 shares publicly held, 300 public shareholders, or an aggregate market value of shares publicly held of more than $1,000,000, or 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 also decide to 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 conversion and exercise of warrants and options could dilute our shareholders and depress the market price of our common stock.

We have filed a shelf registration statement on Form S-3, which was declared effective on February 12, 2009 in connection with a sale from time to time of common stock, preferred stock or warrants or any combination of those securities, either individually or in units, in one or more offerings for up to $50,000,000 (inclusive of the gross proceeds from our November 2010, July 2010, April 2010 and March 2009 registered offerings). We expect to file a new universal shelf registration statement in the future. Raising capital in this or other manners may depress the market price of our stock, and any such financing(s) will dilute our existing shareholders.

In addition, as of December 31, 2010 we had outstanding options to purchase approximately 5.5 million shares of common stock. 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 a registration statement on Form S-3 (File No. 333-161587) covering the resale of shares issued upon conversion of our 10% convertible notes by certain of our affiliates, among other securityholders. The registration statement, which was declared effective on November 25, 2009, only covers the resale of a portion of the shares underlying such notes. We are obligated under the terms of the related registration rights agreement to continue filing registration statements or amendments thereto covering the resale of the remaining portion of the shares underlying the notes, as well as of the shares issuable upon exercise of the related warrants. The sale by these securityholders of their shares pursuant to the registration statement or otherwise could depress the market price of our common stock.

Finally, as of December 31, 2010 the Company had issued and outstanding additional warrants to purchase up to approximately 2.6 million shares of common stock (not including the warrants to purchase approximately 2.6 million shares issued to holders of the convertible notes).

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 2010, 2009 or 2008 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 2,310 square feet of office space in Durham, North Carolina. This lease expires on December 31, 2012.

We own a farm in Canada consisting of 180 acres of land.

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 Technologies, Inc. (“SIGA”) in the Delaware Chancery Court. The complaint alleges, among other things, that we have the right to license exclusively development and marketing rights for SIGA’s drug candidate, SIGA-246, pursuant to a merger agreement between the parties (the “Merger Agreement”) 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.

We are seeking alternatively a judgment requiring SIGA to enter into an exclusive license agreement with us for SIGA-246 in accordance with the terms of the term sheet attached to the merger agreement or monetary damages. In January 2008, the Delaware Chancery Court issued a ruling denying a motion by SIGA to dismiss the complaint. SIGA has filed a counterclaim against us alleging that we breached our duty to engage in good-faith negotiations by, among other things, presenting SIGA with a bad-faith initial proposal for a license agreement that did not contain all necessary terms, demanding SIGA prepare a complete draft of a partnership agreement and then unreasonably rejecting that agreement, and unreasonably refusing to consider economic terms that differed from those set forth in the license agreement term sheet attached to the Merger Agreement. SIGA is seeking recovery of its reliance damages from this alleged breach.

Discovery in the case closed in February 2010. In March 2010 SIGA filed a motion for summary judgment, and subsequently we filed an answering brief in April 2010 and SIGA filed its reply brief. Oral argument on SIGA’s motion for summary judgment was held in the Delaware Court of Chancery in July 2010. The court issued a ruling in November 2010 denying in full SIGA’s motion for partial summary judgment. Trial on all counts in PharmAthene’s complaint commenced on January 3, 2011 and was completed on January 21, 2011. Post-trial briefs are due and closing arguments will be held prior to the end of April 2011.

An accrual for a loss contingency has not been made because the unfavorable resolution of this contingency is not probable.

Item 4. Reserved.

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 2010	High	Low
4th Quarter Ended December 31	$ 4.32	$ 1.40
3rd Quarter Ended September 30	$ 1.69	$ 1.29
2nd Quarter Ended June 30	$ 1.72	$ 1.34
1st Quarter Ended March 31	$ 2.14	$ 1.41

Fiscal Year 2009	High	Low
4th Quarter Ended December 31	$ 4.24	$ 1.21
3rd Quarter Ended September 30	$ 4.14	$ 2.15
2nd Quarter Ended June 30	$ 3.00	$ 2.00
1st Quarter Ended March 31	$ 3.25	$ 1.48

Holders

As of March 24, 2011, in accordance with our transfer agent records, we had 87 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 2010 and 2009 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.

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, 2010 and 2009 as well as our financial positions at December 31, 2010 and 2009, 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 medical countermeasures against biological and chemical weapons. Our current lead product candidates are:

- 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.

Adjustments

In the fourth quarter of 2010, the Company made the following adjustments:

- As discussed in Note 9 to our consolidated financial statements, during the fourth quarter of 2010, the Company incurred expenses of approximately $2.8 million in connection with the call and conversion of its 10% Convertible Notes into shares of Company common stock. Of this amount, approximately $1.2 million related to the accelerated amortization of the debt discount and deferred charges with the conversion of the notes, and approximately $1.1 million related to cash incentive offers.
- As discussed in Notes 2, 6 and 7 to our consolidated financial statements, the Company recognized asset impairment charges and additional depreciation and amortization expense of approximately $4.6 million and severance and one time termination benefits of approximately $0.6 million as a result of its decision to shut down its Canadian operations.
- As discussed in Note 4, the Company recognized approximately $5.8 million of charges relating to the change in the fair value of its derivative instruments as a result of an increase in the Company's stock price to $4.23 at December 31, 2010.
- The Company recognized a reduction in research and development expenses of approximately $0.9 million related to the receipt of certain therapeutic tax grants.

Additionally, the Company reduced its accumulated deficit by $1.3 million as of December 31, 2008 to correct an immaterial error that understated Unbilled Accounts Receivable at that date.

Critical Accounting Policies

Estimates

The preparation of financial statements in conformity with generally accepted accounting principles in the U.S. requires us 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. We base our estimates and assumptions on historical experience and various other factors that are believed to be reasonable under the circumstances. Actual results could differ from our estimates and assumptions. We believe the following are our critical accounting policies, i.e., they affect our more significant estimates and assumptions and require the use of difficult, subjective and complex judgment in their application.

Revenue Recognition

We generate our revenue from two different types of contractual arrangements: cost-plus-fee 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. 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**.**

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 2010 and 2009, we recorded approximately $2.0 million and $2.4 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, 2010, “Other receivables (including unbilled receivables)” were approximately $4.3 million, of which approximately $4.0 million were unbilled accounts receivable.

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 expense all share-based awards to employees, including grants of employee stock options, based on their estimated fair value at the date of grant. Costs of all share-based payments are recognized over the requisite service period that an employee must provide to earn the award (i.e. usually the vesting period) and charged to the functional operating expense associated with that employee.

Intangible Assets

Because of the nature of pharmaceutical research, and particularly because of the difficulties associated with efficacy studies in humans related to the bioterrorist products with which we work and the government's related funding provisions, factors that affect the estimate of the life of an asset are often more uncertain than with respect to other non-bioterrorist pharmaceutical research. We review the carrying value of our intangible assets for impairment annually during the fourth quarter of every year, or more frequently if impairment indicators exist, in accordance with ASC Section 360-10-35, "Impairment or Disposal of Long-Lived Assets." Evaluating for impairment requires judgment, including the estimation of future cash flows, future growth rates and profitability and the expected life over which cash flows will occur. Changes in the Company's business strategy or adverse changes in market conditions could impact impairment analyses and require the recognition of an impairment charge equal to the excess of the carrying value of the intangible asset over its estimated fair value. If impairment is indicated, we measure the amount of such impairment by comparing the carrying value of the assets to the present value of the expected future cash flows associated with the use of the asset. We recognized impairment of assets in Canada associated with the decision to close the farm in the fourth quarter of 2010 with the completion of the Protexia® contract.

Results of Operations

Revenue

We recognized revenue of $21.0 million and $27.5 million during the years ended December 31, 2010 and 2009, respectively.

Our revenue consisted primarily of contract funding from the U.S. government for the development of Protexia®, SparVax™ and Valortim®. Our revenue in the year ended December 31, 2010 changed from the comparable period of 2009 due to the following:

- Under the September 2006 contract with the DoD for the advanced development of Protexia®, we recognized $5.8 million and $6.9 million of revenue for the years ended December 31, 2010 and 2009, respectively. The decline in revenue in 2010 is primarily attributable to decreased Protexia revenues resulting from the completion of major development activities for this program in the third quarter of 2009. This contract expired on December 31, 2010, and no future revenues will be generated under this contract. We currently anticipate the DoD to award to us shortly a fixed price contract for up to approximately $5.7 million to support on-going research we have been conducting and funding related to the production of rBChE using a mammalian-cell based advanced expression system (or AES).

- Under our contract for the development of SparVax™, we recognized approximately $11.7 million and $11.5 million of revenue for the years ended December 31, 2010 and 2009, respectively. The overall modest increase in revenue in the 2010 period as compared to 2009 was primarily the result of the increase in program activities under the contract during the later period. These additional activities included the progression of our bulk drug substance technical transfer to Merck RTP and the successful achievement of contract milestones, such as stability evaluation which resulted in fee payments under the contract. The increase in revenue due to these activities was partially offset by the effect of the bid protest filed by a third party with the U.S. Government Accountability Office (GAO) in March 2010 (denied in June 2010), which resulted in a suspension of activities under this program.

- Under the September 2007 contract for the advanced development of Valortim®, we recognized $3.0 million and $6.2 million of revenue for the years ended December 31, 2010 and 2009, respectively. The significant decrease in revenue is reflective of the decreased activity while we conducted our investigation into the adverse events observed during the Valortim® /ciprofloxocin phase I clinical trial. In December 2010, the FDA took Valortim® off partial clinical hold and consented to our proposed dose-escalation Phase I human clinical trial. That trial commenced in December 2010, and to date we have not observed any significant adverse events related to Valortim®. The term of our current government contract for development of Valortim® runs through September 29, 2011, and we expect to generate increased revenue under that contract as compared to 2010. While the Company has reached out to BARDA to explore future funding alternatives, future government funding for Valortim® beyond the term of the current contract remains uncertain at this time.

Research and Development Expenses

Our research and development expenses were $20.9 million and $30.2 million for the years ended December 31, 2010 and 2009, respectively. These expenses primarily resulted from research and development activities related to our SparVax™, Valortim® and Protexia® programs. They include both direct expenses, which 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, 2010 and 2009 were net of cost reimbursements under certain of our government grants of approximately $2.9 million and $2.4 million, respectively. Included in the 2010 grants was approximately $0.9 million in Therapeutic Discovery Tax Grants.

Research and development expenses for the years ended December 31, 2010 and 2009 were attributable to research programs as follows:

	Year ended	
($ in millions)	December 31, 2010	December 31, 2009
Anthrax therapeutic and vaccines	$ 15.2	$ 21.4
Chemical nerve agent protectants	4.7	7.0
Recombinant dual antigen plague vaccine	0.1	1.6
Internal research and development	0.9	0.2
Total research and development expenses	$ 20.9	$ 30.2

For the year December 31, 2010, research and development expenses decreased $9.3 million from the prior year period. Research and development expenses decreased compared to the prior year period because of decreased activity in the Company's Valortim® anthrax anti-toxin and chemical nerve agent bioscavenger programs as well as the completion of all activities in the Company's plague vaccine program and the effect of a $3.0 million one-time termination fee to Avecia incurred in the second quarter of 2009, partially offset by increased activity under the SparVax™ anthrax vaccine program. These additional activities included the progression of our bulk drug substance technical transfer to Merck RTP and the successful achievement of contract milestones. Research and development expenses were also partially offset by Therapeutic Discovery Tax Grants received in the fourth quarter of 2010 of approximately $0.9 million.

The decrease in development expenses related to the chemical nerve agents protectant program resulted from reduced process development and manufacturing activities as the program completed the first phase of work under the September 2006 contract by the end of 2009. We expect to incur a lower level of costs (and related revenues) over the next 12-24 months than we have historically incurred under the chemical nerve agent protectants program as we transition to the AES production platform for rBChE. In addition, we incurred wind down costs in the fourth quarter of 2010 related to our Protexia® program of approximately $0.6 million, for which we do not anticipate reimbursement by the government. We believe the unreimbursed wind down costs in 2011 will be approximately $0.1 million. In the fourth quarter of 2010 we wrote down the net book value of our Protexia® related assets of approximately $4.6 million.

General and Administrative Expenses

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

Expenses associated with general and administrative functions were $18.0 million and $ 22.4 million for the years ended December 31, 2010 and 2009, respectively.

General and administrative expenses decreased approximately $4.4 million for the year ended December 31, 2010, as compared to the prior year due to cost savings measures taken in 2010 that yielded reductions in a variety of general and administrative expenses, along with the re-assignment of certain employees previously classified as general and administrative into roles in research and development. These reductions were partially offset by the recording of bad debt expense in 2010 of approximately $2.9 million which was primarily associated an invoice to our government customer related to rPA anthrax vaccine development work performed at Avecia prior to the transfer of development activities to a U.S.-based manufacturer and the novation of our government contract for the advanced development of our rPA anthrax vaccine candidate from NIH to BARDA and the wind down of the third-generation anthrax vaccine program.

Depreciation and Intangible Amortization

Depreciation and amortization expenses were $5.7 million and $0.9 million for the years ended December 31, 2010 and 2009, respectively. The increase in these expenses in 2010 is primarily due to the write down of approximately $4.6 million related to the impairment of Canadian assets associated with the Protexia® contract that expired on December 31, 2010.

Other Income and Expenses

Other income and expenses 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, loss on early extinguishment of debt, and foreign currency transaction gains or losses.

For the years ended December 31, 2010 and 2009, we recognized interest income on our investments of approximately $0.0 million and $0.3 million, respectively. The decrease in interest income is primarily attributable to the reduced average balances of our investments and cash balances as we continue to use cash to support our operations, along with lower prevailing interest rates.

We incurred interest expense of $5.9 million and $2.8 million for the years ended December 31, 2010 and 2009, respectively. Interest expense for both periods relates to our then outstanding 10% convertible notes. Interest expense for the year ended December 31, 2010 relates to the acceleration of the amortization of the debt discount associated with the conversion of the 10% convertible notes in the fourth quarter of 2010, the inducement interest payments made to the noteholders in connection with our early conversion offer in November 2010, and the ongoing interest expense associated with the amortization of the debt discount arising from the allocation of fair value to the stock purchase warrants issued in connection with the 10% convertible notes prior to their conversion in the fourth quarter of 2010. Interest expense for the year ended December 31, 2009 relates primarily to our then outstanding secured credit facility (which was repaid in full during the third quarter of 2009), our 8% convertible notes (which were exchanged for 10% notes or repaid during the third quarter of 2009), and our 10% convertible notes.

The change in the fair value of our derivative instruments (Common Stock Purchase Warrants) was a loss of approximately $5.5 million for the year ended December 31, 2010 compared to an approximate $1.0 million gain for the year ended December 31, 2009. The fair value of these derivative instruments is estimated using the Black-Scholes option pricing model.

Liquidity and Capital Resources

Overview

Our primary cash requirements through the end of 2010 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, 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.

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, and the trust funds obtained in the Merger. 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. We believe that based on our current operating cash requirements and expected capital expenditures, and assuming expected receipts from our government contracts, grants and other sources of funding are realized, we will not require additional funding to continue our current level of operations through at least the end of 2011.

At December 31, 2010, accounts receivables and other receivables (including unbilled receivables) totaled approximately $9.7 million. The bid protest filed by a third party with the GAO in March 2010, challenging the decision by the HHS to enter into the modification to our research and development contract with BARDA for the development of SparVax™, and resulting “stop-work” order, caused delays in our work under that modification. The bid protest was ultimately denied, and the related stop work-order canceled in June 2010. Nevertheless, the protests, along with the accumulated billing and collection delays, have reduced revenues and our available cash and cash equivalents during the first nine months of 2010. The combination of these two developments reduced our operating cash flows, which resulted in a need for additional financing to fund our working capital needs.

In April 2010, we completed a public offering of 1,666,668 shares of 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 net proceeds of approximately $2.2 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. These warrants are a derivative liability and as such are reflected at fair value in the consolidated balance sheets. The fair value of this derivative liability will be re-measured at the end of every reporting period and the change in fair value will be reported in the consolidated statement of operations as other income (expense).

In July 2010, we completed a public offering of 2,785,714 shares of 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 net proceeds of approximately $3.5 million. The warrants became exercisable on January 23, 2011 and expire on January 23, 2017. These warrants are a derivative liability and as such are reflected at fair value in the consolidated balance sheets. The fair value of this derivative liability will be re-measured at the end of every reporting period and the change in fair value will be reported in the consolidated statement of operations as other income (expense). 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 closed on 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 estimated net proceeds of approximately $15.9 million (after deducting placement fees of approximately $1.0 million and estimated legal and other fees of approximately $0.4 million).

Under the terms of our previously outstanding 10% convertible notes, unless earlier converted, redeemed or accelerated, the outstanding principal plus accrued interest was payable at maturity on July 28, 2011. We had the right to redeem all or a portion of these convertible notes. Under the terms of the notes, each holder converting notes was entitled to receive a number of shares corresponding to principal and accrued interest through the date of conversion (plus any accrued and unpaid late charges) at a conversion price of approximately $2.54 per share. In November 2010, we offered to pay each holder exercising a conversion right an amount in cash corresponding to the interest foregone, i.e., the interest the holder would have received between November 2010 and the maturity date had they held the note through maturity. Simultaneously with the closing of our November 2010 public offering, certain of our affiliates, officers and directors who owned convertible notes converted their notes into an aggregate of approximately 3.4 million shares of our common stock. These converting noteholders received cash payments of approximately $0.6 million in the aggregate, corresponding to the interest foregone. As of December 31, 2010, substantially all remaining holders of these notes in the aggregate principal amount (plus accrued interest) of approximately $13.2 million, including affiliates, converted their notes, resulting in the issuance of approximately 5.2 million additional shares of our common stock, while one small noteholder elected to have his notes redeemed for cash on December 31, 2010. Of this group of remaining holders, holders of notes in the aggregate principal amount (plus accrued interest) of approximately $8.4 million elected to accept our early conversion offer and received cash payments of approximately $0.5 million in the aggregate, corresponding to the interest they would have accrued following conversion had they held the notes to maturity. At December 31, 2010, none of the 10% convertible notes remain outstanding. The cash payments are included in interest expense on the 2010 consolidated statement of operations.

Under the terms of our agreements with Avecia , we are required to pay Avecia $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™. RFP-BARDA-08-15 was cancelled by BARDA in December 2009. Accordingly, our obligation to pay Avecia 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 turmoil affecting the banking system and financial markets and the possibility that financial institutions may consolidate or cease operations has resulted in a tightening in the credit markets, a low level of liquidity in many financial markets, and extreme volatility in fixed income, credit, currency and equity 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 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, cash equivalents, restricted cash and short-term available-for-sale investments were $11.9 million and $5.8 million at December 31, 2010 and December 31, 2009, respectively. The $6.1 million increase at December 31, 2010 was primarily attributable to the cash received from the sale of equity during the fourth quarter of 2010. As of December 31, 2010 and 2009, total accounts receivables and other receivables (including unbilled receivables) were $9.7 million and $18.7 million, respectively.

We are now current with the billing of our second generation anthrax vaccine program. In addition, the bid protest (which was denied in June 2010) with respect to the modification to our research and development contract with BARDA for the development of SparVax™, and resulting "stop-work" order, along with the accumulated billing and collection delays, reduced revenues and our available cash and cash equivalents during the first nine months of 2010.

As noted above under "*Liquidity and Capital Resources – Overview"*, in April, July, November and December 2010, we completed various public offerings of common stock and warrants and converted our outstanding 10% convertible notes into shares of common stock (with one note being redeemed).

As part of the wind down of activities related to the expiration of our September 2006 development contract with the DoD for Protexia®, management has reclassified certain related assets, including our production facility in Canada to assets held for sale with anticipated disposal in 2011.

Operating Activities

Cash used in operating activities was $14.9 million and $28.1 million for the years ended December 31, 2010 and 2009, respectively. 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 share based compensation of $2.5 million, decreases in prepaid expenses and other current assets of $4.2 million, decreases in accounts receivable of $1.8 million, increases in depreciation and amortization of $5.7 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.

Cash used in operations during the year ended December 31, 2009 reflects our net loss of $32.3 million, adjusted for certain non-cash items, including loss on extinguishment of debt of $4.7 million, share-based compensation of $3.4 million, non-cash interest expense of $1.5 million, an increase in billed accounts receivable of $4.9 million, an increase in unbilled accounts receivable of $3.1 million and a net decrease in accrued expenses and accounts payable of $1.4 million.

Investing Activities

Net cash provided by investing activities was $2.8 million for the year ended December 31, 2010, compared to $8.0 million used in investing activities for the year ended December 31, 2009. Investing activities for the 2010 period related primarily to liquidating investments to meet working capital requirements.

Investing activities for 2009 related primarily to the payment in June 2009 of $7.0 million of deferred purchase consideration to Avecia, and approximately $1.0 million of capital expenditures.

Financing Activities

Net cash provided by financing activities was $21.5 million for the year ended December 31, 2010 as compared to $18.8 million provided by financing activities for the year ended December 31, 2009. Net cash provided by 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, July, and November 2010.

In March 2009, we raised net proceeds of approximately $5.0 million as a result of the public sale of shares of our common stock and warrants. We raised $10.5 million in the July 2009 private placement of 10% convertible notes and related warrants, and used $9.5 million of those proceeds to repay our existing convertible notes (including accrued interest) and all amounts outstanding under our credit facility. We exchanged and cancelled $8.8 million of our then-outstanding 8% convertible notes for our newly issued 10% convertible notes and stock purchase warrants. As noted above, at December 31, 2010, none of the 10% convertible notes remained outstanding. Additionally, pursuant to the payment to Avecia of the deferred purchase consideration and the repayment of all amounts due under our credit facility, we eliminated all of our then applicable restricted cash obligations (approximately $13.3 million).

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements.

Contractual Obligations

The following are contractual commitments at December 31, 2010 associated with leases, research and development arrangements, collaborative development obligations and long term debt:

Contractual Obligations(1)	Total	Less than 1 Year	1-3 Years	3-5 Years	More than 5 years
Operating facility leases	$ 5,193,219	$ 798,954	$ 1,571,922	$ 1,619,238	$ 1,203,105
Research and development agreements	12,385,656	11,556,006	829,650	-	-
Total contractual obligations	$ 17,578,875	$ 12,354,960	$ 2,401,572	$ 1,619,238	$ 1,203,105

(1) This table does not include any royalty payments of 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 Risk.

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.

Evaluation of Disclosure Controls and Procedures

We designed our disclosure controls and procedures, as such term is defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), to provide reasonable assurance that information required to be disclosed by us in reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosures.

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of our disclosure controls and procedures as of the end of the period covered by this report. Based on this evaluation, our principal executive officer and our principal financial officer concluded that our disclosure controls and procedures were effective to provide such reasonable assurance.

In designing and evaluating the disclosure controls and procedures, management recognized that such controls and procedures, as any controls and procedures, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934. Our 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. Our internal control over financial reporting includes those policies and procedures that:

(i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets;

(ii) 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 our management and directors; and

(iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our 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.

Management assessed the effectiveness of our internal control over financial reporting as of December 31, 2010. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control-Integrated Framework*. Based on this assessment, management determined that we maintained effective internal control over financial reporting as of December 31, 2010.

This Annual Report on Form 10-K does not include an attestation report of our independent registered public accounting firm, Ernst & Young LLP, regarding internal control over financial reporting. Management's report was not subject to attestation by our independent registered public accounting firm pursuant to temporary rules of the SEC that permit us to provide only management's report in this Annual Report on Form 10-K.

Changes in Internal Control Over Financial Reporting

During the quarter ended December 31, 2010, there were no changes in our internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) that occurred during 2010 that have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

Item 9B. Other Information.

None.

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.

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. (6)
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. (10)
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. (12)
3.1	Amended and Restated Certificate of Incorporation of the Company, as amended. (25)
3.2	By-laws, as amended. (13)
4.1	Specimen Unit Certificate. (1)
4.2	Specimen Common Stock Certificate. (9)
4.3	Amendment to Unit Purchase Option by and between the Registrant and Maxim Partners, LLC dated January 28, 2007. (7)
4.4	Form of Warrant in connection with Securities Purchase Agreement dated as of March 23, 2009. (21)
4.5	Form of 10% Unsecured Senior Convertible Note. (22)
4.6	Form of Warrant in connection with Note and Warrant Purchase Agreement, as amended as of July 28, 2009. (22)
4.7	Form of Warrant in connection with Securities Purchase Agreement dated as of April 7, 2010. (29)
4.8	Form of Warrant in connection with Securities Purchase Agreement dated as of July 20, 2010. (30)
10.2	Form of Investment Management Trust Agreement between Continental Stock Transfer & Trust Company and the Registrant. (3)

10.2.1	Amendment No. 1 to Investment Management Trust Agreement between Continental Stock Transfer & Trust Company and the Registrant. (5)
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. (6)
10.11	Advisory Agreement by and among Maxim Group LLC and the Registrant, dated January 8, 2007. (7)
10.12	Amended and Restated 2007 Long-Term Incentive Compensation Plan. (15)
10.19.3	Consent, Assumption and Second Loan Modification Agreement, dated as of March 31, 2009, by and among Silicon Valley Bank, Oxford Finance Corporation and PharmAthene, Inc. (21)
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. (9)
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. (9)
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. (9)
10.23	Collaboration Agreement, dated November 29, 2004, by and between the Company and Medarex, Inc. (9)
10.26.1	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. (9)
10.26.2	Second Amendment to Office Lease, by and between the Company and Park Place Trust, dated September 16, 2008. (28)
10.27	Biopharmaceutical Development and Manufacturing Services Agreement, dated June 15, 2007, by and between the Company and Laureate Pharma, Inc. (9)+
10.28	Services Agreement, dated March 2, 2007, by and between the Company and GTC Biotherapeutics, Inc. (9)+
10.30	Form of PharmAthene Inc. Executive Employment Agreement. (17) ++

10.30.1	Employment Agreement, dated April 18, 2008, by and between Eric Richman and the Company ++ (34)
10.30.2	Reserved.
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. ++ (33)
10.30.4	Employment Agreement, dated August 14, 2009, by and between Charles A. Reinhart III and the Company ++, *
10.30.5	Employment Agreement, dated April 5, 2010, by and between Thomas Fuerst and the Company ++, *
10.31	Form of PharmAthene Inc. Confidentiality and Non-Solicitation Agreement. (17)
10.32	Master Services Agreement, dated April 2, 2008, between PharmAthene UK Limited and Avecia Biologics Limited. (17) +
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). (18)+
10.34	Master Service Agreement, dated August 18, 2005, between Avecia Limited and DSTL. (18) +
10.35	Manufacturing Licence Agreement, dated June 20, 2006, between Avecia Limited and DSTL. (18) +
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. (21) +
10.37	Letter Agreement, dated March 20, 2008, between Avecia Biologics Limited and DSTL. (18)+
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. (21) +
10.38	Contract Award by the National Institute of Allergy and Infectious Diseases (NIAID), dated September 25, 2008. (19)+
10.39	Securities Purchase Agreement, dated September 30, 2008, between PharmAthene, Inc. and Kelisia Holdings Ltd. (19)
10.40	Letter Agreement, dated September 30, 2008, between PharmAthene, Inc. and Panacea Biotec, Ltd. (19)
10.41	Investor Rights Agreement, dated October 10, 2008, between PharmAthene Inc. and Kelisia Holdings Ltd. (19)
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. (27) +

10.45	Amendments 1 through 13 to the NIH Prime Contract-Anthrax. (27) + , **
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). (26) +
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). (36) +
10.48	Form of Indemnification Agreement (20)
10.49	Form of Securities Purchase Agreement dated as of March 23, 2009 between the Company and the Purchasers party thereto. (23)
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. (22)
10.52	Form of Registration Rights Agreement, dated as of July 28, 2009 by and among PharmAthene, Inc. and the investors signatories thereto. (22)
10.53	Technology Transfer and Development Services Subcontract, dated as of September 17, 2009, by and between Diosynth RTP Inc. and PharmAthene, Inc. (26) +
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. (24) +
10.55	Form of Securities Purchase Agreement, dated as of April 7, 2010, between PharmAthene and the Purchasers party thereto.(31)
10.56	Form of Securities Purchase Agreement, dated as of July 20, 2010, between PharmAthene and the Purchasers party thereto.(32)
21	Subsidiaries. *
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.*

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(1) Incorporated by reference to the Registration Statement on Form S-1 of the Registrant filed on May 6, 2005.

(2) Reserved.

(3) Incorporated by reference to the Registration Statement on Form S-1/A of the Registrant filed on July 12, 2005.

(4) Reserved.

(5) Incorporated by reference to the Quarterly Report on Form 10-Q filed by the Registrant on November 14, 2005.

(6) Incorporated by reference to the Current Report on Form 8-K filed by the Registrant on January 22, 2007.

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

(8) Reserved.

(9) Incorporated by reference to the Current Report on Form 8-K filed by the Registrant on September 24, 2007.

(10) Incorporated by reference to the Current Report on Form 8-K filed by the Registrant on March 26, 2008.

(11) Reserved.

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

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

(14) Reserved.

(15) Incorporated by reference to Appendix B to the Proxy Statement on Schedule 14A filed by the Registrant on May 15, 2008.

(16) Incorporated by reference to the Current Report on Form 8-K/A filed by the Registrant on June 18, 2008.

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

(18) 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.

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

(20) Incorporated by reference to the Current Report on Form 8-K filed by the Registrant on January 27, 2009.

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

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

(23) 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).

(24) Incorporated by reference to the corresponding exhibit to the Company's quarterly report on Form 10-Q filed on August 13, 2009.

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

(26) Incorporated by reference to the corresponding exhibit to the Company's quarterly report on Form 10-Q filed on November 13, 2009.

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

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

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

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

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

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

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

(34) Incorporated by reference to Exhibit 10.30 to the Company's annual report on Form 10-K for the year ended December 31, 2009.

(35) Incorporated by reference to Exhibit 10.31 to the Company's annual report on Form 10-K for the year ended December 31, 2009.

(36) Incorporated by reference to Exhibit 10.32 to the Company's current report on Form 8-K filed on May 13, 2010.

* 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 31st day of March, 2011.

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, Charles A. Reinhart III, 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 31, 2011
/s/ Charles A. Reinhart III Charles A. Reinhart III	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	March 31, 2011
/s/ John Pappajohn John Pappajohn	Chairman of the Board	March 31, 2011
/s/ John Gill John Gill	Director	March 31 , 2011
/s/ James H. Cavanaugh James H. Cavanaugh, Ph.D.	Director	March 31, 2011
Steven St. Peter, M.D.	Director	
/s/ Derace Schaffer Derace Schaffer, M.D.	Director	March 31, 2011
/s/ Joel McCleary Joel McCleary	Director	March 31, 2011
/s/ Jeffrey W. Runge Jeffrey W. Runge, M.D.	Director	March 31, 2011
/s/ Mitchel Sayare Mitchel Sayare, Ph.D.	Director	March 31, 2011

PHARMATHENE, INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders of PharmAthene, Inc.

We have audited the accompanying consolidated balance sheets of PharmAthene, Inc. as of December 31, 2010 and 2009, and the related consolidated statements of operations, stockholders' equity, and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company’s internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and 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, 2010 and 2009, and the consolidated results of its operations and its cash flows for the years then ended, in conformity with U.S. generally accepted accounting principles.

/s/ Ernst & Young LLP

McLean, Virginia

March 31, 2011

PHARMATHENE, INC.

CONSOLIDATED BALANCE SHEETS

	December 31,	
	2010	**2009**
ASSETS		
Current assets:		
Cash and cash equivalents	$ 11,785,327	$ 2,673,567
Restricted cash	100,000	-
Short-term investments	-	3,137,071
Accounts receivable, net	5,367,130	8,866,346
Other receivables (including unbilled receivables)	4,317,170	9,834,460
Prepaid expenses and other current assets	1,014,002	973,214
Assets held for sale	1,000,100	-
Total current assets	23,583,729	25,484,658
Property and equipment, net	1,178,416	6,262,388
Patents, net	-	928,577
Other long-term assets and deferred costs	88,447	308,973
Goodwill	2,348,453	2,348,453
Total assets	$ 27,199,045	$ 35,333,049
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 3,128,203	$ 1,934,119
Accrued expenses and other liabilities	3,035,284	11,532,101
Total current liabilities	6,163,487	13,466,220
Other long-term liabilities	461,858	452,618
Derivative instruments	8,362,995	835,299
Long-term debt	-	17,426,513
Total liabilities	14,988,340	32,180,650
Stockholders' equity:		
Common stock, $0.0001 par value; 100,000,000 shares authorized; 46,238,244 and 28,130,284 shares issued and outstanding at December 31, 2010 and 2009, respectively.	4,624	2,813
Additional paid-in-capital	200,847,468	157,004,037
Accumulated other comprehensive income	1,250,497	1,188,156
Accumulated deficit	(189,891,884)	(155,042,607)
Total stockholders' equity	12,210,705	3,152,399
Total liabilities and stockholders' equity	$ 27,199,045	$ 35,333,049

See the accompanying notes to the consolidated financial statements.

PHARMATHENE, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

	Year ended December 31,	
	2010	**2009**
Contract revenue	$ 20,993,605	$ 27,549,978
	20,993,605	27,549,978
Operating expenses:		
Research and development	20,875,536	30,219,758
General and administrative	18,015,761	22,432,585
Depreciation and amortization	5,655,865	872,304
Total operating expenses	44,547,162	53,524,647
Loss from operations	(23,553,557)	(25,974,669)
Other income (expenses):		
Interest income	6,955	269,133
Interest expense	(5,936,480)	(2,837,302)
Loss on early extinguishment of debt	-	(4,690,049)
Other income (expense)	91,355	(90,655)
Change in market value of derivative instruments	(5,457,550)	1,043,782
Total other income (expenses)	(11,295,720)	(6,305,091)
Net loss	$ (34,849,277)	$ (32,279,760)
Basic and diluted net loss per share	$ (1.08)	$ (1.17)
Weighted average shares used in calculation of basic and diluted net loss per share	32,309,621	27,575,332

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 12/31/2008	25,890,143	$ 2,589	$ 141,968,772	$ 386,351	$ (122,762,847)	$ 19,594,865
Net Loss	-	-	-	-	(32,279,760)	(32,279,760)
Net unrealized (losses) on short-term investments	-	-	-	(10,199)	-	(10,199)
Foreign currency translation adjustments	-	-	-	812,004	-	812,004
Comprehensive income (loss)	-	-	-	801,805	-	(31,477,955)
Employee vesting of restricted shares	114,336	11	(11)	-	-	-
Issuance of common stock, net issuance costs	2,116,055	212	4,924,058	-	-	4,924,270
Sale of stock purchase warrants	-	-	(1,236,067)	-	-	(1,236,067)
Share-based compensation	-	-	3,444,275	-	-	3,444,275
Shares issued upon exercise of stock options	9,750	1	27,447	-	-	27,448
Equity component of convertible debt	-	-	7,875,563	-	-	7,875,563
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)	-	-	-	62,341	-	(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	-	-	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

See the accompanying notes to the consolidated financial statements.

PHARMATHENE, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year ended December 31,	
	2010	**2009**
Operating activities		
Net loss	$ (34,849,277)	$ (32,279,760)
Adjustments to reconcile net loss to net cash used in operating activities:		
Bad Debt Expense	2,935,063	-
Change in market value of derivative instruments	5,457,550	(1,043,782)
Loss on early extinguishment of debt	-	4,690,049
Depreciation and amortization	1,020,376	872,304
Impairment of assets held for sale	4,635,489	-
Change in Avecia purchase accounting	-	154,456
Compensatory option expense	2,513,159	3,444,275
Non cash interest expense on debt	4,653,633	1,480,284
Changes in operating assets and liabilities:		
Accounts receivable	1,830,221	(4,897,917)
Prepaid expenses and other current assets	4,207,148	(1,915,837)
Accounts payable	1,245,975	(1,939,185)
Accrued expenses and other liabilities	(8,513,914)	3,289,463
Net cash used in operating activities	(14,864,577)	(28,145,650)
Investing activities		
Purchases of property and equipment	(374,581)	(1,029,428)
Purchases of short-term investments	-	(8,406,697)
Proceeds from sales of short-term investments	3,130,588	8,450,339
Payments for Avecia Acquisition	-	(7,000,000)
Net cash provided by (used in) investing activities	2,756,007	(7,985,786)
Financing activities		
Proceeds from issuance of convertible debt	-	10,528,196
Payments of debt obligations	(11,439)	(9,538,016)
Change in restricted cash requirements	(100,000)	13,250,000
Net proceeds from issuance of common stock and warrants	21,571,891	4,951,718
Other financing costs	-	$ (402,430)
Net cash provided by financing activities	21,460,452	18,789,468
Effects of exchange rates on cash	(240,122)	263,131
Increases (decreases) in cash and cash equivalents	9,111,760	(17,078,837)
Cash and cash equivalents, at beginning of year	2,673,567	19,752,404
Cash and cash equivalents, at end of year	$ 11,785,327	$ 2,673,567
Supplemental disclosure of cash flow information		
Cash paid for interest	$ 1,234,142	$ 1,357,018
Cash paid for income taxes	$ -	$ 184,226

See the accompanying notes to the consolidated financial statements.

Note 1 - Organization and Business

PharmAthene, Inc. ("PharmAthene" or the "Company") was incorporated under the laws of the State of Delaware as Healthcare Acquisition Corp. ("HAQ") on April 25, 2005, 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").

We are 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 and 2010) to sustain our operations. Based on the operating cash requirements and capital expenditures expected for 2011, we will not require additional funding to continue our current level of operations to the end of 2011. 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 U.S. Corporation, PharmAthene Canada, Inc., and PharmAthene UK Limited, collectively referred to herein as "PharmAthene", "we", "us", "our" or the "Company". 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.

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.

Adjustments

In the fourth quarter of 2010, the Company made the following adjustments:

- As discussed in Note 9 to our consolidated financial statements, during the fourth quarter of 2010, the Company incurred expenses of approximately $2.8 million in connection with the call and conversion of its 10% Convertible Notes into shares of Company common stock. Of this amount, approximately $1.2 million related to the accelerated amortization of the debt discount and deferred charges with the conversion of the notes, and approximately $1.1 million related to cash incentive offers.

- As discussed in Notes 2, 6 and 7, the Company recognized asset impairment charges in additional depreciation and amortization expense of approximately $4.6 million and severance and one time termination benefits of approximately $0.6 million as a result of its decision to shut down its Canadian operations.

- As discussed in Note 4, the Company recognized approximately $5.8 million of charges relating to the change in the fair value of its derivative instruments as a result of the increase in the Company's stock price to $4.23 at December 31, 2010.

- The Company recognized a reduction in research and development expenses of approximately $0.9 million related to the receipt of certain therapeutic tax grants.

Additionally, the Company reduced its accumulated deficit by $1.3 million as of December 31, 2008 to correct an immaterial error that understated Unbilled Accounts Receivable at that date.

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. Translation adjustments are accumulated in a separate component of stockholders' equity. Transaction gains or losses are included in the determination of net gain or loss, which was an approximately $0.1 million gain and an approximately $0.5 million loss for the years ending December 31, 2010 and 2009, respectively.

Comprehensive Loss

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.

	Foreign Currency Translation	Unrealized Gains (Losses) on Investments	Accumulated Other Comprehensive Income
Balance as of December 31, 2008	$ 369,669	$ 16,682	$ 386,351
2009 other comprehensive income	812,004	(10,199)	801,805
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

Cash and Cash Equivalents

Cash and cash equivalents, are stated at cost which approximates 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 $0.0 million and $0.3 million in 2010 and 2009, respectively.

Restricted Cash and Letter of Credit

As of December 31, 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”), 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, 2010 and 2009, the Company’s trade receivable balances were comprised solely of receivables from these customers. Unbilled accounts receivable totaling $4.0 million and $9.4 million as of December 31, 2010 and 2009, respectively, relate to the contracts with these same customers.

Property and Equipment

Property and equipment consist of land, building and leasehold improvements, laboratory, computer, farm and office equipment and furniture 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)
Building and leasehold improvements	4 - 20
Laboratory equipment	7
Furniture and office equipment	5 - 7
Computer equipment	3

Impairment of Long-Lived Assets

Long-lived assets consist primarily of patents and 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 in depreciation and amortization expense in our 2010 consolidated statement of operations. The remaining assets in Canada have been reclassified as assets held for sale consisting of land and building and leasehold improvements of approximately $0.5 million and $0.5 million respectively

Concentration of Credit Risk

Financial instruments that potentially subject us to concentrations of credit risk are primarily cash and cash equivalents, investments and billed accounts receivable. We maintain our cash and cash equivalents and investment balances in the form of money market accounts, corporate and government debt securities and overnight deposits with financial institutions that we believe are creditworthy.

Fair Value of Financial Instruments

Our financial instruments primarily include cash and cash equivalents, accounts receivable, short-term investments and other current assets, accounts payable, accrued and other liabilities, convertible notes and long-term debt. Due to the short-term nature of the cash and cash equivalents, accounts receivable, short-term investments and 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. The carrying values of our convertible notes and other long term debt approximate their fair values, based on our current incremental borrowing rates.

Short-term investments consist of investment grade government agency and corporate debt securities due within one year. All investments are classified as available-for-sale and are recorded at market value. Unrealized gains and losses are reflected in other comprehensive income (loss). The estimated fair value of our available-for-sale securities is determined based on quoted market prices or rates for similar instruments. We review our investment portfolio on a regular basis and seek guidance from our professional portfolio manager related to U.S. and global market conditions. We did not have any short term investments at December 31, 2010. We assess the risk of impairment related to securities held in our investment portfolio on a regular basis and identified no permanent or “other-than-temporary” impairment during the year ended December 31, 2010 and 2009.

Intangible Assets and Goodwill

Patents are carried at cost less accumulated amortization which is calculated on a straight line basis over the estimated useful lives of the patents, currently estimated to be 11 years. All of the patents associated with Protexia® have been 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, 2010.

Goodwill represents the excess of purchase price over the fair value of net identifiable assets associated with the Avecia Acquisition. We review the carrying value of our intangible assets for impairment annually during the fourth quarter of every year, or more frequently if impairment indicators exist. Evaluating for impairment requires judgment, including the estimation of future cash flows, future growth rates and profitability and the expected life over which cash flows will occur. Changes in the Company's business strategy or adverse changes in market conditions could impact 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 two different types of contractual arrangements: cost-plus-fee contracts and cost reimbursable grants. Costs consist primarily of actual internal labor charges and external sub-contractor 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 achieved. 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.

We analyze each cost reimbursable grant to determine whether we should report payments under such grant as revenue or as an offset to our expenses incurred. In 2010 and 2009, we recorded approximately $2.9 million and $2.4 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 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 forfeiture. In 2009 we used a 17% forfeiture rate; this rate was revised to 12% for 2010 grants. The forfeiture rate was revised based on changing trends in our historical forfeitures.

Share-based compensation expense for 2010 and 2009, respectively, was:

	Year ended December 31,	
	2010	**2009**
Research and development	$ 1,008,368	$ 773,109
General and administrative	1,504,791	2,671,166
Total share-based compensation expense	$ 2,513,159	$ 3,444,275

During 2010, we granted 2,722,131 options to employees, non-employee directors and consultants, and made restricted stock grants of 35,000. At December 31, 2010, we had total unrecognized stock based compensation expense related to unvested awards of options and restricted shares of approximately $5.2 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, 2010, 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 the common shares underlying our convertible notes 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. The dilutive impact of our dilutive potential common shares issued upon conversion of our convertible notes is determined by applying the "if converted" 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 10.7 million and 16.5 million potential dilutive shares have been excluded in the calculation of diluted net loss per share in 2010 and 2009, 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 will adopt ASU 2009-13 on January 1, 2011; we have not yet determined the impact of the adoption on our financial position or results of operations.

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 will adopt ASU 2010-17 on January 1, 2011; we have not yet determined the impact of the adoption on our financial position or results of operations.

Note 3 - Avecia Settlement

In June 2009, PharmAthene and Avecia entered into a settlement agreement (i) to resolve certain issues related to the wind down and cancellation of work related to the Company's rPA vaccine program being conducted at Avecia pursuant to a master services agreement ("MSA") between the two organizations, and (ii) to accelerate the payment of certain deferred consideration related to the Avecia Acquisition. Under the settlement agreement:

- we paid Avecia $7.0 million of the remaining deferred purchase price consideration under the Avecia Acquisition, and as a result the existing letter of credit that had supported the deferred consideration (and the related requirement to maintain restricted cash as collateral for the letter of credit) was terminated in June 2009;

- we agreed to pay Avecia approximately $1.8 million related to past performance and raw materials under the MSA subject to certain remaining performance obligations by Avecia related to, among other things, the technology transfer effort to a new U.S.-based bulk drug substance manufacturer; and

- we agreed to pay Avecia approximately $3.0 million in cancellation fees.

In June 2009, we expensed as allowable costs under our government contract, the $1.8 million payment for past contract performance and recognized related contract revenues. We also expensed the $3.0 million cancellation fee in June 2009.

In the second quarter of 2009, our existing research and development contract for SparVax™ was transferred from NIAID to BARDA. In the third quarter of 2009 BARDA and PharmAthene modified the existing statement of work to include, among other things, the completion of on-going stability studies and development of potency assays along with certain manufacturing scale-up and technology transfer activities to a U.S.-based manufacturer for the bulk drug substance for SparVax™. We then entered into a corresponding subcontract with our U.S.-based manufacturer. As a result of the transfer of the contract and modification of the statement of work, we relocated most development and manufacturing activities as well as other general and administrative functions from the UK to the U.S. In 2009, we expensed approximately $2.1 million of costs associated with these exit activities. Of this amount approximately $1.8 million and $0.3 million is presented as research and development expenses and general and administrative expenses, respectively. As of December 31, 2009, $1.1 million remained in accrued expenses.

In connection with the Avecia Acquisition, 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 specified patents and technology necessary to perform development of the rPA and rYP programs as required under our contracts with NIAID and BARDA. Upon commercialization, the license agreements require us to make royalty payments equal to a specified percentage of future sales of products for both government procurement and commercial markets. No payments on these licenses have been incurred. In February 2009, both of these licenses were amended and restated to broaden the scope of exclusivity and address other general business issues.

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.

	As of December 31, 2010			
	Level 1	**Level 2**	**Level 3**	**Balance**
Liabilities				
Derivatives	$ -	$ -	$ 8,362,995	$ 8,362,995

	As of December 31, 2009			
	Level 1	**Level 2**	**Level 3**	**Balance**
Assets				
Available-for-sale securities	$ 3,137,071	$ -	$ -	$ 3,137,071
Liabilities				
Derivatives	$ -	$ -	$ 835,299	$ 835,299

The following table sets forth a summary of changes in the fair value of our Level 3 liabilities for the years ended December 31, 2010 and 2009:

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

Description	Balance as of December 31, 2008	Cumulative Effect of Adoption of New Accounting	New Liabilities	Unrealized (Gains)	Balance as of December 31, 2009
Embedded conversion option	$ 6,405	$ -	$ -	$ (6,405)	$ -
Stock purchase warrants	$ -	$ 636,609	$ 1,236,067	$ (1,037,377)	$ 835,299

The gains on the derivative instruments are classified in other expenses as the change in 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 - Short-Term Investments – Available for Sale Securities

The amortized cost, gross unrealized gains, gross unrealized losses and fair value of available-for-sale investments by security classification, all of which are short term, at December 31, 2009 were as follows:

December 31, 2009	Amortized Cost	Gross Unrealized Gain	Gross Unrealized Loss	Estimated Fair Value
Corporate debt securities	$ 3,130,588	$ 6,491	$ (8)	$ 3,137,071
Total	$ 3,130,588	$ 6,491	$ (8)	$ 3,137,071

During the years ended December 31, 2010 and 2009, we realized net gains of approximately $5,000 and $3,300, respectively, on sales of available-for-sale securities. The gains and losses on available-for-sale securities are based on the specific identification method.

Note 6 - Property and Equipment

Property and equipment consisted of the following:

	December 31,	
	2010	2009
Land	$ -	$ 524,109
Building and leasehold improvements	758,126	5,940,009
Furniture, farm and office equipment	192,943	446,897
Laboratory equipment	-	713,533
Computer and other equipment	1,379,216	1,224,927
	2,330,285	8,849,475
Less accumulated depreciation	(1,151,869)	(2,587,087)
Property and equipment, net	$ 1,178,416	$ 6,262,388

Depreciation expense for the years ended December 31, 2010 and 2009 was $4.7 million and $0.8 million, respectively. Depreciation expense for 2010 included an impairment charge of approximately $3.8 million associated with the closing of the Canadian operation upon the expiration of the Protexia® contract. 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. This change is included in the accompanying balance sheet.

Note 7 - Patents

In conjunction with our decision to close our Canadian operation upon the expiration of the Protexia® contract with the DoD, we are writing off the remaining value of the patents in the fourth quarter of 2010 of approximately $0.8 million. This charge is included in depreciation and amortization in the accompanying consolidated statement of operations. The carrying value of these assets was approximately $0.0 million and $0.9 million as of December 31, 2010 and 2009 respectively.

Note 8 - Accrued Expenses and Other Liabilities

Accrued expenses and other liabilities consisted of the following:

	December 31,	
	2010	2009
Accrued development expenses	$ 1,384,922	$ 6,582,470
Accrued professional services	791,697	1,849,045
Accrued employee expenses	778,718	1,330,471
Other	79,947	1,770,115
Accrued expenses and other liabilities	$ 3,035,284	$ 11,532,101

Note 9 - Debt

Convertible Notes

Our 8% senior unsecured convertible notes accrued interest at a rate of 8% per annum and were to mature on August 3, 2009 (the "Old Notes"). The principal amount of the Old Notes and any accrued interest were convertible into shares of our common stock at the option of the holder at any time based upon a conversion rate of $10.00 per share.

In July 2009, we cancelled a portion of the Old Notes, and issued new convertible notes and stock purchase warrants to certain holders of the Old Notes as well as to certain new note investors in a private placement (the "July 2009 Private Placement"). In connection with the July 2009 Private Placement, among other things we:

- exchanged a portion of the Old Notes in the aggregate principal amount plus accrued interest totaling $8.8 million for new two-year 10% unsecured senior convertible notes, convertible into shares of common stock at a conversion price of approximately $2.54 per share (the "New Convertible Notes") and cancelled the corresponding Old Notes;
- issued additional New Convertible Notes in the aggregate principal amount of $10.5 million to new note investors;
- issued to the recipients of the New Convertible Notes stock purchase warrants to purchase up to 2,572,775 shares of common stock at $2.50 per share, which warrants are exercisable from January 28, 2010 through January 28, 2015; and
- used the proceeds from the sale of the New Convertible Notes to repay $5.5 million of the Old Notes that were not exchanged for the New Convertible Notes and warrants and repaid all outstanding amounts and fees under the Company's then-existing credit facility.

The New Convertible Notes accrued interest at 10% per annum and were to mature on July 28, 2011. The principal amount of the New Convertible Notes and any accrued interest were convertible into shares of our common stock at the option of the holder at any time based upon a conversion price of $2.54 per share. The conversion price was subject to adjustment for specified dilutive events, and we had the right to redeem all or a portion of the New Convertible Notes beginning in July 2010.

In November 2010, holders of New 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 New 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 New 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 New Convertible Notes remain outstanding as of December 31, 2010.

We incurred approximately $5.8 million and $1.5 million of interest expense related to the New Convertible Notes in 2010 and 2009 respectively.

Credit Facility

In March 2007, we entered into a $10 million credit facility with Silicon Valley Bank and Oxford Finance Corporation (together, the "Lenders"). In July 2009, we repaid all outstanding amounts due under the credit facility along with certain prepayment fees. In connection with establishing the credit facility, in 2007 we issued to the Lenders certain stock purchase warrants, which expire on March 30, 2017, to purchase an aggregate of 100,778 shares of the Company's common stock at $3.97 per share.

Note 10 - Commitments and Contingencies

Leases

We lease our offices in the United States under a 10 year operating lease, which commenced on May 1, 2007. Additionally, with the Avecia Acquisition, we assumed an operating lease for office space in the United Kingdom which expired in October, 2010. Remaining annual minimum payments are as follows:

2011	$	799,000
2012	$	797,500
2013	$	774,400
2014	$	797,700
2015	$	821,600
2016 and thereafter	$	1,203,000

For each of the years ended December 31, 2010 and 2009, total rent expense under operating lease agreements approximated $1.0 million.

License Agreements

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 2010 or 2009.

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 2010 or 2009.

In connection with the Nexia 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 results 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. Under the new agreement, we are required to pay initial license fees totaling $700,000 and royalty payments based on net sales, with $100,000 due in the first year.

In connection with the Avecia Acquisition in April 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 Chancery Court. The complaint alleges, among other things, that we have the right to license exclusively development and marketing rights for SIGA's drug candidate, SIGA-246, pursuant to a merger agreement between the parties (the "Merger Agreement") 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.

We are seeking alternatively a judgment requiring SIGA to enter into an exclusive license agreement with the Company for SIGA-246 in accordance with the terms of the term sheet attached to the merger agreement or monetary damages. In January 2008, the Delaware Chancery Court issued a ruling denying a motion by SIGA to dismiss the complaint. SIGA has filed a counterclaim against the Company alleging that we breached our duty to engage in good-faith negotiations by, among other things, presenting SIGA with a bad-faith initial proposal for a license agreement that did not contain all necessary terms, demanding SIGA prepare a complete draft of a partnership agreement and then unreasonably rejecting that agreement, and unreasonably refusing to consider economic terms that differed from those set forth in the license agreement term sheet attached to the Merger Agreement. SIGA is seeking recovery of its reliance damages from this alleged breach.

Discovery in the case closed in February 2010. In March 2010 SIGA filed a motion for summary judgment, and subsequently we filed an answering brief in April 2010 and SIGA filed its reply brief. Oral argument on SIGA's motion for summary judgment was held in the Delaware Court of Chancery in July 2010. The court issued a ruling in November 2010 denying in full SIGA's motion for partial summary judgment. Trial on all counts in PharmAthene's complaint commenced on January 3, 2011 and was completed on January 21, 2011. Post-trial briefs are due and closing arguments will be held prior to the end of April 2011.

An accrual for a loss contingency has not been made because the unfavorable resolution of this contingency is not probable.

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 Company's 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 New Convertible Notes and related warrants. We subsequently filed a registration statement on Form S-3 with the Securities and Exchange Commission to register a portion of the shares underlying the New Convertible Notes, which registration statement was declared effective in the fourth quarter of 2009. We are obligated to continue filing registration statements or amendments thereto covering the resale of the remaining portion of the shares underlying the notes, as well as of the shares issuable upon exercise of the related warrants. We are obligated to maintain the registration statement(s) effective until the date when all shares underlying the New 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 that we executed in connection with the initial public offering, the Merger and a subsequent equity financing, under which we have obligations to keep the corresponding registration statements effective until the registrable securities (as defined in each such 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 New 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 New 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 $193,000.

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 New 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 approximate $193,000 for each month until the failure is cured.

Note 11 - Related Party Transactions

Several directors and officers of the Company invested in the New Convertible Notes and warrants as part of the July 2009 Private Placement.

Note 12 - Stockholders' Equity

Common Stock

In March 2009, we completed a public sale of 2,116,055 shares of common stock at $2.60 per share and warrants to purchase 705,354 shares of our common stock at an exercise price of $3.00 per share, generating gross proceeds of $5.5 million. The warrants expire on September 27, 2014.

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 estimated net proceeds of approximately $15.9 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.

Long-Term Incentive Plan

Prior to 2007, share-based awards were granted pursuant to our 2002 Long-Term Incentive Plan (the "2002 Plan"). In connection with the Merger, we assumed all outstanding awards that had been initially granted under the 2002 Plan. No further grants are being made under the 2002 Plan. On August 3, 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.

At that time, we reserved 3,500,000 shares of common stock in connection with awards to be granted under the 2007 Plan, including those awards that had originally been made under the 2002 Plan. In 2008, the Company's shareholders approved amendments to the 2007 Plan, increasing from 3,500,000 shares to 4,600,000 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. The Board of Directors in conjunction with management determines who receives awards, the vesting conditions, which are generally four years, 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	8.4
Exercisable, December 31, 2010	2,169,013	$ 3.81	7.3
Vested and expected to vest, December 31, 2010	4,958,959	$ 3.21	8.3

The aggregate intrinsic value is calculated as the difference between (i) the closing price of the common stock at December 31, 2010 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 $1.9 million as of December 31, 2010.

At December 31, 2010, total compensation costs for unvested stock option awards approximated $5.0 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 2010 and 2009 approximated $1.88 and $1.89, respectively. The fair value for the 2010 and 2009 awards were estimated at the date of grant using the Black-Scholes option-pricing model using the following assumptions:

	December 31,	
	2010	2009
Weighted-average volatility	87%	86%
Risk-free rate	0.28% - 3.2%	1.8% - 3.6%
Expected annual dividend yield	-	-
Expected weighted-average life, in years	6.0	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 ours 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. We use historical data and expectations for the future to estimate employee exercise and post-vest termination behavior and therefore do not stratify employees into multiple groups.

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

	Shares	Weighted-Average Grant Date Fair Value	Weighted-Average Remaining Term
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	$ 2.52	8.7 years
Vested and expected to vest, December 31, 2010	97,795	$	8.7 years

At December 31, 2010, total compensation costs for unvested Restricted Stock awards approximated $0.2 million and will be recognized over the next year.

Unit Purchase Option

In connection with our initial public offering in 2005, the underwriters paid $100 for an option to purchase up to a total of 225,000 units. The units issuable upon exercise of this option were identical to those offered in the initial public offering (i.e. each unit consisted of one share of common stock and one warrant) except that the associated warrants had a higher exercise price (see below). The unit purchase option became exercisable at $10.00 per unit on August 3, 2007, and expired unexercised on July 27, 2010 (except that the warrant included in such option expired unexercised on July 27, 2009).

Warrants

In connection with the March 2009 public offering of approximately 2.1 million shares, we issued warrants to purchase an aggregate of 705,354 shares of our common stock at an exercise price of $3.00 per share. The warrants became exercisable on September 27, 2009 and will expire on September 27, 2014. These warrants are a derivative liability and as such, we reflect the liability at fair value in the consolidated balance sheets. The fair value of this derivative liability will be re-measured at the end of every reporting period and the change in fair value will be reported in the consolidated statements of operations as other income (expense).

In March 2007, we entered into a $10 million credit facility with Silicon Valley Bank and Oxford Finance Corporation (together, the “Lenders”). In July 2009, we repaid all outstanding amounts due under the credit facility along with certain prepayment fees. In connection with establishing the credit facility, in 2007 we issued to the Lenders certain stock purchase warrants, which expire on March 30, 2017, to purchase an aggregate of 100,778 shares of the Company’s common stock at $3.97 per share.

In connection with the July 2009 private placement, we issued warrants to purchase an aggregate of 2,572,775 shares of the Company’s common stock at an exercise price of $2.50 per share. The warrants will expire on January 28, 2015 and are classified in equity.

In connection with the April 2010 public offering of 1,666,668 shares of our common stock, we issued warrants to purchase an aggregate of 500,000 shares of our common stock at an exercise price of $1.89 per share. The warrants became exercisable on October 13, 2010 and expire on October 13, 2015. The warrants are a derivative liability and as such, we reflect the liability at fair value in the consolidated balance sheets. The fair value of this derivative liability will be re-measured at the end of every reporting period and the change in fair value will be reported in the consolidated statements of operations as other income (expense).

In connection with the July 2010 public offering of 2,785,714 shares of our common stock, we issued warrants to purchase an aggregate of 1,323,214 shares of our common stock at an exercise price of $1.63 per share. The warrants become exercisable on January 23, 2011 and expire on January 23, 2017. The warrants are a derivative liability and as such reflect the liability at fair value in the consolidated balance sheets. The fair value of this derivative liability will be re-measured at the end of every reporting period and the change in fair value will be reported in the consolidated statement of operations as other income (expense).

Note 13 - 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,	
	2010	**2009**
Statutory federal tax benefit	$ (11,848,754)	$ (10,975,118)
State income tax, net of federal benefit	$ (1,284,265)	(1,166,452)
Other permanent differences	607,981	1,041,007
Foreign rate differential	2,492,478	571,788
Write-off of expired/forfeited options and conversion of notes	3,071,189	-
Expiration of Net Operating Losses	5,053,927	-
Other	309,840	-
Increase in valuation allowance	1,597,604	10,528,775
Income tax expense	$ -	$ -

Our net deferred tax assets consisted of the following:

	December 31,	
	2010	2009
Deferred tax assets:		
Net operating loss carryforwards	$ 36,611,209	$ 33,510,575
Fixed assets/intangibles	3,357,098	7,834,521
Research and development credits/loss carryforwards	3,073,821	2,207,081
Accrued expenses and other	5,150,378	3,732,459
Total deferred tax assets	48,192,506	47,284,636
Deferred tax liabilities:		
Convertible notes	-	689,734
Bridge note revaluation	-	-
Total deferred tax liabilities	-	689,734
Net deferred tax assets	48,192,506	46,594,902
Less: valuation allowance	(48,192,506)	(46,594,902)
Net deferred tax assets	$ -	$ -

As discussed in Note 2, the Company adjusted its accumulated deficit as of December 31, 2008 to correct an error that management has determined to be immaterial in Unbilled Accounts Receivable. As a result, the cumulative net operating losses as of December 31, 2009 have been adjusted by approximately $0.4 million.

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 the level of historical taxable income and projections for future taxable income over the periods in which the net operating loss carryforwards are available to reduce income taxes payable, we have established a full valuation allowance against the net deferred tax asset in 2010, consistent with 2009.

The U.S. federal net operating loss carryforwards of approximately $92.1 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 carryforwards of approximately $0.9 million will begin to expire in 2030. The Quebec Provincial net operating loss carryforwards of approximately $1.4 million will begin to expire in 2030.Certain Canadian federal net operating losses may have an unlimited life. The UK net operating loss carryforwards of approximately $0.1million has an unlimited life.

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 its 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 14th day of August 2009 by and between Charles A. Reinhart III (the "**Executive**") and **PharmAthene, Inc.**, a Delaware corporation (the "**Company**").

W I T N E S S E T H:

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 August 14, 2009 (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**."

a. **Position and Duties Generally**. The Executive shall 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 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 $330,000.00 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 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, on August 10, 2009, the Company granted 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 $0.0001 per share, of the Company at an exercise price per share equal to $ 2.78, 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. **First-Year Temporary Living Expense Bonus.** The Company agrees to pay the Executive a temporary living expense bonus in the net (after tax) amount of Forty Thousand Dollars ($40,000), to be paid on a semi-monthly basis in accordance with the Company's regular payroll practices over a period of twelve (12) months ("Temporary Living Expense Bonus"). The gross amount of the Temporary Living Expense Bonus will be treated as taxable wages subject to withholding of all applicable taxes.

Relocation Expenses. The Executive shall relocate to Maryland within a reasonable period of time, as agreed to by the Executive and the Company. The Company shall reimburse the Executive for customary expenses incurred in relocating to Maryland, including but not limited to (a) packing and transportation fees for relocating household possessions, (b) utility costs for service hookups and related service charges, fees for appliance and utilities installations, and re-registration of personal vehicles and driver's licenses, and (c) sales commissions on the Executive's existing primary residence in New Jersey. Appropriate expense records must be obtained and submitted by Executive to the Human Resources Department and accounts payable prior to reimbursement. No amounts will be paid to reimburse Executive for "points" or other amounts paid to lock-in or reduce the interest rate (or secure other favorable terms) on any mortgage loan associated with the purchase of a primary residence in Maryland.

iv. 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 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 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 11, 12, 13 or 14 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) 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, (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 six (6) 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 or 14 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 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 and 14 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 or 14 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
Attention: CEO

with a copy to:

Sonnenschein Nath & Rosenthal LLP
101 JFK Parkway

Short Hills, NJ 07078
Attention: Jeffrey Baumel, Esq.

if to the Executive to:

_____
_____
_____
_____

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. **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.

18. **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.

19. **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.

20. **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.

21. **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.

22. **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.

23. **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.

24. **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.

25. **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.

26. **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/ Charles A. Reinhart III
Name: Charles A. Reinhart III

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 5th day of April 2010 by and between Thomas R. Fuerst (the "**Executive**") and **PharmAthene, Inc.**, a Delaware corporation (the "**Company**").

W I T N E S S E T H:

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 April 5, 2010 (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, Chief Scientific 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 President and CEO (or her/his designee).

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 $305,000.00 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; provided that Executive's bonus for his first year of employment (payable during the first calendar quarter 2011) shall not be less than $25,000. In addition, the Executive may be eligible for additional bonuses at the option and sole discretion of the Compensation Committee based upon 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, on April 5, 2010, the Company granted to Executive pursuant to the Company's 2007 Long-Term Incentive Plan ("2007 Plan") a non-qualified stock option to purchase up to 350,000 shares of common stock, par value $0.0001 per share, of the Company at an exercise price per share equal to $1.69, 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: 50,000 shares vested immediately, with the remaining 300,000 shares vesting 25% on the first anniversary of the Date of Grant and 25% on each of the next three anniversaries.

iii. **Sign on Bonus**. The Company agrees to pay the Executive a one-time sign on bonus of Forty Thousand Dollars ($40,000), to be paid (less applicable tax and other withholdings) in the first pay period following completion of Executive's first two weeks of service.

Travel Expenses. The Company will pay for travel expenses from Executive's current residence in Massachusetts to the Company's headquarters in Annapolis, MD up to $2000/month (subject to applicable tax and other withholdings) until the earlier of (i) relocation of Executive's primary residence to Maryland or (ii) the end of the first 24 months of Executive's employment.

iv. 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 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 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 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) 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, (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 six (6) 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 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 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 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, and 10 through 16 and 19 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:

Sonnenschein Nath & Rosenthal LLP
101 JFK Parkway
Short Hills, NJ 07078
Attention: Jeffrey Baumel, Esq.

if to the Executive to:

_____

_____

_____

_____

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, 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, including without limitation the offer letter dated March 10, 2010 (and signed by the Executive on March 11, 2010). 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/ Thomas R. Fuerst
Name: Thomas R. Fuerst

PHARMATHENE, INC.

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

Exhibit 21

List of PharmAthene, Inc. subsidiaries:

PharmAthene UK Limited
PharmAthene Canada, Inc.

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), and
(6) Registration Statement (Form S-3 No. 333-161587),

of PharmAthene, Inc. and in the related Prospectuses of our report dated March 31, 2011, with respect to the consolidated financial statements of PharmAthene, Inc., included in this Annual Report (Form 10-K) for the year ended December 31, 2010.

/s/ Ernst & Young LLP

McLean, Virginia
March 31, 2011

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, 2010;

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 31, 2011

/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, Charles A. Reinhart III certify that:

1. I have reviewed this Form 10-K of PharmAthene, Inc. for the year ended December 31, 2010;

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 31, 2011

/s/ Charles A. Reinhart III

Name: **Charles A. Reinhart III**
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 of PharmAthene, Inc. (the "Company") on Form 10-K for the year ended December 31, 2010, 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

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 31, 2011

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 of PharmAthene, Inc. (the "Company") on Form 10-K for the year ended December 31, 2010, as filed with the Securities and Exchange Commission (the "Report"), I, Charles A. Reinhart III, 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

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Charles A. Reinhart III

Charles A. Reinhart III
Chief Financial Officer
March 31, 2011