As filed with the Securities and Exchange Commission on August 31, 2011

REGISTRATION NO. 333-_____

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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. o

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.

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

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be registered (1)	Proposed maximum offering price per share	Proposed maximum aggregate offering price	Amount of registration fee
Common Stock, par value $0.0001 per share	2,387,614(2)	$ 2.54(3)	$ 6,064,540(3)	$ 704.09(3)
Common Stock, par value $0.0001 per share, to be issued upon exercise of fixed-price warrants	2,572,775	$ 2.54(3)	$ 6,534,849(3)	$ 758.70(3)
TOTAL	4,960,389			1,462.79

(1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), the Registrant is also registering hereunder an indeterminate number of additional shares of common stock that shall be issuable to prevent dilution resulting from stock splits, stock dividends or similar transactions.

(2) Represents the remaining shares of common stock that have been issued upon the conversion of 10% convertible notes, the resale of which had not previously been registered by the Registrant on its Registration Statement on Form S-3, as amended (File No. 333-161587), which was declared effective on November 25, 2009.

(3) Estimated solely for purposes of calculating the amount of the registration fee pursuant to Rule 457(c) of the Securities Act based upon the average of the high and low sales prices of the registrant's common stock as reported on the NYSE Amex on August 30, 2011.

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. The selling stockholders 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 where the offer or sale is not permitted.

Subject to Completion, Dated August 31, 2011

PROSPECTUS

2,387,614 Shares of Common Stock
2,572,775 Shares of Common Stock Underlying Fixed-Price Warrants

This prospectus relates to the resale from time to time by the selling stockholders (described in the section entitled "Selling Stockholders" on page 18 of this prospectus) of up to 4,960,389 shares of our common stock, par value $0.0001 per share, consisting of (i) 2,387,614 shares of common stock that have been issued upon the conversion of 10% convertible notes and (ii) up to 2,572,775 shares of common stock that are issuable upon exercise of warrants with a fixed exercise price of $2.50 per share. The resale of an additional 4,582,659 shares of common stock underlying the 10% convertible notes has been previously registered by us pursuant to a registration statement on Form S-3, as amended (File No. 333-161587), which was declared effective by the Securities and Exchange Commission on November 25, 2009. The 10% convertible notes and related warrants were issued to investors pursuant to the Note and Warrant Purchase Agreement, dated as of July 24, 2009, as amended, between PharmAthene, Inc. and the investors named in that agreement. In this prospectus, we refer to that agreement as the "Note and Warrant Purchase Agreement," to the notes as the "10% Convertible Notes" or the "Notes" and to the warrants as the "Warrants."

The selling stockholders may offer and sell, from time to time, in the open market or in privately negotiated transactions and at market prices, fixed prices or negotiated prices, all or any portion of the shares registered for resale hereby in amounts and on terms to be determined at the time of sale. For additional information on the possible methods of sale that may be used by the selling stockholders, you should refer to the section entitled "Plan of Distribution" beginning on page 29 of this prospectus. We will not receive any of the proceeds from the resale of shares of our common stock by the selling stockholders.

Our common stock is listed on NYSE Amex under the symbol "PIP." On August 30, 2011, the last reported sale price per share of common stock on that exchange was $2.54.

Investing in our common stock involves certain risks. You should read the entire prospectus and any accompanying prospectus supplement carefully before you make your investment decision. See "Risk Factors" beginning on page 4.

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.

ABOUT THIS PROSPECTUS

You should rely only on the information contained or incorporated by reference in this prospectus and any applicable prospectus supplements. Neither PharmAthene, Inc. nor the selling stockholders have 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. The Company is not making any offer to sell these securities and the selling stockholders 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 appearing in this prospectus is accurate only as of the date on the cover page and that information contained in any document incorporated by reference in this prospectus is only accurate as of the date of the document incorporated by reference. Our business, financial condition, results of operations and prospects may have subsequently changed.

SUMMARY

Business 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.

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.

Recent Events

On August 16, 2011, we announced that we have been awarded a $5.7 million contract under a Department of Defense (DoD) Broad Agency Announcement for studies directed at the development of an advanced expression system for the bioproduction of our nerve agent medical countermeasure program. The contract has a base period of 18 months.

On August 22, 2011, Charles A. Reinhart III resigned from his position as our Chief Financial Officer, which resignation will become effective on September 7, 2011.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should consider the following risk factors, as well as other information contained or incorporated by reference in this prospectus and any accompanying prospectus supplement, before deciding to purchase any shares of our common stock offered herein. The risks and uncertainties described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business operations. If any of these risks occur, our business, financial condition or results of operations could suffer, the market price of our common stock could decline and you could lose all or part of your investment in our common stock.

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

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

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

Our 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 TM 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 recorded an accrual for these exit activities, of which $0.1 million remained in accrued expenses at June 30, 2011. We also wrote down the net book value of our Protexia® related assets of approximately $4.6 million as of December 31, 2010.

Further, BARDA has expressed concerns regarding our past performance and our ability to successfully complete the current objectives within the existing cost ceiling and schedules under our contract for the development of SparVax TM . We are in discussions with BARDA about modifying the activities under our current contract to focus primarily on the production of cGMP material, conducting another human clinical study, and demonstrating product stability. These modifications may result in reduced funding of our activities by BARDA. Further, if we are unable to perform adequately under this contract, including meeting milestones within one month of their due dates, we may be at increased risk that BARDA will curtail our activities under, or terminate, that contract.

Our current development contract for Valortim® runs through 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, formaion, 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 TM 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 purchasers of shares 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 June 30, 2011 we had outstanding options to purchase approximately 5.3 million shares of common stock (not including restricted shares). Additional shares are reserved for issuance under our 2007 Long-Term Incentive Compensation Plan. Our stock options are generally exercisable for ten years, with a significant portion exercisable either immediately or beginning one year after the date of the grant.

We filed 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 the selling stockholders listed in this prospectus. 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 stockholders of their shares pursuant to the registration statement or otherwise could depress the market price of our common stock.

Finally, as of June 30, 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 received proceeds of approximately $10.5 million in connection with the issuance of the 10% Convertible Notes and Warrants in July 2009 and we will receive the exercise price of $2.50 per share upon exercise of any Warrants (assuming the Warrants are exercised for cash and not as part of a "net issue exercise"). We will use any proceeds from the exercise of the Warrants for the satisfaction of existing obligations and for general working capital. We will not receive any of the proceeds from the sale of our common stock offered by the selling stockholders named in this prospectus.

SELLING STOCKHOLDERS

An aggregate of 4,960,389 shares of our common stock will be registered for resale by the selling stockholders under this prospectus, consisting of (i) 2,387,614 shares of common stock that have been issued upon the conversion of the 10% Convertible Notes and (ii) 2,572,775 shares of common stock that are issuable upon exercise of the Warrants. The resale of an additional 4,582,659 shares of common stock underlying the 10% Convertible Notes has been previously registered by us pursuant to a registration statement on Form S-3, as amended (File No. 333-161587), which was declared effective by the Securities and Exchange Commission on November 25, 2009. The remaining shares underlying the 10% Convertible Notes were previously sold by their holders pursuant to an exemption from registration under the Securities Act. The 10% Convertible Notes and Warrants were issued to investors pursuant to the Note and Warrant Purchase Agreement, dated as of July 24, 2009, as amended, between PharmAthene, Inc. and the investors named in that agreement.

All of the shares referred to above were issued or will be issued by us, as the case may be, pursuant to exemptions from registration under Section 4(2) of the Securities Act. The description of the 10% Convertible Notes and the Warrants is set forth in our Current Reports on Form 8-K and Form 8-K/A filed with the SEC on July 30, 2009 and August 3, 2009, respectively, and is incorporated herein by reference.

On November 3, 2010, certain of our affiliates, officers and directors, who owned 10% Convertible Notes, converted their Notes into an aggregate of approximately 3.4 million shares of our common stock. These converting noteholders received cash payments of approximately $0.6 million in the aggregate, corresponding to the interest they would have accrued following conversion had they held the Notes to maturity. Substantially all remaining holders of the 10% Convertible Notes in the aggregate principal amount (plus accrued interest) of approximately $13.1 million, including affiliates, converted their Notes prior to December 29, 2010, resulting in the issuance of approximately 5.2 million shares of our common stock, while one noteholder elected to have his Note redeemed for cash on December 29, 2010. Of this group of remaining holders, holders of Notes in the aggregate principal amount (plus accrued interest) of approximately $8.4 million elected to accept our early conversion offer and received cash payments of approximately $0.3 million in the aggregate, corresponding to the interest they would have accrued following conversion had they held their Notes to maturity. At December 29, 2010, none of the 10% Convertible Notes remained outstanding.

The closing price per share of our common stock on the NYSE Amex on July 24, 2009, the trading day immediately preceding the time that we entered into the binding agreement to issue the 10% Convertible Notes and Warrants, was $2.50. Based on this closing price, the aggregate dollar value of the 4,960,389 shares being registered for resale under this prospectus is approximately $12,400,973.

To the extent permitted by law, the selling stockholders listed below may resell shares pursuant to this prospectus. We have registered the resale of the shares to permit the selling stockholders and their respective permitted transferees or other successors in interest that receive their shares from the selling stockholders after the date of this prospectus to resell the shares.

The following table sets forth the name of the selling stockholders, the number and percentage of shares of our common stock beneficially owned by each of the selling stockholders as of August 4, 2011 (unless otherwise specified in the footnotes to the table) and immediately after the offering (assuming that all shares offered in this prospectus are sold and the selling stockholders' beneficial ownership does not otherwise change) and the number of shares of our common stock being offered by the selling stockholders. The selling stockholders may sell all, some or none of the shares being offered. Accordingly, no estimate can be given as to the number of shares that will be held by the selling stockholders upon consummation of any sales. In addition, the selling stockholders listed in the table below may have acquired, sold or transferred, in transactions exempt from registration, some or all of their shares since the date as of which the information in the table is presented.

All information with respect to share ownership has been furnished by the selling stockholders, obtained from our transfer agent and/or obtained from certain beneficial ownership filings made by the selling stockholders with the SEC. Each selling stockholder that is an affiliate of a broker-dealer has informed us that it purchased the shares being registered for resale in the ordinary course of business and at the time of such purchase, it had no agreements or understandings, directly or indirectly, with any person to distribute the shares. From time to time, additional information concerning ownership of the shares of common stock may rest with holders of the shares not named in the table below and of whom we are unaware.

	Shares Beneficially Owned Prior to the Offering(1)		Number of Shares Being Offered		Shares Beneficially Owned After the Offering(1)	
Name of Selling Stockholder	**Number**	**Percentage**	**Underlying Notes(2)**	**Underlying Warrants(3)**	**Number**	**Percentage**
Healthcare Ventures VII, L.P.(4)	4,606,814	9.48%	435,297	280,998	3,890,519	8.01%
MPM Asset Management Investors 2004 BVIII LLC, MPM Bioventures III, L.P., MPM Bioventures III GmbH & Co. Beteiligungs KG, MPM Bioventures III Parallel Fund, L.P. and MPM Bioventures III-QP, L.P. (collectively, "MPM")(5)	7,077,826	14.46%	1,129,473	729,108	5,219,245	10.66%
David Wright(6)	35,669	*	12,760	8,237	14,672	*
Ronald W. Kaiser(6)	5,503	*	1,968	1,271	2,264	*
Ontario Teachers' Pension Plan Board(7)	1,355,466	2.80%	210,312	135,763	1,009,391	2.09%
Jerome Parks(6)	23,237	*	12,760	8,237	2,240	*
Joel McCleary(8)	248,559	*	8,725	5,633	234,201	*
Eric Richman(9)	554,276	1.14%	3,398	2,194	548,684	1.13%
Baker Bros. Investments II, L.P., Baker Brothers Life Sciences, L.P. and 14159, L.P.(10)	933,584	1.90%	0	933,334	250	*
Derace Schaffer, State Street Bank and Trust Trustee F/B/O Derace L. Schaffer IRA Rollover(11)	1,096,043	2.26%	206,548	133,333	756,162	1.56%
James H. Desnick(6)	338,689	*	103,275	66,667	168,747	*
Edward F. Heil(6)	288,689	*	103,275	66,667	118,747	*
Argyris (RJ) Vassiliou(12)	350,476	*	41,310	26,667	282,499	*
Ann Vassiliou Children's Trust(13)	223,213	*	61,964	40,000	121,249	*
Mary L. Pappajohn(14)	427,377	*	56,549	133,333	237,495	*
Christopher Camut(6)	1,333	*	0	1,333	0	*
Total			**2,387,614**	**2,572,775**		

* Less than 1%

(1) Based on 48,232,101 shares of our common stock outstanding as of August 4, 2011. Beneficial ownership is determined in accordance with the rules and regulations of the SEC. In computing the number of shares beneficially owned by a person and the percentage ownership of that person, shares of our common stock underlying warrants, options and convertible notes held by that person that are currently exercisable/convertible or exercisable/convertible within 60 days of August 4, 2011, are deemed outstanding. Such shares, however, are not deemed outstanding for the purposes of computing the percentage ownership of any other person. Except as indicated pursuant to applicable community property laws, each stockholder named in the table has sole voting and investment power with respect to the shares set forth opposite such stockholder's name.

(2) The number of shares underlying the 10% Convertible Notes in this column represents only a portion of the shares issued in respect of the Notes held by the investor. 4,582,659 shares underlying the 10% Convertible Notes were previously registered for resale and the remaining shares underlying the 10% Convertible Notes were previously sold by their holders pursuant to an exemption from registration under the Securities Act.

(3) Represents the maximum number of shares issuable upon exercise of the Warrants at an exercise price of $2.50 per share, subject to customary anti-dilution adjustments (assuming no net issue exercise of those Warrants).

(4) The number of shares beneficially owned prior to the offering includes the shares underlying the Warrants sold under this prospectus, as well as options to purchase 72,759 shares of common stock held by Dr. James Cavanaugh and exercisable as of August 4, 2011 or within 60 days thereof (representing the total number of options held by Dr. Cavanaugh). Dr. Cavanaugh, a member of our Board of Directors until April 2011, is a general partner of HealthCare Partners VII, L.P., which is the general partner of HealthCare Ventures VII, L.P. In such capacity he may be deemed to share voting and investment power with respect to these shares. Dr. Cavanaugh disclaims beneficial ownership of these shares except to the extent of his proportionate pecuniary interest therein. The remaining general partners of HealthCare Partners VII, L.P. are Dr. Christopher Mirabelli, Mr. Harold Werner, Mr. Augustine Lawlor and Mr. John Littlechild.

(5) The number of shares beneficially owned prior to the offering includes the shares underlying the Warrants sold under this prospectus and an option to purchase 1,104 of our common stock owned by Ansbert Gadicke. See Schedule 13D/A filed by MPM on December 27, 2010. MPM BioVentures III GP, L.P. and MPM BioVentures III LLC are the direct and indirect general partners of MPM BioVentures III-QP, L.P., MPM BioVentures III GmbH & Co. Beteiligungs KG, MPM BioVentures III, L.P. and MPM BioVentures III Parallel Fund, L.P. The Series A members of MPM BioVentures III LLC and managers of MPM Asset Management Investors 2004 BVIII LLC are Luke Evnin, Ansbert Gadicke, Nicholas Galakatos, Dennis Henner, Nicholas Simon III, Michael Steinmetz and Kurt Wheeler, who disclaim beneficial ownership of these shares except to the extent of their proportionate pecuniary interest therein. Our director Steven St. Peter is affiliated with the MPM Funds, but is not a member of the general partners and thus is not deemed to have beneficial ownership of the shares owned by the MPM Funds.

(6) The number of shares beneficially owned prior to the offering includes the shares underlying the Warrants sold under this prospectus.

(7) The number of shares beneficially owned prior to the offering includes the shares underlying the Warrants sold under this prospectus and includes 1,219,703 shares of our common stock held by a wholly-owned subsidiary of the selling stockholder. We have been advised by the selling stockholder that the voting and dispositive power with respect to the shares being registered is exercised by Terry Woodward.

(8) The number of shares beneficially owned prior to the offering includes the shares underlying the Warrants sold under this prospectus and options to purchase 122,759 shares of common stock exercisable as of August 4, 2011 or within 60 days thereof (representing the portion of options to purchase a total of 142,759 shares of common stock held by Mr. McCleary that was exercisable as of August 4, 2011 or will become exercisable within 60 days thereof). Mr. McCleary is a member of our Board of Directors.

(9) The number of shares beneficially owned prior to the offering includes the shares underlying the Warrants sold under this prospectus and options to purchase a total of 452,760 shares of common stock (representing the portion of options to purchase a total of 1,018,046 shares of common stock that was exercisable as of August 4, 2011 or will become exercisable within 60 days thereof).

(10) The number of shares beneficially owned prior to the offering includes the shares underlying the Warrants sold under this prospectus. By virtue of their ownership of entities that have the power to control the investment decisions of Baker Bros. Investments II, L.P., Baker Brothers Life Sciences, L.P. and 14159, L.P., Felix J. Baker and Julian C. Baker may each be deemed to be beneficial owners of shares owned by such entities and may be deemed to have shared power to vote or direct the vote of and shared power to dispose or direct the disposition of such securities.

(11) The number of shares beneficially owned prior to the offering includes the shares underlying the Warrants sold under this prospectus and options to purchase 70,000 shares of common stock shares exercisable as of August 4, 2011 or within 60 days thereof (representing the portion of options to purchase a total of 90,000 shares of common stock that was exercisable as of August 4, 2011 or will become exercisable within 60 days thereof). Of the shares offered for resale under this prospectus that were issued upon conversion of Notes, 82,619 shares are held directly by Dr. Schaffer and 123,929 are held indirectly through Dr. Schaffer's IRA account. Of the shares offered for resale under this prospectus that are issuable upon exercise of Warrants, 53,333 shares are held directly by Dr. Schaffer and 80,000 are held indirectly through Dr. Schaffer's IRA account. Dr. Schaffer is a member of our Board of Directors.

(12) The number of shares beneficially owned prior to the offering includes 235,000 shares of our common stock, jointly held by the selling stockholder and his spouse, and includes the shares underlying the Warrants sold under this prospectus. See also footnote 13.

(13) The number of shares beneficially owned prior to the offering includes the shares underlying the Warrants sold under this prospectus. Mr. Argyris (RJ) Vassiliou is the trustee for the Ann Vassiliou Children's Trust. See also footnote 12.

(14) The number of shares beneficially owned prior to the offering includes the shares underlying the Warrants sold under this prospectus. Mary L. Pappajohn is the spouse of John Pappajohn, who was the Chairman of our Board of Directors until July 2011, when he retired from the Board. Ms. Pappajohn is not deemed to have beneficial ownership of the PharmAthene securities owned by her spouse for purposes of this table, because she does not have voting or investment power over such securities, which have therefore not been included in this table. As of August 4, 2011, Mr. Pappajohn had beneficial ownership of an additional 521,164 shares of common stock, consisting of 451,164 shares and 70,000 shares underlying options.

Possible Payments to Selling Stockholders and Affiliates

The table below summarizes the dollar amount of actual cash interest payments made with respect to the Notes, as well as the maximum initial registration default payment and monthly registration default payment, that we may be required to make to selling stockholders, affiliates of selling stockholders or any person with whom any selling stockholder has a contractual relationship regarding the sale of the Notes and Warrants or the resale of the underlying shares. These payments relate to all of the Notes issued pursuant to the Note and Warrant Purchase Agreement, i.e., they also include that portion of a given Note with respect to which we have previously registered for resale the underlying shares. In addition to the payments disclosed in the table, we were obligated to reimburse MPM and Healthcare Ventures VII, L.P. for certain reasonable legal costs and expenses incurred by them and payable directly to their counsel in connection with the sale of the Notes and Warrants.

Selling Stockholders	Actual Interest Payments(1)*	Potential Registration Default Payments(2)*	Potential On-Going Registration Default Payments(2)*
Mary Pappajohn	$ 74,166.67	$ 10,000.00	$10,000/month
Derace Schaffer, State Street Bank and Trust Trustee F/B/O Derace L. Schaffer IRA Rollover	$ 74,166.67	$ 10,000.00	$10,000/month
Joel McCleary	$ 3,132.95	$ 422.42	$422.42/month
David Wright	$ 4,581.77	$ 617.77	$617.77/month
Christopher Camut	$ 1,438.89	$ 100.00	$100.00/month
Eric Richman	$ 1,220.32	$ 164.54	$164.54/month
Healthcare Ventures VII, L.P.	$ 156,304.97	$ 21,074.83	$21,074.83/month
MPM	$ 405,566.69	$ 54,683.15	$54,683.15/month
Jerome Parks	$ 4,581.77	$ 617.77	$617.77/month
Ronald Kaiser	$ 706.93	$ 95.32	$95.32/month
Ontario Teachers' Pension Plan Board	$ 75,518.21	$ 10,182.23	$10,182.23/month
James H. Desnick	$ 37,083.33	$ 5,000.00	$5,000.00/month
Edward F. Heil	$ 37,083.33	$ 5,000.00	$5,000.00/month
Argyis (R.J.) Vassiliou	$ 14,833.34	$ 2,000.00	$2,000.00/month
Ann Vassiliou Children's Trust	$ 22,250.00	$ 3,000.00	$3,000.00/month
Baker Bros. Investments II, L.P., Baker Brothers Life Sciences, L.P. and 14159, L.P.	$ 207,666.66	$ 70,000.00	$70,000.00/month
TOTAL	**$ 1,120,302.50**	**$ 192,958.03**	**$192,958.03/month**

* Amounts are rounded up to the nearest cent.

(1) For Mr. Camut, this amount represents total interest accrued through the date of redemption on December 29, 2010. For Baker Bros. and its affiliates, this amount represents a cash payment made with respect to 40% of the Notes held by Baker Bros. and its affiliates, which represented the interest that would have accrued on such Notes from November 3, 2010 (the effective date of conversion) through maturity, in accordance with the terms of our early conversion offer to the Noteholders. Interest that had accrued on such 40% of Notes from the date of issuance through the date of conversion, as well as interest that had accrued on the remaining 60% of Notes held by Baker Bros., was paid in shares of common stock. For all other holders, this amount represents cash payments made in accordance with the terms of our early conversion offer to the Noteholders, which represents the interest that would have accrued on the Notes from November 3, 2010 through maturity. Interest that had accrued on such Notes from the date of issuance to November 3, 2010 was paid in shares of common stock. The amounts reflected here do not include the market value of the shares of common stock corresponding to interest accrued through the date of conversion.

(2) Under the terms of the Notes, if (i) the registration statement is (A) not filed within 30 days of the closing, ("Filing Failure"), or (B) not declared effective as specified in the Notes ("Effectiveness Failure"), or (ii) after the effective date of the registration statement, after the 2nd consecutive business day (other than during an allowable blackout period under the Notes) on which sales of all of the securities required to be included on the registration statement cannot be made pursuant to the registration statement (a "Maintenance Failure"), we will be required to pay to each selling stockholder a one-time payment of 1.0% of the aggregate principal amount of the Notes relating to the affected shares on each of the following dates: (i) the day of a Filing Failure, (ii) the day of an Effectiveness Failure and (iii) the initial day of a Maintenance Failure.

Following a Filing Failure, Effectiveness Failure or Maintenance Failure, we will also be required to make to each selling stockholder monthly payments of 1.0% of the aggregate principal amount of the Notes relating to the affected shares on each of the following dates: (i) on every 30 th day after the initial day of a Filing Failure, (ii) on every 30th day after the initial day of an Effectiveness Failure and (iii) on every 30 th day after the initial day of a Maintenance Failure, in each case prorated for shorter periods and until the failure is cured.

If the Company fails to make any of these payments in a timely manner, the amount due will bear interest at 1.5% per month (prorated for partial months) until paid in full.

The amounts included in the column "Registration Default Payments" represent only a one-time payment of 1.0% of the aggregate principal amount of the Notes, and do not reflect the additional monthly payments described above.

Based on the above, in the first year following the filing of this registration statement, we could be required to pay to the selling stockholders and any of their affiliates an aggregate of $2,508,454, assuming the registration statement is not declared effective in accordance with the terms of the Notes, all required payments are made on time and no late fees or interest on these payments are incurred. Because the Notes have all been converted or redeemed, no additional ordinary interest is payable with respect to the Notes during that time period.

The Note and Warrant Purchase Agreement also provides that we are obligated to pay, and save the selling stockholders harmless from, any and all liabilities with respect to any stamp or similar taxes which may be determined to be payable in connection with the execution and performance of the Note and Warrant Purchase Agreement, and the other documents executed in connection therewith (the "Transaction Documents") or any modification, amendment or alteration of the terms or provisions of the Transaction Documents (excluding taxes on the income or gain of any selling stockholder).

We may also be obligated to make following potential payments to selling stockholders and their affiliates upon the events described below. We do not anticipate having to pay any of these amounts, but we are unable to estimate at this time if any such payments will be payable, or, if payable, the amount of such payments.

- *Late Charge.* The terms of the Notes provide that any amount due by us pursuant to the sale of the Notes and Warrants, other than interest, which is not paid when due shall result in a late charge being incurred and payable by us in an amount equal to interest on such amount at the rate of 5.0% per annum from the date such amount was due until the same is paid in full ("Late Charge").

- *Indemnification Obligations.* Under the Registration Rights Agreement, we have agreed to indemnify each selling stockholder for any losses arising out of or based upon any untrue statement or alleged untrue statement of any material fact contained in this prospectus, prospectus supplement or registration statement of which this prospectus is a part, or any amendment or supplement thereof, or arising out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading. We will reimburse the selling stockholder for any reasonable legal or other expenses incurred in connection with investigating or defending any such losses, subject to certain exceptions set forth in the Registration Rights Agreement.

Possible Profit/(Loss) to Selling Stockholders with Respect to Conversion or Exercise of Company Securities

The tables below summarize the total possible profit/(loss) that the selling stockholders or their affiliates could have realized as a result of (a) the conversion of the 10% Convertible Notes, (b) the exercise of the Warrants and (c) the exercise of any options to purchase our common stock, assuming conversion or exercise on the date of sale or date of grant, as applicable:

Security	Market price per share on date of sale(1)	Conversion price per share(2)	Total number of shares actually issued upon conversion(3)	Combined market price of total number of underlying shares	Combined conversion price of total number of underlying shares	Total possible profit/(loss) realizable by selling stockholders
10% Convertible Notes	$ 2.50	$ 2.541667	8,588,983	$21,472,457.50	$21,830,334.65	$ (357,877.15)

(1) Represents the closing price per share of our common stock on the NYSE Amex on July 24, 2009, the trading day immediately preceding the time that we entered into the binding agreement to issue the 10% Convertible Notes and Warrants.

(2) The conversion price was subject to customary antidilution adjustments, including in the event of a stock dividend, stock split or stock combination, recapitalization or reorganization, merger or consolidation, sale of all or substantially all of our assets, distribution of debt or assets to our stockholders and in connection with certain other dilutive equity issuances.

(3) This amount, which is based on the number of Notes actually converted, includes (a) 7,587,856 shares issued in respect of the aggregate principal amount of the 10% Convertible Notes, and (b) 1,001,127 shares issued in respect of interest accrued on the Notes through the date of conversion.

Security	Market price per share on date of sale(1)	Exercise price per share (2)	Total number of underlying shares	Combined market price of total number of underlying shares	Combined exercise price of total number of underlying shares	Total possible profit/(loss) realizable by selling stockholders
Warrants related to 10% Convertible Notes	$ 2.50	$ 2.50	2,572,775	$ 6,431,937.50	$ 6,431,937.50	$ 0.00

(1) Represents the closing price per share of our common stock on the NYSE Amex on July 24, 2009, the trading day immediately preceding the time that we entered into the binding agreement to issue the 10% Convertible Notes and Warrants.

(2) The exercise price is subject to customary antidilution adjustments, including in the event of a stock dividend, stock split or stock combination, recapitalization or reorganization, merger or consolidation, sale of all or substantially all of our assets, distribution of debt or assets to our stockholders and in connection with certain other dilutive equity issuances.

Selling Stockholder	Option Grant Date	Market price per share on grant date	Exercise price per share on grant date	Total number of underlying shares	Combined market price of total number of underlying shares	Combined exercise price of total number of underlying shares	Total possible profit/(loss) realizable by selling stockholder/ affiliate
Chris Camut(1)	1/4/2007	$ 3.80	$ 3.80	44,172	$ 167,854	$ 167,854	$ 0
	10/2/2007	$ 5.20	$ 5.20	215,000	$ 1,118,000	$ 1,118,000	$ 0
	1/21/2009	$ 2.46	$ 2.46	25,308	$ 62,258	$ 62,258	$ 0
Healthcare Ventures VII, L.P. (2)	9/11/2003	$ 2.96	$ 2.96	1,655	$ 4,899	$ 4,899	$ 0
	1/18/2006	$ 3.80	$ 3.80	1,104	$ 4,195	$ 4,195	$ 0
	10/9/2007	$ 5.25	$ 5.25	20,000	$ 105,000	$ 105,000	$ 0
	3/9/2009	$ 2.53	$ 2.59	10,000	$ 25,300	$ 25,900	$ (600)
	8/5/2009	$ 2.47	$ 2.47	20,000	$ 49,400	$ 49,400	$ 0
	6/23/2010	$ 1.60	$ 1.60	20,000	$ 32,000	$ 32,000	$ 0
Joel McCleary	9/11/2003	$ 2.96	$ 2.96	1,655	$ 4,899	$ 4,899	$ 0
	1/18/2006	$ 3.80	$ 3.80	1,104	$ 4,195	$ 4,195	$ 0
	10/9/2007	$ 5.25	$ 5.25	20,000	$ 105,000	$ 105,000	$ 0
	4/28/2008	$ 2.97	$ 2.97	50,000	$ 148,500	$ 148,500	$ 0
	3/9/2009	$ 2.53	$ 2.59	10,000	$ 25,300	$ 25,900	$ (600)
	8/5/2009	$ 2.47	$ 2.47	20,000	$ 49,400	$ 49,400	$ 0
	6/23/2010	$ 1.60	$ 1.60	20,000	$ 32,000	$ 32,000	$ 0
	6/23/2011	$ 3.04	$ 3.11	20,000	$ 60,800	$ 62,200	$ (1,400)
MPM(3)	1/18/2006	$ 3.80	$ 3.80	1,104	$ 4,195	$ 4,195	$ 0
	1/18/2006	$ 3.80	$ 3.80	1,104	$ 4,195	$ 4,195	$ 0
	10/9/2007	$ 5.25	$ 5.25	20,000	$ 105,000	$ 105,000	$ 0
	3/9/2009	$ 2.53	$ 2.59	10,000	$ 25,300	$ 25,900	$ (600)
	8/5/2009	$ 2.47	$ 2.47	20,000	$ 49,400	$ 49,400	$ 0
	6/23/2010	$ 1.60	$ 1.60	20,000	$ 32,000	$ 32,000	$ 0
	6/23/2011	$ 3.04	$ 3.11	20,000	$ 60,800	$ 62,200	$ (1,400)

Mary Pappajohn(4)	10/9/2007	$ 5.25	$ 5.25	20,000	$ 105,000	$ 105,000	$ 0
	3/9/2009	$ 2.53	$ 2.59	10,000	$ 25,300	$ 25,900	$ (600)
	8/5/2009	$ 2.47	$ 2.47	20,000	$ 49,400	$ 49,400	$ 0
	6/23/2010	$ 1.60	$ 1.60	20,000	$ 32,000	$ 32,000	$ 0
	6/23/2011(1)	$ 3.04	$ 3.11	20,000	$ 60,800	$ 62,200	$ (1,400)
Eric Richman	11/15/2003	$ 2.96	$ 2.96	28,638	$ 84,768	$ 84,768	$ 0
	1/18/2005	$ 3.80	$ 3.80	11,043	$ 41,963	$ 41,963	$ 0
	2/22/2006	$ 3.80	$ 3.80	4,510	$ 17,138	$ 17,138	$ 0
	1/4/2007	$ 3.80	$ 3.80	8,282	$ 31,472	$ 31,472	$ 0
	10/2/2007	$ 5.20	$ 5.20	260,000	$ 1,352,000	$ 1,352,000	$ 0
	1/21/2009	$ 2.46	$ 2.46	30,573	$ 75,210	$ 75,210	$ 0
	3/25/2010	$ 1.51	$ 1.51	100,000	$ 151,000	$ 151,000	$ 0
	5/18/2010	$ 1.48	$ 1.48	100,000	$ 148,000	$ 148,000	$ 0
	10/20/2010	$ 4.20	$ 4.20	125,000	$ 525,000	$ 525,000	$ 0
	11/3/2010	$ 3.34	$ 3.34	125,000	$ 417,500	$ 417,500	$ 0
	12/23/2010	$ 3.91	$ 3.91	225,000	$ 879,750	$ 879,750	$ 0
Derace Schaffer	10/9/2007	$ 5.25	$ 5.25	20,000	$ 105,000	$ 105,000	$ 0
	3/9/2009	$ 2.53	$ 2.59	10,000	$ 25,300	$ 25,900	$ (600)
	8/5/2009	$ 2.47	$ 2.47	20,000	$ 49,400	$ 49,400	$ 0
	6/23/2010	$ 1.60	$ 1.60	20,000	$ 32,000	$ 32,000	$ 0
	6/23/2011	$ 3.04	$ 3.11	20,000	$ 60,800	$ 62,200	$ (1,400)
David Wright(1)	7/15/2003	$ 2.96	$ 2.96	82,714	$ 244,833	$ 244,833	$ 0
	1/18/2005	$ 3.80	$ 3.80	69,130	$ 262,694	$ 262,694	$ 0
	2/22/2006	$ 3.80	$ 3.80	13,803	$ 52,451	$ 52,451	$ 0
	1/4/2007	$ 3.80	$ 3.80	16,556	$ 62,913	$ 62,913	$ 0
	8/30/2007	$ 5.36	$ 5.36	780,000	$ 4,180,800	$ 4,180,800	$ 0
	1/21/2009	$ 2.46	$ 2.46	37,185	$ 91,475	$ 91,475	$ 0

(1) The options presented have been either exercised or canceled and are no longer outstanding.

(2) These options were granted to Dr. James Cavanaugh, a general partner of the entity that serves as general partner of Healthcare Ventures VII, L.P. Dr. Cavanaugh retired from the Board of Directors in April 2011.

(3) Dr. Steven St. Peter is an affiliate of MPM. Apart from one of the two 1,104 option grants on 1/18/2006, all options listed herein have been granted to Dr. St. Peter, and MPM does not have voting or investment power over such options.

(4) These options are held by John Pappajohn, the Chairman of our Board of Directors until July 2011 (when he retired from the Board). Mary Pappajohn is the wife of Mr. Pappajohn. Ms. Pappajohn does not have voting or investment power over her husband's options.

Comparison of Proceeds

The following table shows the payments made, required to be made or that may be required to be made to selling stockholders under the assumptions disclosed in the footnotes to the table, in relation to the gross proceeds to us from the sale of the 10% Convertible Notes and Warrants.

Gross Proceeds from the Sale of the 10% Convertible Notes and Warrants(1)	$	19,295,802
Less Payments Made or Required to be Made to Selling Stockholders and Affiliates(2)	$	1,313,261
Less Payments Made to Counsel to MPM and Healthcare Ventures VII, L.P. for certain reasonable legal costs and expenses	$	75,000
Resulting Net Proceeds from Sale of the 10% Convertible Notes and Warrants(1)	$	17,907,541
Total Possible Discount to Market Price of Stock Registered Hereunder	$	0

(1) Represents a combination of canceled debt (8% convertible notes) and new cash. Does not include $6,431,938 receivable by us upon the full exercise of all Warrants (assuming no net issue exercise of those Warrants).

(2) This amount reflects actual cash interest payments made to the sole redeeming noteholder through the date of redemption, actual cash interest payments made to all other noteholders who accepted our early conversion offer representing the interest that would have accrued on their Notes from the conversion date had they held such Notes through maturity, and a one-time payment of $192,958.03, payable in the event the Company fails to meet its registration obligations described above, but excludes monthly payments of $192,958.03, payable each month during which the Company has not cured any failure to meet its registration obligations. The amounts reflected here do not include the market value of the shares of common stock corresponding to interest accrued through the date of conversion. We are unable, at this time, to estimate the amount of any other payments that may be required to be made to the selling stockholders in the future.

The total amount of all actual and possible payments payable to the selling stockholders in connection with the sale of the 10% Convertible Notes and Warrants reflected in the table above, represents approximately 7.75% of the resulting net proceeds to us from such sale, which is approximately 3.88% per annum averaged over the two-year term of such notes.

Prior Securities Transactions

The following table and accompanying footnotes show information with respect to the prior securities transactions effected between Healthcare Acquisition Corp. (“HAQ”) and the selling stockholders named in this prospectus (or their affiliates) since HAQ’s initial public offering in August 2005, and do not include any grants or exercises of stock options or restricted stock made under our 2007 Long-Term Incentive Compensation Plan, which we refer to as the “2007 Plan.” Except for grants or exercises under the 2007 Plan and the sale of the 10% Convertible Notes and Warrants in July 2009, we have not effected any securities transactions with the selling stockholders identified in this prospectus (or their affiliates) since merging with HAQ’s wholly-owned subsidiary in August 2007 and prior to the date of sale of the Notes and Warrants in July 2009.

Selling Stockholder	Common stock outstanding prior to transaction	Common stock outstanding prior to transaction held by persons other than selling stockholders, their affiliates or our current affiliates	Common stock issued or issuable in transaction	Percentage of common stock issued in the transaction (based on non-affiliate holdings)(1)	Closing market price per share of common stock immediately prior to transaction (2)	Closing market price per share of common stock on 08/04/11
August 3, 2007 Merger of the Company into wholly-owned subsidiary of HAQ (the “2007 Merger”)						
Joel McCleary(3)	11,650,000	8,545,000	104,083	1.22%	$ 6.89	$ 2.29
Eric Richman(4)	11,650,000	8,545,000	814	0.01%	$ 6.89	$ 2.29
Jerome Parks(5)	11,650,000	8,545,000	5,320	0.06%	$ 6.89	$ 2.29
Ronald Kaiser(6)	11,650,000	8,545,000	820	0.01%	$ 6.89	$ 2.29
Ontario Teachers’ Pension Plan Board(7)	11,650,000	8,545,000	855,261	10.01%	$ 6.89	$ 2.29
David Wright(8)	11,650,000	8,545,000	107,135	1.25%	$ 6.89	$ 2.29
Healthcare Ventures VII, L.P.(9)	11,650,000	8,545,000	3,498,748	40.94%	$ 6.89	$ 2.29
MPM(10)	11,650,000	8,545,000	3,960,396	46.35%	$ 6.89	$ 2.29

(1) Ratio shown is of (i) common stock issued or issuable in connection with transaction to (ii) undiluted common stock outstanding prior to transaction held by persons other than selling stockholders or their affiliates or our current affiliates.

(2) Reflects the closing price of common stock on the American Stock Exchange on August 2, 2007.

(3) Contains 2,673 shares issuable upon conversion of principal amount of formerly outstanding 8% Notes, which were exchanged for 10% Convertible Notes.

(4) Consists of 814 shares issuable upon conversion of principal amount of formerly outstanding 8% Notes, which were exchanged for 10% Convertible Notes.

(5) Consists of 5,320 shares issuable upon conversion of principal amount of formerly outstanding 8% Notes, which were exchanged for 10% Convertible Notes.

(6) Consists of 820 shares issuable upon conversion of principal amount of formerly outstanding 8% Notes, which were exchanged for 10% Convertible Notes.

(7) Contains 87,693 shares issuable upon conversion of principal amount of formerly outstanding 8% Notes, which were exchanged for 10% Convertible Notes.

(8) Contains 2,673 shares issuable upon conversion of principal amount of formerly outstanding 8% Notes, which were exchanged for 10% Convertible Notes.

(9) Contains 181,505 shares issuable upon conversion of principal amount of formerly outstanding 8% Notes, which were exchanged for 10% Convertible Notes.

(10) Contains 470,953 shares issuable upon conversion of formerly outstanding 8% Notes, which were exchanged for 10% Convertible Notes.

Shares Registered for Resale Pursuant to Prior Registration Statements

Prior to the issuance of the Notes and the Warrants, 11,802,235 shares of our common stock were held by persons other than the selling stockholders, our affiliates or affiliates of the selling stockholders. The following table shows the number of shares that have been registered for resale by the selling stockholders or their affiliates pursuant to prior registration statements (including the registration statement on Form S-3 (File No. 333-161587) pursuant to which a portion of the shares underlying the 10% Notes have been registered for resale), the number of shares so registered that continue to be held by the selling stockholders or their affiliates, and the number of shares registered for resale pursuant to this registration statement.

	Previous registrations				
Selling stockholder	**Number of shares registered for resale by the selling stockholders or their affiliates prior to the issuance of the Notes and Warrants**	**Number of Shares underlying the Notes that have been previously registered for resale by the selling stockholders or their affiliates (File No. 333-161587)**	**Number of shares previously registered for resale by the selling stockholders or their affiliates that continue to be held as of August 4, 2011**	**Number of shares that have been sold in registered resale transactions by the selling stockholders or their affiliates**	**Number of shares registered for resale on behalf of the selling stockholders or their affiliates on this registration statement**
Mary Pappajohn	894,653(1)	237,495	901,599	230,549(2)	189,882
Derace Schaffer, State Street Bank and Trust Trustee F/B/O Derace L. Schaffer IRA Rollover	823,673(3)	237,495	688,122	373,046(6)	339,881
Joel McCleary	104,083(4)	10,032	111,442	0	14,358
David Wright	107,135(4)	14,672	70,282	0	20,997
Christopher Camut	0	2,375	2,375	0	1,333
Eric Richman	814(4)	3,908	3,908	0	5,592
Healthcare Ventures VII, L.P.	3,498,748(4)	500,517	3,817,760	0	716,295
MPM(5)	3,960,396(4)	1,298,698	4,788,141	0	1,858,581
Jerome Parks	5,320(4)	14,672	1,240	0	20,997
Ronald Kaiser	820(4)	2,264	2,264	0	3,239
Ontario Teachers' Pension Plan Board	855,261(4)	241,823	1,097,087	0	346,075
James H. Desnick	0	118,747	118,747	0	169,942
Edward F. Heil	0	118,747	118,747	0	169,942
Argyis (R.J.) Vassiliou	0	47,499	47,499	0	67,977
Ann Vassiliou Children's Trust	0	71,249	71,249	0	101,964
Baker Bros. Investments II, L.P., Baker Brothers Life Sciences, L.P. and 14159, L.P.	0	1,662,466	0	1,243,322	933,334
TOTAL	**10,250,903**	**4,582,659**	**11,840,462**	**1,846,917**	**4,960,389**

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(1) Consists of 681,713 shares registered for resale by the selling stockholder's spouse, John Pappajohn, pursuant to Registration Statement on Form S-3, as amended, File No. 333-155692, declared effective February 12, 2009, and 141,960 and 70,980 shares registered for resale by John Pappajohn and Matthew Kinley (an employee of a company controlled by Mr. Pappajohn), respectively, pursuant to Registration Statement on Form S-3, as

amended, File No. 333-146463, declared effective January 29, 2008. The 141,960 and 70,980 shares were issuable upon exercise of our warrants that expired unexercised in July 2009.

(2) These shares were sold pursuant to Registration Statement on Form S-3, as amended, File No. 333-155692, declared effective February 12, 2009, for $0.0001 per share upon the exercise by certain third parties of stock purchase options granted to them by John Pappajohn and Derace Schaffer, respectively.

(3) Consists of 681,713 shares registered for resale pursuant to Registration Statement on Form S-3, as amended, File No. 333-155692, effective February 12, 2009, and 141,960 shares registered for resale pursuant to Registration Statement on Form S-3, as amended, File No. 333-146463, effective January 29, 2008. The 141,960 shares were issuable upon exercise of our warrants that expired unexercised in July 2009.

(4) Shares registered pursuant to Registration Statement on Form S-3, as amended, File No. 333-146463, declared effective January 29, 2008. The following shares registered on such registration statement were issuable upon conversion of our 8% convertible notes, which are no longer outstanding: (a) 470,953 shares registered by MPM; (b) 87,693 shares registered by Ontario Teachers' Pension Plan Board; (c) 181,505 shares registered by HCV; (d) 2,673 shares registered by Joel McCleary; (e) 5,320 shares registered by David Wright; (f) 814 shares registered by Eric Richman; (g) 820 shares registered by Ronald Kaiser; and (h) 5,320 shares registered by Jerome Parks.

(5) Shares registered for resale pursuant to the first registration statement (File No. 333-146463) are held by MPM BioVentures III-QP, L.P., MPM BioVentures III GmbH & Co. Beteiligungs KG, MPM BioVentures III, L.P., MPM BioVentures III Parallel Fund, L.P., and MPM Asset Management Investors 2004 BVIII LLC. Shares registered for resale pursuant to the Registration Statement on Form S-3, as amended (File No. 333-161587) and the current registration statement are held by MPM Asset Management Investors 2004 BVIII LLC, MPM Bioventures III, L.P., MPM Bioventures III GmbH & Co. Beteiligungs KG, MPM Bioventures III Parallel Fund, L.P. and MPM Bioventures III-QP, L.P.

(6) Of these shares, 230,549 were sold pursuant to Registration Statement on Form S-3, as amended, File No. 333-155692, declared effective February 12, 2009, for $0.0001 per share upon the exercise by certain third parties of stock purchase options granted to them by John Pappajohn and Derace Schaffer, respectively, and 142,497 were sold pursuant to Registration Statement on Form S-3, as amended, File No. 333-161587, declared effective November 25, 2009.

No Short Position by Selling Stockholders

Based upon information provided by the selling stockholders, we have a reasonable basis to believe that no selling stockholder currently has a short position in our common stock.

PLAN OF DISTRIBUTION

The shares covered by this prospectus may be offered and sold from time to time by the selling stockholders. The term "selling stockholder" includes pledgees, donees, transferees or other successors in interest selling shares received after the date of this prospectus from each selling stockholder as a pledge, gift, partnership distribution or other non-sale related transfer. The number of shares beneficially owned by a selling stockholder will decrease as and when it effects any such transfers. The plan of distribution for the selling stockholders' shares sold hereunder will otherwise remain unchanged, except that the transferees, pledgees, donees or other successors will be selling stockholders hereunder. To the extent required, we may amend and supplement this prospectus from time to time to describe a specific plan of distribution.

The selling stockholders will act independently of us in making decisions with respect to the timing, manner and size of each sale. The selling stockholders may make these sales at prices and under terms then prevailing or at prices related to the then current market price. The selling stockholders may also make sales in negotiated transactions. The selling stockholders may offer their shares from time to time pursuant to one or more of the following methods:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- one or more block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- publicly or privately negotiated transactions;
- on the NYSE Amex (or through the facilities of any national securities exchange or U.S. inter-dealer quotation system of a registered national securities association, on which the shares are then listed, admitted to unlisted trading privileges or included for quotation);
- through underwriters, brokers or dealers (who may act as agents or principals) or directly to one or more purchasers;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

In connection with distributions of the shares or otherwise, the selling stockholders may:

- enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the shares in the course of hedging the positions they assume;
- sell the shares short and redeliver the shares to close out such short positions;
- enter into option or other transactions with broker-dealers or other financial institutions which require the delivery to them of shares offered by this prospectus, which they may in turn resell; and
- pledge shares to a broker-dealer or other financial institution, which, upon a default, they may in turn resell.

In addition to the foregoing methods, the selling stockholders may offer their shares from time to time in transactions involving principals or brokers not otherwise contemplated above, in a combination of such methods or described above or any other lawful methods. The selling stockholders may also transfer, donate or assign their shares to lenders, family members and others and each of such persons will be deemed to be a selling stockholder for purposes of this prospectus. The selling stockholders or their successors in interest may from time to time pledge or grant a security interest in some or all of the shares of common stock, and if the selling stockholders default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock from to time under this prospectus; provided however in the event of a pledge or then default on a secured obligation by the selling stockholder, in order for the shares to be sold under this registration statement, unless permitted by law, we must distribute a prospectus supplement and/or amendment to this registration statement amending the list of selling stockholders to include the pledgee, secured party or other successors in interest of the selling stockholder under this prospectus.

The selling stockholders may also sell their shares pursuant to Rule 144 under the Securities Act, which permits limited resale of shares purchased in a private placement subject to the satisfaction of certain conditions.

Sales through brokers may be made by any method of trading authorized by any stock exchange or market on which the shares may be listed or quoted, including block trading in negotiated transactions. Without limiting the foregoing, such brokers may act as dealers by purchasing any or all of the shares covered by this prospectus, either as agents for others or as principals for their own accounts, and reselling such shares pursuant to this prospectus. The selling stockholders may effect such transactions directly, or indirectly through underwriters, broker-dealers or agents acting on their behalf. In effecting sales, broker-dealers or agents engaged by the selling stockholders may arrange for other broker-dealers to participate. Broker-dealers or agents may receive commissions, discounts or concessions from the selling stockholders, in amounts to be negotiated immediately prior to the sale (which compensation as to a particular broker-dealer might be in excess of customary commissions for routine market transactions).

In offering the shares covered by this prospectus, the selling stockholders, and any broker-dealers and any other participating broker-dealers who execute sales for the selling stockholders, may be deemed to be "underwriters" within the meaning of the Securities Act in connection with these sales. Any profits realized by the selling stockholders and the compensation of such broker-dealers may be deemed to be underwriting discounts and commissions.

The Company is required to pay all fees and expenses incident to the registration of the shares.

The Company has agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

LEGAL MATTERS

SNR Denton US LLP, New York, New York, has passed upon the validity of the common stock offered pursuant to this prospectus.

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. 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 have filed with the SEC a registration statement on Form S-3, of which this prospectus is a part, under the Securities Act, to register the resale of the shares of common stock offered by the selling stockholders. However, this prospectus does not contain all of the information contained in the registration statement and the exhibits and schedules to the registration statement. We encourage you to carefully read the registration statement and the exhibits and schedules to the registration statement.

As a public company, we are required to file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any of our materials on file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Our filings are available to the public over the Internet at the SEC's website at http://www.sec.gov. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" in this prospectus the information in other documents that we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be a part of this prospectus and may subsequently be updated and superseded as described below. We incorporate by reference in this prospectus the documents listed below and any future filings that we may make with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act after the date that the registration statement of which this prospectus forms a part is first filed with the SEC and prior to the termination of the offering under this prospectus. We are not, however, incorporating by reference any documents or portions thereof, whether specifically listed below or filed by us in the future, that are not deemed "filed" with the SEC, including information "furnished" pursuant to Items 2.02 or 7.01 of Form 8-K.

We incorporate by reference the following documents we have filed 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 Reports on Form 10-Q for the quarters ended March 31 and June 30, 2011 (File No. 001-32587);
- our Current Reports on Form 8-K filed with the SEC on June 10, 2011, July 20, 2011 and August 26, 2011 (except with respect to the information furnished pursuant to Item 7.01 thereto); 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."

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.

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, Attn: General Counsel.

Any statement contained in this prospectus and any accompanying prospectus supplement or in any document incorporated or deemed to be incorporated by reference in this prospectus or any accompanying prospectus supplement will be deemed to have been modified or superseded to the extent that a statement contained in this prospectus or any accompanying prospectus supplement or in any other document we subsequently file with the SEC that also is incorporated or deemed to be incorporated by reference in this prospectus or any accompanying prospectus supplement modifies or supersedes the original statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to be a part of this prospectus or any accompanying prospectus supplement.

You should rely only on the information provided in and incorporated by reference into this prospectus. We have not authorized anyone else to provide you with different information. You should not assume that the information in this prospectus or any accompanying prospectus supplement is accurate as of any date other than the date on the front cover of these documents.

PART II. INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the estimated expenses paid or payable by the Registrant in connection with the sale and distribution of the securities registered hereby. All of the amounts shown are estimates except for the SEC registration fee.

SEC Registration Fee	$	1,463
Accounting Fees and Expenses	$	20,000
Legal Fees and Expenses	$	50,000
Miscellaneous	$	5,000
Total:	$	76,463

Item 15. Indemnification of Officers and Directors.

Our certificate of incorporation 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 thereto. 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 hereunder 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 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.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to the Registrant's directors, officers, and controlling persons pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the 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 of expenses incurred or paid by a director, officer or controlling person in a 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 the court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

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.

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;

(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 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 of 1933, each such post-effective amendment shall be deemed to be a new Registration Statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof; 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.

(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.

(C) 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 August 31, 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 August 31, 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/ Derace Schaffer Derace Schaffer, MD	Director
/s/ John M. Gill John Gill	Director
/s/ Steven St. Peter Steven St. Peter, M.D.	Director
/s/ Joel McCleary Joel McCleary	Director
/s/ Jeffrey W. Runge Jeffrey W. Runge	Director
 Mitchel Sayare	Director

Index to Exhibits

Exhibit No.	Description
4.1	Form of 10% Unsecured Senior Convertible Note, incorporated by reference to Exhibit 4.9 to the Registrant's Current Report on Form 8-K/A, filed August 3, 2009 (File No. 001-32587).
4.2	Form of Warrant To Purchase Common Stock, incorporated by reference to Exhibit 4.10 to the Registrant's Current Report on Form 8-K/A, filed August 3, 2009 (File No. 001-32587).
5.1	Opinion of SNR Denton US LLP.
10.1	Note and Warrant Purchase Agreement, dated as of July 24, 2009 by and among PharmAthene, Inc. and the investors named therein, as amended by Amendment No. 1 to Note and Warrant Purchase Agreement, dated as of July 26, 2009 and Amendment No. 2 to Note and Warrant Purchase Agreement, dated as of July 28, 2009, incorporated by reference to Exhibit 10.50 to the Registrant's Current Report on Form 8-K/A, filed August 3, 2009 (File No. 001-32587).
10.2	Registration Rights Agreement, dated as of July 28, 2009 by and among PharmAthene, Inc. and the investors named therein, incorporated by reference to Exhibit 10.51 to the Registrant's Current Report on Form 8-K/A, filed August 3, 2009 (File No. 001-32587).
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 in the signature pages hereto).

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

August 31, 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 "Act") (such registration statement, as it may be amended, the "Registration Statement"), covering the resale of an aggregate of up to 4,960,389 shares (the "Registered Shares") of common stock, par value $0.0001 per share, of the Company (the "Common Stock"), consisting of (i) up to 2,387,614 shares of Common Stock that were issued upon conversion of the Company's 10% convertible notes (the "Issued Shares") and (ii) up to 2,572,775 shares of Common Stock issuable upon exercise of the related warrants (the "Warrant Shares"). The Registered Shares have been included in the Registration Statement for the account of the persons identified therein as the Selling Stockholders.

We are delivering this opinion to you at your request in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Act.

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;

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

(d) corporate proceedings of the Company relating to the issuance of the Registered Shares; 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 of all signatures and the conformity to original documents of all copies furnished to us as original or photostatic copies. We have also assumed that the corporate records furnished to us by the Company include all corporate proceedings taken by the Company to date.

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

1. The Issued Shares have been duly and validly authorized and issued and are fully paid and non-assessable.

2. The Warrant Shares have been duly and validly authorized and, when issued and paid for in accordance with the terms of the Warrants, will be duly and validly issued, fully paid and non-assessable.

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 and Common Stock underlying fixed price 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

Baltimore, Maryland
August 29, 2011