As filed with the Securities and Exchange Commission on July 7, 2011

REGISTRATION NO. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, DC

FORM S-3

Registration Statement Under the Securities Act of 1933

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
(410) 269-2600
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Eric I. Richman
Chief Executive Officer
PharmAthene, Inc.
One Park Place, Suite 450
Annapolis, MD 21401
(410) 269-2600
(Name, address, including zip code, and telephone number, including area code, of agent for service)

With a copy to:
Jeffrey A. Baumel, Esq.
Roland S. Chase, Esq.
SNR Denton US LLP
Two World Financial Center
New York, New York 10281
(212) 768-6700

Approximate date of commencement of proposed sale to the public:
From time to time after the effective date of this Registration Statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. ☐

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. x

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. o

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. o

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 (Do not check if a smaller reporting company)	x	Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities To Be Registered	Amount to be registered (1)	Proposed maximum offering price per unit(1)	Proposed Maximum Aggregate Offering Price(1) (2)	Amount of Registration Fee(2)
Common Stock, par value $0.0001 per share (3)	—	—	—	—
Preferred Stock, par value $0.0001 per share (3)	—	—	—	—
Warrants (4)	—	—	—	—
Total	—	—	$ 100,000,000	$ 11,610

(1) There are being registered an indeterminate number of securities as shall have an aggregate offering price not to exceed $100,000,000. The securities registered hereunder may be sold separately or with other securities registered hereunder. The proposed maximum aggregate offering price per class of security will be determined from time to time by the registrant in connection with the issuance by the registrant of the securities registered under this registration statement and is not specified as to each class of security being registered under this registration statement pursuant to General Instruction II.D. of Form S-3 under the Securities Act of 1933, as amended (the "Securities Act").

(2) The proposed maximum offering price has been estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(o) under the Securities Act.

(3) Subject to note 1 above, there is being registered hereunder an indeterminate number of shares of common and preferred stock of the registrant as may be sold from time to time by the registrant. Pursuant to Rule 416 under the Securities Act, the shares being registered hereunder include such indeterminate number of shares of common and preferred stock as may be issuable from time to time with respect to the shares being registered hereunder as a result of stock splits, stock dividends or similar transactions. Pursuant to Rule 457(i) under the Securities Act, the shares being registered hereunder include such indeterminate number of shares of common and preferred stock as may be issuable from time to time upon conversion, exercise or exchange of any preferred stock or warrants issued under this registration statement.

(4) Subject to note 1 above, there is being registered hereunder an indeterminate number of warrants to purchase common stock or preferred stock of one or more series. Pursuant to Rule 457(i) under the Securities Act, the warrants being registered hereunder include such indeterminate number of warrants as may be issuable upon conversion or exchange of any preferred stock issued under this registration statement.

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

The information in this prospectus is not complete and may be changed. We may not sell these securities until the Registration Statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state or jurisdiction where the offer or sale is not permitted.

Subject to Completion, Dated July 7, 2011

PROSPECTUS

$100,000,000

PharmAthene

Common Stock
Preferred Stock
Warrants

From time to time, we may offer and sell common stock, preferred stock or warrants or any combination of those securities, either individually or in units, in one or more offerings. The aggregate public offering price of the securities offered by us pursuant to this prospectus will not exceed $100,000,000.

This prospectus provides you with a general description of the securities that we may offer. Each time we offer securities, we will provide a supplement to this prospectus that will contain more specific information about the terms of that offering, including the prices at which those securities will be sold. We may also add, update or change in the prospectus supplement any of the information contained in this prospectus.

The securities offered by us pursuant to this prospectus may be sold directly to investors, through agents, underwriters or dealers as designated from time to time, through a combination of these methods or in any other manner as described under the heading "Plan of Distribution" and in the corresponding section in the applicable prospectus supplement. Each time we offer securities, the relevant prospectus supplement will provide the specific terms of the plan of distribution for such offering and the net proceeds that we expect to receive from such offering.

Our common stock is listed on the NYSE Amex under the trading symbol "PIP." Each prospectus supplement will indicate if the securities offered pursuant to that supplement will be listed on any securities exchange.

This prospectus may not be used to sell any of our securities unless accompanied by a prospectus supplement or a free writing prospectus.

Investing in our securities involves certain risks. You should carefully read both this prospectus and the applicable prospectus supplement, as well as any documents incorporated by reference in this prospectus and/or the applicable prospectus supplement, before you make your investment decision. See "Risk Factors" beginning on page 3 of this prospectus and contained in other documents that are incorporated by reference in this prospectus.

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

The date of this prospectus is , 2011.

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ABOUT THIS PROSPECTUS

You should rely only on the information contained or incorporated by reference in this prospectus and any applicable prospectus supplements. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information in this prospectus is accurate as of the date appearing on the front cover of this prospectus only and that information contained in any prospectus supplement or document incorporated by reference in this prospectus is only accurate as of the date of such prospectus supplement or document. Our business, financial condition, results of operations and prospects may have subsequently changed.

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, to register an indeterminate number of shares of common stock, preferred stock and warrants as may from time to time be offered for sale, either individually or in units, at indeterminate prices (up to an aggregate maximum offering price for all such securities of $100,000,000), using a “shelf” registration process. By using a shelf registration statement, we may offer and sell from time to time in one or more offerings the securities described in this prospectus.

This prospectus provides you with some of the general terms that may apply to an offering of our securities. Each time we sell securities under this shelf registration we will provide a prospectus supplement that will contain specific information about the terms of that specific offering, including the number and price (or exercise price) of the securities to be offered and sold in that offering and the specific manner in which such securities may be offered. The prospectus supplement may also add to, update or change any of the information contained in this prospectus. To the extent there is a conflict between the information contained in this prospectus, on the one hand, and the information contained in the applicable prospectus supplement, on the other hand, you should rely on the information in the prospectus supplement.

You should carefully read both this prospectus and the applicable prospectus supplement, as well as any documents incorporated by reference in this prospectus (as described under the heading “Incorporation by Reference”) and/or the applicable prospectus supplement, before you make your investment decision. The information incorporated by reference includes important business and financial information about us that is not included nor delivered with this document. This information is available without charge on the SEC’s website at www.sec.gov or upon written or oral request to PharmAthene, Inc., One Park Place, Suite 450, Annapolis, MD 21401, (410) 269-2600. If any statement in this prospectus, the applicable prospectus supplement or any document incorporated by reference one of these documents is inconsistent with a statement in another of those document having a later date, the statement in the document having the later date modifies or supersedes the earlier statement.

Unless otherwise mentioned or unless the context requires otherwise, all references to “PharmAthene,” “the Company,” “we,” “us,” “our,” and similar terms refer to PharmAthene, Inc. and its subsidiaries on a consolidated basis. The phrase “this prospectus” refers to this prospectus and any applicable prospectus supplement, unless the context otherwise requires. Whenever we refer to “you” or “yours”, we mean the persons to whom offers are made under this prospectus.

SUMMARY

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.

Our executive offices are located at One Park Place, Suite 450, Annapolis, Maryland 21401 and our telephone number is (410) 269-2600.

RISK FACTORS

Investing in our securities involves risks. In addition to the other information in this prospectus and any prospectus supplement, you should carefully consider the following risks before making an investment decision. 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 and financial results could be harmed. In that case, the trading price of our common stock could decline. You should also refer to the information included in our other filings with the SEC, including our most recent annual report on Form 10-K or quarterly report on Form 10-Q, as the case may be, and in any applicable prospectus supplement.

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 we 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 were filed and subsequent oral argument in front of the court was held in April 2011. The case is now under consideration by the court. The timing of the court's decision and outcome of the case are 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." For example, we have not finished generating and presented to the FDA comparability data for bulk drug substance produced at Avecia and bulk drug substance produced at Fujifilm RTP to establish substantial product equivalence. If once these data are presented to the FDA, the agency does not believe they confirm substantial product equivalence, the Company could be required to conduct additional non-clinical studies, human clinical studies, manufacturing or other work, which would extend dramatically the development timeline for the SparVax™ product candidate.

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 Fujifilm), 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 in our annual report on Form 10-K for the year ended December 31, 2010 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 engaged a new contract manufacturer, Merck RTP (which was subsequently acquired by Fujifilm), to replace Avecia to manufacture bulk drug substance for SparVax™ and are engaged in a technology transfer process to this new contract manufacturer. Fujifilm 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. Furthermore, we have not finished generating and presented to the FDA comparability data for bulk drug substance produced at Avecia and bulk drug substance produced at Fujifilm RTP to establish substantial product equivalence. If once these data are presented to the FDA, the agency does not believe they confirm substantial product equivalence, the Company could be required to conduct additional non-clinical studies, human clinical studies, manufacturing or other work, which would dramatically extend the development timeline for the SparVax™ product candidate.

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 ongoing economic downturn, the accompanying fall in tax revenues and the U.S. government's efforts to stabilize the economy, the U.S. government may be forced or choose further to reduce or delay spending in the biodefense field or eliminate funding of certain programs altogether, which could decrease the likelihood of future government contract awards or that the government would procure products from us. Future funding levels for two of our key government customers, BARDA and DoD, for the advanced development and procurement of medical countermeasures are uncertain, and may be subject to budget cuts as the U.S. Congress and the President look to reduce the nation's budget deficit.

For example, due to 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 have closed down our Protexia®-related operations. We incurred wind-down costs in the fourth quarter of 2010 and first quarter of 2011of approximately $0.8 million and will incur additional wind-down costs of approximately $0.1 million in the second quarter of 2011, for which we do not anticipate reimbursement by the government. 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™. 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 January 31, 2012. While the Company has reached out to BARDA to explore potential future funding alternatives and submitted a white paper for additional funding under a BARDA Broad Agency Announcement, 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 ongoing economic downturn, the accompanying fall in tax revenues, and the U.S. government's efforts to stabilize the economy, the U.S. government may be forced or choose further to reduce or delay spending in the biodefense field or eliminate funding of certain programs altogether, which could decrease the likelihood of future government contract awards, 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 TM . 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 Fujifilm RTP (which recently acquired 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 do not meet the continued listing standards of the NYSE Amex at the end of our compliance period in January 2012 or after January 2012, our common stock could be delisted from trading, which could limit investors' ability to make transactions in our common stock and subject us to additional trading restrictions.

Our common stock is listed on the NYSE Amex, a national securities exchange, which imposes continued listing requirements with respect to listed shares. In July 2010, we received a letter from the NYSE Amex, stating that we were not in compliance with the exchange's continued listing standards, specifically, Sections 1003(a)(i), (ii) and (iii) of the NYSE Amex Company Guide, because we had stockholders' equity of less than $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, including 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 the periodic review of our compliance with the plan by exchange staff. If we do not meet the continued listing standards as of 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 exercise of warrants and options could dilute our shareholders, including the investors in this offering, and depress the market price of our common stock.

The issuance of securities pursuant to this registration statement or otherwise may depress the market price of our stock, and any such financing(s) will dilute our existing shareholders.

In addition, as of March 31, 2011 we had outstanding options to purchase approximately 5.2 million shares of common stock (not including restricted shares). Additional shares are reserved for issuance under our 2007 Long-Term Incentive Compensation Plan. Our stock options are generally exercisable for ten years, with a significant portion exercisable either immediately or beginning one year after the date of the grant.

We filed 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 March 31, 2011, we 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 in connection with the issuance of the notes in July 2009 and not including the warrants to purchase approximately 0.4 million shares issued in June 2011).

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.

SPECIAL NOTE REGARDING FORWARD-LOOKING INFORMATION

This prospectus and any related prospectus supplement and the information incorporated by reference herein and therein contain 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 prospectus supplement and in our other reports filed with the SEC from time to time hereafter. In particular, there can be no assurance that we will prevail in our lawsuit against SIGA, or that even if the court rules in our favor, the court will award monetary damages or other remedies adequate to fully compensate us for our 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 January 2012 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 prospectus on information available to us on the date of this prospectus, 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 above.

USE OF PROCEEDS

We will retain broad discretion over the use of net proceeds to us from the sale of our securities offered hereby. Except as may be otherwise described in a prospectus supplement, we currently anticipate using any net proceeds to us for general corporate purposes, which may include working capital, research and development expenses, general and administrative expenses, and capital expenditures. We may also use a portion of the net proceeds to acquire or invest in businesses, products and technologies that are complementary to our own, although we have no present commitments or agreements for any such transactions. The amounts and timing of our actual expenditures for each purpose may vary significantly depending upon numerous factors, including the actual amount of proceeds we receive, the status of our research and product development efforts, regulatory approvals, competition and economic or other conditions.

Pending the application of such proceeds, we may invest the proceeds in short-term, interest bearing, investment-grade marketable securities or money market obligations.

DESCRIPTION OF COMMON STOCK

Under our Amended and Restated Certificate of Incorporation, as amended, to which we refer as our "charter," we are currently authorized to issue 100,000,000 shares of common stock, par value $.0001 per share. As of June 30, 2011, we had 48,232,101 shares of common stock outstanding.

Holders of our common stock are entitled to one vote for each share of common stock held of record on all matters to be voted on by stockholders, except as otherwise provided by law or in any preferred stock designation. Our bylaws specify that, except as otherwise required by law or our charter, the presence in person or by proxy of holders of a majority of the shares entitled to vote at a meeting of stockholders will be necessary, and will constitute a quorum, for the transaction of business at such meeting. Our bylaws furthermore specify that all elections of directors will be determined by a plurality of the votes and that, except as otherwise provided by law or in the charter or bylaws, any other matter will be determined by the vote of a majority of the shares which are voted with regard to it. Holders of our common stock have no conversion, preemptive or other subscription rights and there are no sinking fund or redemption provisions applicable to the common stock.

There is no cumulative voting with respect to the election of directors, with the result that the holders of more than 50% of the shares voting for the election of directors can elect all of the directors then up for election. Holders of our common stock are entitled to receive dividends when, as and if declared by our board of directors out of funds legally available therefor. In the event of our liquidation, dissolution or winding up, the holders of common stock are entitled to share in all assets remaining which are available for distribution to them after payment of liabilities and after provision has been made for each class of stock, if any, having preference over the common stock.

Transfer Agent

The transfer agent and registrar for the common stock is Continental Stock Transfer & Trust Company, New York, New York.

DESCRIPTION OF PREFERRED STOCK

Under our charter, we are currently authorized to issue 1,000,000 shares of preferred stock, par value $.0001 per share. As of the date of this prospectus, we had no shares of preferred stock outstanding.

Under our charter, our board of directors is expressly granted authority to issue shares of preferred stock, in one or more series, and to fix for each series such voting powers, full or limited, and such designations, preferences and relative, participating, optional or other special rights and such qualifications, limitations or restrictions as it may determine in the resolution or resolutions providing for the issue of such series (to which we also refer as a "preferred stock designation") and as may be permitted by the Delaware General Corporation Law. The number of authorized shares of preferred stock may be increased or decreased (but not below the number of shares of preferred stock then outstanding) by the affirmative vote of the holders of a majority of the voting power of all of the then outstanding shares of our capital stock entitled to vote generally in the election of directors, voting together as a single class, without a separate vote of the holders of the preferred stock, or any series of preferred stock, unless a vote of any such holders is required pursuant to any preferred stock designation.

This section describes the general terms of our preferred stock to which any prospectus supplement may relate. A prospectus supplement will describe the terms relating to any preferred stock to be offered by us in greater detail, and may provide information that is different from the information described in this prospectus. If the information in the prospectus supplement with respect to the particular preferred stock being offered differs from the information in this prospectus, you should rely on the information in the prospectus supplement. A copy of our charter has been incorporated by reference from our filings with the SEC as an exhibit to the registration statement of which this prospectus is a part. A certificate of designations will specify the terms of the preferred stock being offered, and will be filed as an exhibit to the registration statement of which this prospectus is a part or incorporated by reference from a report that we file with the SEC.

The rights and terms relating to any new series of preferred stock could adversely affect the voting power or other rights of the holders of the common stock or could be utilized, under certain circumstances, as a method of discouraging, delaying or preventing a change in control of the Company.

The following description of our preferred stock, together with any description of our preferred stock in a related prospectus supplement, summarizes the material terms and provisions of the preferred stock that we may sell under this prospectus. We urge you to read the applicable prospectus supplement(s) related to the particular series of preferred stock that we sell under this prospectus and to the actual terms and provisions contained in our charter (certificate of designations) and bylaws, each as amended from time to time.

Terms

Our board of directors will fix the rights, preferences, privileges, qualifications and restrictions of the preferred stock of each series that we sell under this prospectus and applicable prospectus supplements in the certificate of designations relating to that series. We will file as an exhibit to the registration statement of which this prospectus is a part or incorporate by reference the form of any certificate of designations that describes the terms of the series of preferred stock we are offering in connection with the issuance of the related series of preferred stock. This description of the preferred stock in the certificate of designations and any applicable prospectus supplement may include:

- the number of shares of preferred stock to be issued and the offering price of the preferred stock;
- the title and stated value of the preferred stock;
- dividend rights, including dividend rates, periods, or payment dates, or methods of calculation of dividends applicable to the preferred stock;
- whether dividends will be cumulative or non-cumulative, and if cumulative the date from which distributions on the preferred stock shall accumulate;
- right to convert the preferred stock into a different type of security;
- voting rights, if any, attributable to the preferred stock;
- rights and preferences upon our liquidation or winding up of our affairs;
- terms of redemption;
- preemption rights, if any;
- the procedures for any auction and remarketing, if any, for the preferred stock;
- the provisions for a sinking fund, if any, for the preferred stock;
- any listing of the preferred stock on any securities exchange;
- the terms and conditions, if applicable, upon which the preferred stock will be convertible into our common stock, including the conversion price (or manner of calculation thereof);

- a discussion of federal income tax considerations applicable to the preferred stock, if material;
- the relative ranking and preferences of the preferred stock as to dividend or other distribution rights and rights if we liquidate, dissolve or wind up our affairs;
- any limitations on issuance of any series of preferred stock ranking senior to or on a parity with the series of preferred stock being offered as to distribution rights and rights upon the liquidation, dissolution or winding up or our affairs; and
- any other specific terms, preferences, rights, limitations or restrictions of the preferred stock.

Rank

As set forth in the applicable supplement to this prospectus, shares of our preferred stock may rank, with respect to payment of distributions and rights upon our liquidation, dissolution or winding up, and allocation of our earnings and losses:

- senior to all classes or series of our common stock, and to all of our equity securities ranking junior to the preferred stock;
- equally with all equity securities issued by us, the terms of which specifically provide that these equity securities rank on a parity, or equally, with the preferred stock; or
- junior to all equity securities issued by us, the terms of which specifically provide that these equity securities rank senior to the preferred stock.

Distributions

Subject to any preferential rights of any outstanding stock or series of stock, holders of our preferred stock may be entitled to receive distributions, when and as authorized by our board of directors, out of legally available funds, and share pro rata based on the number of shares of preferred stock, common stock and other equity securities outstanding.

Voting Rights

As indicated in the applicable supplement to this prospectus, and as otherwise required under Delaware law, holders of our preferred stock may or may not have voting rights.

Liquidation Preference

As indicated in the applicable supplement to this prospectus, upon the voluntary or involuntary liquidation, dissolution or winding up of our affairs, then, before any distribution or payment shall be made to the holders of any common stock or any other class or series of stock ranking junior to the preferred stock in our distribution of assets upon any liquidation, dissolution or winding up, the holders of each series of our preferred stock may be entitled to receive, after payment or provision for payment of our debts and other liabilities, out of our assets legally available for distribution to shareholders, liquidating distributions in the amount of the liquidation preference per share (set forth in the applicable supplement to this prospectus), plus an amount, if applicable, equal to all distributions accrued and unpaid thereon (which shall not include any accumulation in respect of unpaid distributions for prior distribution periods if the preferred stock does not have a cumulative distribution). After payment of the full amount of the liquidating distributions to which they may be entitled, the holders of preferred stock may have no right or claim to any of our remaining assets. In the event that, upon our voluntary or involuntary liquidation, dissolution or winding up, the legally available assets are insufficient to pay the amount of the liquidating distributions on all of our outstanding preferred stock and the corresponding amounts payable on all of our stock of other classes or series of equity security ranking on a parity with the preferred stock in the distribution of assets upon liquidation, dissolution or winding up, then the holders of our preferred stock and all other such classes or series of equity securities may share ratably in the distribution of assets in proportion to the full liquidating distributions to which they would otherwise be respectively entitled.

If the liquidating distributions are made in full to all holders of preferred stock, our remaining assets may be distributed among the holders of any other classes or series of equity security ranking junior to the preferred stock upon our liquidation, dissolution, or winding up, according to their respective rights and preferences and in each case according to their respective number of shares of stock.

Conversion Rights

The terms and conditions, if any, upon which shares of any series of preferred stock are convertible into, such as common stock, debt securities, warrants or units consisting of one or more of such securities will be set forth in the applicable supplement to this prospectus. These terms will include the amount and type of security into which the shares of preferred stock are convertible, the conversion price (or manner of calculation thereof), the conversion period, provisions as to whether conversion will be at the option of the holders of the preferred stock or us, the events, if any, requiring an adjustment of the conversion price and provisions, if any, affecting conversion in the event of the redemption of that preferred stock.

Redemption

If so provided in the applicable supplement to this prospectus, our preferred stock will be subject to mandatory redemption or redemption at our option, in whole or in part, in each case upon the terms, at the times and at the redemption prices set forth in such supplement to this prospectus.

DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the warrants that we may offer under this prospectus. While the terms we have summarized below will apply generally to any warrants that we may offer under this prospectus, we will describe the particular terms of any series of warrants in more detail in the applicable prospectus supplement. The terms of any warrants offered under a prospectus supplement may differ from the terms described below.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from another report that we file with the SEC, the form of warrant agreement, which may include a form of warrant certificate, that describes the terms of the particular series of warrants we are offering. The following summary of material provisions of the warrants and the warrant agreements are subject to all the provisions of the warrant agreement and warrant certificate applicable to a particular series of warrants. We urge you to read the applicable prospectus supplements related to the particular series of warrants that we sell under this prospectus, as well as the complete warrant agreements and/or warrant certificates that contain the terms of the warrants.

General

We will describe in the applicable prospectus supplement the terms relating to warrants being offered, which may include:

- the offering price and aggregate number of warrants offered;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- in the case of warrants to purchase common stock or preferred stock, the number of shares of common stock or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which these shares may be purchased upon such exercise;
- the terms of any rights to redeem or call the warrants;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreements and warrants may be modified;
- federal income tax consequences of holding or exercising the warrants, if material;

- the terms of the securities issuable upon exercise of the warrants; and

- any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

Before exercising their warrants, holders of warrants will likely not have any of the rights of holders of the securities purchasable upon such exercise, including, in the case of warrants to purchase common stock or preferred stock, the right to receive dividends, if any, or payments upon our liquidation, dissolution or winding up of our affairs or to exercise voting rights, if any.

Exercise of Warrants

Each warrant will entitle the holder to purchase the securities that we specify in the applicable prospectus supplement at the exercise price that we describe in the applicable prospectus supplement. Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants at any time up to the specified time on the expiration date that we set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

Holders of the warrants may exercise the warrants by delivering the warrant certificate representing the warrants to be exercised together with specified information, and paying the required amount to the warrant agent in immediately available funds, as provided in the applicable prospectus supplement. We intend to set forth in any warrant agreement and in the applicable prospectus supplement the information that the holder of the warrant will be required to deliver to the warrant agent.

Upon receipt of the required payment and any warrant certificate or other form required for exercise properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will issue and deliver the securities purchasable upon such exercise. If fewer than all of the warrants represented by the warrant or warrant certificate are exercised, then we will issue a new warrant or warrant certificate for the remaining amount of warrants. If we so indicate in the applicable prospectus supplement, holders of the warrants may surrender securities as all or part of the exercise price for warrants.

PLAN OF DISTRIBUTION

We may sell the securities covered by this prospectus from time to time. Registration of our securities covered by this prospectus does not mean, however, that those securities will necessarily be offered or sold.

We may sell the securities covered by this prospectus:

- through agents;
- through one or more underwriters or dealers in a public offering and sale by them;
- through a block trade in which the broker or dealer engaged to handle the block trade will attempt to sell the securities as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- directly to one or more purchasers (through a specific bidding or auction process or otherwise);
- in "at the market offerings," within the meaning of Rule 415(a)(4) of the Securities Act, to or through a market maker or into an existing trading market, on an exchange or otherwise;
- through a combination of any of these methods of sale; or
- at a fixed exchange ratio in return for other of our securities.

We may sell the securities from time to time in one or more transactions at a fixed price or prices, which may be changed from time to time, at market prices prevailing at the times of sale, at prices related to such prevailing market prices, or at negotiated prices. For each offering of securities hereunder, we will describe the method of distribution of such securities in a prospectus supplement. The prospectus supplements will describe the terms of the offerings of the securities, including:

- The name or names of any underwriters, if any;
- The purchase price of our securities and the proceeds we will receive from the sale;
- Any overallotment options under which underwriters may purchase additional securities from us;
- Any agency fees or underwriting discounts and other items constituting agents' or underwriters' compensation;
- Any public offering price;
- Any discounts or concessions allowed or reallowed or paid to dealers; and
- Any securities exchange or market on which our common stock or other securities may be listed.

Only underwriters named in the prospectus supplement are underwriters of the securities offered by that prospectus supplement.

In compliance with the guidelines of the Financial Industry Regulatory Authority ("FINRA"), the aggregate value of all compensation to be received by participating FINRA members in any offering pursuant to this prospectus will not exceed 8% of the offering proceeds.

If underwriters are used in the sale, they will acquire the securities for their own account and may resell the securities from time to time in one or more transactions at a fixed public offering price. Unless otherwise specified in the prospectus supplement, the obligations of the underwriters to purchase the securities will be subject to the conditions listed in the applicable underwriting agreement and, subject to certain conditions, the underwriters may be obligated to purchase all the securities offered by the prospectus supplement. We may offer the securities to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. Any public offering price and any discounts or concessions allowed or reallowed or paid to dealers may change from time to time.

In connection with any particular offering pursuant to this prospectus, an underwriter may engage in stabilizing transactions, over-allotment transactions, syndicate covering transactions and penalty bids in accordance with Regulation M under the Securities Exchange Act of 1934, as amended.

Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum price.

Over-allotment involves sales by an underwriter of shares in excess of the number of shares an underwriter is obligated to purchase, which creates a syndicate short position. The short position may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by an underwriter is not greater than the number of shares that it may purchase in the over-allotment option. In a naked short position, the number of shares involved is greater than the number of shares in the over-allotment option. An underwriter may close out any short position by either exercising its over-allotment option and/or purchasing shares in the open market.

Syndicate covering transactions involve purchases of common stock in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares to close out the short position, an underwriter will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the over-allotment option. If an underwriter sells more shares than could be covered by the over-allotment option, a naked short position, the position can only be closed out by buying shares in the open market. A naked short position is more likely to be created if an underwriter is concerned that there could be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase in the offering.

Penalty bids permit representatives to reclaim a selling concession from a syndicate member when the common shares originally sold by the syndicate member is purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of the common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. These transactions may be effected on the NYSE Amex or otherwise and, if commenced, may be discontinued at any time. We make no representation or prediction as to the direction or magnitude of any effect that any of these activities may have on the price of our common stock or, if applicable, the price for any of our other securities. For a description of these activities, see the information under the heading “Underwriting” or “Plan of Distribution” in the applicable prospectus supplement.

If we use dealers in the sale of securities, we will sell the securities to the dealers as principals. They may then resell those securities to the public at varying prices determined by the dealers at the time of resale. We will include in the prospectus supplement the names of the dealers and the terms of the transaction.

We may sell securities directly or through agents we designate from time to time. We will name any agent involved in the offering and sale of securities and we will describe any commissions payable by us to the agent in the prospectus supplement. Unless the prospectus supplement states otherwise, any such agent will act on a best-efforts basis for the period of its appointment.

We may authorize agents or underwriters to solicit offers by certain types of institutional investors to purchase securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. We will describe the conditions to these contracts and the commissions we must pay for solicitation of these contracts in the prospectus supplement.

We may provide underwriters and agents with indemnification against civil liabilities related to this offering, including liabilities under the Securities Act, or contribution with respect to payments that the underwriters or agents may make with respect to such liabilities.

Any preferred stock we offer will represent a new issue of securities with no established trading market. Any underwriters may make a market in these securities, but will not be obligated to do so and may discontinue any market making at any time without notice. We cannot guarantee the liquidity of the trading markets for these securities.

Underwriters, broker-dealers or agents who may become involved in the sale of our securities may engage in transactions with and perform other services for us in the ordinary course of their business for which they receive compensation.

LEGAL MATTERS

If and when the securities being registered hereunder are issued, the validity of such issuance will be passed upon for us by SNR Denton US LLP, New York, New York.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2010, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the informational reporting requirements of the Exchange Act and file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any materials we file with the SEC at the SEC's Public Reference Room located at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC -0330 for further information on the Public Reference Room. You may also access filed documents at the SEC's website at www.sec.gov.

INCORPORATION BY REFERENCE

We are incorporating by reference important business and financial information about us that we file with the SEC. Any information that we incorporate by reference is considered part of this prospectus. Information that we file with the SEC after the initial filing of the registration statement of which this prospectus forms a part and prior to the termination of the offering pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, shall be deemed to be incorporated by reference in the registration statement and to be part thereof from the date of filing of such information and automatically adds to, updates or supersedes the information listed below.

We incorporate by reference the following documents we have filed, or may file, with the SEC:

- our Annual Report on Form 10-K and 10-K/A for the year ended December 31, 2010 (File No. 001 -32587);
- our Quarterly Report on Form 10-Q for the quarter ended March 31, 2011 (File No. 001-32587);
- our Current Report on Form 8-K filed with the SEC on June 10, 2011; and
- the description of our common stock contained in our registration statement on Form 8-A filed with the SEC on July 27, 2005, including any amendments or reports filed for the purpose of updating such description, including the description of the Company's securities set forth in the Definitive Proxy Statement filed with the SEC on July 16, 2007, on page 159 under the caption "Description of Securities."

To the extent that any information contained in any Current Report on Form 8-K, or any exhibit thereto, is furnished to, rather than filed with, the SEC, such information or exhibit is specifically not incorporated by reference in this prospectus.

We make available free of charge through our website at www.pharmathene.com our press releases and all of the documents that we are required to file electronically with the SEC, including all amendments thereto, as soon as reasonably practical after they are electronically filed with, or furnished to, the SEC. Our website also contains our Code of Ethics. The information on our website is not part of nor incorporated by reference into this prospectus.

You may also read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC -0330. The SEC also maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers, like PharmAthene, that file electronically with the SEC at http://www.sec.gov.

In addition, we will provide, without charge to each person, including any beneficial owner, to whom this prospectus is delivered, upon written or oral request of such person, a copy of any or all of the documents incorporated by reference in this prospectus other than exhibits, unless such exhibits specifically are incorporated by reference into such documents or this prospectus. Requests for such documents should be addressed in writing or by telephone to: PharmAthene, Inc., One Park Place, Suite 450, Annapolis, MD 21401, (410) 269-2600.

PART II.
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following is a statement of the estimated costs and expenses, other than underwriting compensation, incurred or expected to be incurred by us in connection with the issuance and distribution of the securities being registered pursuant to this registration statement. All of the amounts shown are estimates except for the SEC registration fee. The amounts do not include the costs of preparing any prospectus supplements, NYSE Amex listing fees, FINRA filing fees, transfer agent fees or other expenses relating to the sale and distribution of particular securities registered pursuant to this registration statement, as those costs and expenses cannot be estimated at this time.

SEC Registration Fee	$	11,610
Accounting Fees and Expenses	$	50,000
Legal Fees and Expenses	$	50,000
Miscellaneous Fees and Expenses	$	5,000
Total:	$	116,305

Item 15. Indemnification of Officers and Directors.

Our Amended and Restated Certificate of Incorporation, as amended, provides that the Company, to the full extent permitted by Section 145 of the Delaware General Corporation Law, as amended from time to time, shall indemnify all persons whom it may indemnify pursuant such law. It further provides that expenses (including attorneys' fees) incurred by an officer or director in defending any civil, criminal, administrative, or investigative action, suit or proceeding for which such officer or director may be entitled to indemnification under our Amended and Restated Certificate of Incorporation, as amended, shall be paid by the Company in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such director or officer to repay such amount if it shall ultimately be determined that he is not entitled to be indemnified by the Company as authorized thereby.

Our Bylaws, as amended, provide the Company with the power to indemnify its officers, directors, employees and agents or any person serving at the Company's request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise to the fullest extent permitted by Delaware law.

All of our directors and officers are covered by insurance policies maintained by the Company against certain liabilities for actions taken in their capacities as such, including liabilities under the Securities Act.

On January 21, 2009, the Company's board of directors approved a form of indemnification agreement (the "Indemnification Agreement") and authorized the Company to enter into such Indemnification Agreement with each of the Company's current directors and executive officers, as well as other key employees to be identified by the chief executive officer from time to time.

Pursuant to the Indemnification Agreements, the Company generally agreed, in exchange for each person's continued service as a director, officer or other employee, as applicable, to indemnify and hold harmless each such person to the fullest extent permitted by law against certain expenses, judgments, penalties, fines and settlement payments incurred in connection with any proceeding other than a derivative suit (and against certain expenses in connection with a derivative suit) and resulting from his or her service to the Company.

The foregoing description of the Indemnification Agreements does not purport to be complete and is qualified in its entirety by reference to the actual agreement, a form of which is attached as an exhibit to the Company's Current Report on Form 8-K, filed on January 27, 2009, and which is incorporated herein by reference.

Item 16. Exhibits.

See the index to exhibits, which is incorporated herein by reference.

Item 17. Undertakings.

(a) The undersigned registrant hereby undertakes:

(1) to file, during the period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) to include any prospectus required by Section 10(a)(3) of the Securities Act of 1933, as amended (the "Securities Act" or "Securities Act of 1933");

(ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) do not apply if the information required to be included in a post- effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") that are incorporated by reference in the registration statement or is contained in a form of prospectus pursuant to Rule 424(b) that is part of the registration statement;

(2) that, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof; and

(3) to remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(5) that, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) (A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which the prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however,* that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(6) that, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424 (§230.424 of this chapter);

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(h) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Annapolis, State of Maryland on July 7, 2011.

PHARMATHENE, INC.
(Registrant)

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

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, each of the undersigned constitutes and appoints Eric I. Richman, Charles A. Reinhart III and Jordan P. Karp, and each of them, as attorneys-in-fact and agents, with full power of substitution and resubstitution, for and in the name, place and stead of the undersigned, in any and all capacities, to sign any and all amendments (including post- effective amendments) to this Registration Statement or any Registration Statement for this offering that is to be effective upon the filing pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and all post-effective amendments thereto, and to file the same, with all exhibits thereto and all other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as the undersigned might or could do in person, hereby ratifying and confirming all that each of said attorney-in-fact or substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities indicated, on July 7, 2011.

Signature	Title
/s/ Eric I. Richman Eric I. Richman	Chief Executive Officer and Director (Principal Executive Officer)
/s/ Charles A. Reinhart III Charles A. Reinhart III	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)
/s/ John Pappajohn John Pappajohn	Chairman of the Board
/s/ Derace Schaffer, M.D. Derace Schaffer, M.D.	Director
/s/ John Gill John Gill	Director
/s/ Steven St. Peter, M.D. Steven St. Peter, M.D.	Director
/s/ Joel McCleary Joel McCleary	Director
/s/ Jeffrey W. Runge, M.D. Jeffrey W. Runge, M.D.	Director
/s/ Mitchel Sayare, Ph.D. Mitchel Sayare, Ph.D.	Director

Index to Exhibits

Exhibit No.	Description
1.1	Form of Underwriting Agreement.*
3.1	Amended and Restated Certificate of Incorporation, as amended. Incorporated by reference to the Company's current report on Form 8-K filed on November 4, 2009.
3.2	Bylaws, as amended. Incorporated by reference to the Current Report on Form 8-K filed by the Registrant on May 2, 2008.
3.3	Certificate of Designations with respect to Preferred Stock.*
4.1	Specimen Common Stock Certificate. Incorporated by reference to the Current Report on Form 8-K filed by the Registrant on September 24, 2007.
4.2	Form of Warrant and/or Form of Warrant Agreement.*
5.1	Opinion of SNR Denton US LLP.
23.1	Consent of SNR Denton US LLP (included in Exhibit 5.1).
23.2	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.
24.1	Powers of Attorney (included on the signature page of this Registration Statement).

* If applicable, to be subsequently filed by amendment or as an exhibit to a current report on Form 8-K or other applicable report filed with the SEC and incorporated herein by reference.

SNR Denton US LLP
Two World Financial Center
New York, NY 10281-1008

T +1 212 768 6700
F +1 212 768 6800
snrdenton.com

Exhibit 5.1

July 7, 2011

PharmAthene, Inc.
One Park Place
Suite 450
Annapolis, MD 21401

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel to PharmAthene, Inc., a Delaware corporation (the "Company"), in connection with a Registration Statement on Form S-3 being filed contemporaneously herewith by the Company with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "Securities Act") (such registration statement, as it may be amended, the "Registration Statement") for the issuance and sale from time to time pursuant to Rule 415(a)(1)(x), promulgated under the Securities Act, of securities (collectively, the "Securities") with an aggregate public offering price of $100,000,000, consisting of: (i) shares of common stock, par value $0.0001 per share, of the Company (the "Common Stock"); (ii) shares of preferred stock, par value $0.0001 per share, of the Company (the "Preferred Stock"); and (iii) warrants to purchase shares of Common Stock or Preferred Stock (collectively, the "Warrants"). This opinion is being delivered to you in accordance with your request and in accordance with the requirements of Item 16 of Form S-3 and Item 601(b)(5)(i) of Regulation S-K.

In connection with rendering this opinion, we have examined originals, certified copies or copies otherwise identified as being true copies of the following:

(a) the Registration Statement;

(b) the Amended and Restated Certificate of Incorporation of the Company, as amended (as so amended, the "Certificate of Incorporation");

(c) the By-Laws of the Company, as amended (as so amended, the "By-Laws");

(d) corporate proceedings of the Company relating to its proposed issuance of the Securities; and

(e) such other instruments and documents as we have deemed relevant or necessary in connection with our opinions set forth herein.

In making the aforesaid examinations, we have assumed the genuineness and authenticity of all documents examined by us and all signatures therein and the conformity to originals of all copies of all documents examined by us. We have also assumed that the corporate records furnished to us by the Company include all corporate proceedings taken by it to date.

Based on and subject to the assumptions, qualifications and limitations set forth herein, we are of the opinion that:

(1) When (i) the Registration Statement has become effective under the Securities Act and (ii) an issuance of the Common Stock has been duly authorized by the Company and, upon issuance and delivery of certificates for the Common Stock against payment therefor in accordance with the terms of such corporate proceeding taken by the Company and any applicable underwriting agreement or purchase agreement, and as contemplated by the Registration Statement and/or the applicable prospectus supplement, or upon the exercise of any Warrants to purchase Common Stock in accordance with the terms thereof, or conversion or exchange of Preferred Stock that, by its terms, is convertible into or exchangeable for Common Stock, and receipt by the Company of any additional consideration payable upon such conversion, exchange or exercise, as applicable, the shares of Common Stock represented by such certificates will be validly issued, fully paid and non-assessable.

(2) When (i) the Registration Statement has become effective under the Securities Act, (ii) a series of Preferred Stock has been duly authorized and established by the Company in accordance with the terms of the Certificate of Incorporation, the By-Laws and applicable law, (iii) one or more appropriate Certificate or Certificates of Designation has or have been filed with the Secretary of State of the State of Delaware and (iv) the issuance of such series of Preferred Stock has been appropriately authorized by the Company and, upon issuance and delivery of certificates for such series of Preferred Stock against payment therefor in accordance with the terms of such corporate proceeding taken by the Company and any applicable underwriting agreement or purchase agreement, and as contemplated by the Registration Statement and/or the applicable prospectus supplement, or upon the exercise of any Warrants to purchase such series of Preferred Stock in accordance with the terms thereof, and receipt by the Company of any additional consideration payable upon such exercise, such series of Preferred Stock represented by such certificates will be validly issued, fully paid and non-assessable.

(3) When (i) the Registration Statement has become effective under the Securities Act, (ii) the Warrants and, if applicable, a warrant agreement conforming to the description thereof in the Registration Statement and/or the applicable prospectus supplement have been duly authorized by the Company and any such warrant agreement has been duly executed and delivered by the Company and the warrant agent named therein and (iii) Warrants conforming to the requirements of any related warrant agreement have been duly authenticated by the applicable warrant agent and duly executed and delivered on behalf of the Company against payment therefor in accordance with the terms of such corporate proceeding taken by the Company, any applicable underwriting agreement or purchase agreement and any applicable warrant agreement, and as contemplated by the Registration Statement and/or the applicable prospectus supplement, the Warrants will constitute valid and binding obligations of the Company, enforceable in accordance with their terms.

Our opinions are subject to the effect of Federal and state bankruptcy, insolvency, reorganization, arrangement, moratorium, fraudulent conveyance and other laws relating to or affecting the rights of secured or unsecured creditors generally (or affecting the rights of only creditors of specific types of debtors), with respect to which we express no opinion.

Our opinions are subject to the effect of general principals of equity, whether applied by a court of law or equity, including, without limitation, concepts of materiality, good faith and fair dealing and upon the availability of injunctive relief or other equitable remedies, and the application of principles of equity (regardless of whether enforcement is considered in proceedings at law or in equity).

The Company has informed us that it intends to issue Securities from time to time on a delayed or continuous basis. The opinions set forth above are limited to applicable laws as in effect on the date hereof. Prior to issuing any Securities pursuant to the Registration Statement (i) the Company will advise us in writing of the terms thereof, and (ii) the Company will afford us an opportunity to review the documents pursuant to which such Securities are to be issued or sold (including the applicable offering documents) and the Company will file such supplement or amendment to this opinion (if any) as we may reasonably consider necessary or appropriate.

We express no opinion as to the laws of any jurisdiction other than the corporate laws of the State of Delaware (including the Delaware General Corporation Law and applicable provisions of the Delaware constitution, as well as reported judicial decisions interpreting same, but excluding local laws) and the federal laws of the United States of America.

We hereby consent to the use of our opinion as herein set forth as an exhibit to the Registration Statement and to the use of our name under the caption “Legal Matters” in the prospectus forming a part of the Registration Statement. We do not, by giving such consent, admit that we are within the category of persons whose consent is required under Section 7 of the Act.

Very truly yours,

/s/ SNR Denton US LLP

SNR Denton US LLP

Exhibit 23.2

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption “Experts” in the Registration Statement (Form S-3) and related Prospectus of PharmAthene, Inc. for the registration of shares of its Common Stock, Preferred Stock, and Warrants and to the incorporation by reference therein of our report dated March 31, 2011, with respect to the consolidated financial statements of PharmAthene, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2010, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

McLean, VA

June 30, 2011