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## **FORM 10-K**

**PHARMATHENE, INC - PIP**

**Filed: March 31, 2008 (period: December 31, 2007)**

Annual report with a comprehensive overview of the company

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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

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**Form 10-K**

(Mark One)

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

For the fiscal year ended December 31, 2007

or

- TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File Number: 001-32587

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**PHARMATHENE, INC.**

(Exact name of registrant as specified in its charter)

**Delaware**

(State or other jurisdiction of  
incorporation or organization)

**20-2726770**

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

**One Park Place, Suite 450, Annapolis, MD**

(Address of principal executive offices)

**21401**

(Zip Code)

**(410) 269-2600**

(Registrant's telephone number, including area code)

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

Title of Each Class:

Name of Each Exchange on Which Registered:

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Common Stock, par value \$0.0001 per share  
Warrants to purchase shares of Common Stock

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American Stock Exchange  
American Stock Exchange

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

None

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Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

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

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

Large Accelerated Filer                       Accelerated Filer                       Non-Accelerated Filer                       Smaller Reporting Company

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

The aggregate market value of voting stock held by non-affiliates of the registrant was \$68,620,000 based upon the closing price on the American Stock Exchange on the last business day of the registrant's most recently completed second fiscal quarter (June 29, 2007).

The number of shares of the registrant's Common Stock, par value \$0.0001 per share, outstanding as of March 26, 2008 was 22,087,121.

#### **DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the definitive Proxy Statement to be delivered to stockholders in connection with the Annual Meeting of Stockholders to be held on or about June 13, 2008 are incorporated by reference into Part III.

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**PHARMATHENE, INC.**

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## Special Note Regarding Forward-Looking Statements

We believe that some of the information in this document constitutes forward-looking statements. You can identify these statements by forward-looking words such as "may," "expect," "anticipate," "contemplate," "believe," "estimate," "intends," and "continue" or similar words. You should read statements that contain these words carefully because, among other things, they may:

- discuss future expectations;
- indicates projections of future results of operations or financial condition; or
- state other "forward-looking" information.

We believe it is important to communicate our expectations to our stockholders. However, there may be events in the future that we are not able to accurately predict or over which we have no control. The risk factors and cautionary language discussed in this document provide examples of risks, uncertainties and events that may cause actual results to differ materially from the expectations described in the forward-looking statements including, among other things:

- changing interpretations of generally accepted accounting principles;
- outcomes of government reviews, inquiries, investigations and related litigation;
- continued compliance with government regulations;
- legislation or regulatory environments, requirements or changes adversely affecting the businesses in which we are engaged;
- statements about industry trends;
- general economic conditions; and
- geopolitical events and regulatory changes.

You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this document.

All forward-looking statements included herein are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. Unless otherwise indicated, the information in this annual report is as of December 31, 2007. Except to the extent required by applicable laws and regulations, we undertake no obligation to update these forward-looking statements to reflect events or circumstances after the date of this document or to reflect the occurrence of unanticipated events.

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## PART I

### Item 1. Business.

#### Background of PharmAthene, Inc.

PharmAthene, Inc. ("PharmAthene" or the "Company") was incorporated under the laws of the State of Delaware as Healthcare Acquisition Corp. ("HAQ") on April 25, 2005, a blank check company formed to serve as a vehicle for the acquisition of a then unidentified business. The Company became a public company on August 3, 2005. On August 3, 2007, we consummated a merger (the "Merger") with PharmAthene, Inc., a Delaware corporation ("Former PharmAthene"), pursuant to an Agreement and Plan of Merger, dated as of January 19, 2007 (the "Merger Agreement"), by and among HAQ, PAI Acquisition Corp., a Delaware corporation and a wholly-owned subsidiary of HAQ, and Former PharmAthene, whereby Former PharmAthene became a wholly-owned subsidiary of HAQ and, effective upon the consummation of the Merger, HAQ changed its name from "Healthcare Acquisition Corp." to "PharmAthene, Inc." and Former PharmAthene changed its name to "PharmAthene US Corporation." Our operations are conducted by our wholly-owned subsidiary, PharmAthene US Corporation. Our executive offices are located at One Park Place, Suite 450, Annapolis, Maryland 21401 and our telephone number is 410-269-2600. Our stock trades on the American Stock Exchange under the symbol "PIP." See the section entitled "Recent Events" below for more information regarding the Merger.

*Unless the context otherwise requires, all references in this report to "PharmAthene" or the "Company" or "our," "us," and "we" refer to PharmAthene, Inc. (formerly known as Healthcare Acquisition Corp.) and its subsidiaries, as a combined entity. All references in this report to "PharmAthene US" refer to PharmAthene US Corporation, our wholly owned subsidiary. Unless the context otherwise requires, the information contained in this report gives effect to the consummation of the Merger of August 3, 2007 and the change of our name from "Healthcare Acquisition Corp." to "PharmAthene, Inc."*

#### Overview

We are a biodefense company engaged in development and commercialization of medical countermeasures against biological and chemical weapons. In addition to our own research, we collaborate with pharmaceutical companies to support clinical development of product candidates. We have two products under development: Valortim™, a fully human monoclonal antibody (an identical population of highly specific antibodies produced from a single clone) for the prevention and treatment of anthrax infection, and Protexia®, which mimics a natural bioscavenger, for the treatment or prevention of nerve agent poisoning by organophosphate compounds which include nerve gases and pesticides.

Our lead product candidate, Valortim™, is a fully human monoclonal antibody designed to protect against and treat human inhalation anthrax, the most lethal form of the infection caused by the *Bacillus anthracis* bacterium. We are co-developing Valortim™ with Medarex, Inc., biopharmaceutical company that specializes in developing fully human antibody-based therapeutic products, and will share with Medarex any profits derived from sales of Valortim™. Preclinical trials in animal models have demonstrated Valortim™ to be effective prophylactically and therapeutically for inhalation anthrax infection. Working with Medarex, we completed dosing healthy volunteers in a Phase I open-label, dose-escalation clinical trial to evaluate the safety, tolerability, immunogenicity (the ability of an antigen to elicit an immune response), and pharmacokinetics (the study of absorption, metabolism and action of drugs) of a single dose of Valortim™ administered intravenously or intramuscularly. No drug-related serious adverse events were reported. Final results from the Phase I trial were presented at the Infectious Disease Society of America meeting in October 2006. Valortim™ was granted Fast Track Status by the US Food and Drug Administration (the "FDA"), and may permit us to submit portions of a Biologics License Application ("BLA") or efficacy supplement before the complete BLA is submitted. This can expedite the review process depending upon whether the FDA has sufficient resources to review the portions submitted. Additionally, Valortim™ was granted orphan drug status for the treatment of inhalation anthrax.

Protexia®, our second product candidate, is a recombinant form (that is, produced using genetic engineering technology) of human butyrylcholinesterase, a naturally occurring enzyme ("BChE"), for use in the prophylaxis and treatment of organophosphate chemical nerve agent poisoning. Preclinical trials in animal models demonstrate that Protexia® is effective prophylactically and therapeutically for chemical nerve agent poisoning. We plan to continue preclinical animal studies of Protexia® through 2008 and file an Investigational New Drug application ("IND") with the FDA in 2008. The procurement process for the scale-up development and sale of Protexia® is underway with the US Department of Defense (the "DoD"), which is responsible for purchasing biodefense countermeasures for military use. The DoD requested competitive bids in a Request for Proposal (an "RFP") for a recombinant form of BChE for prophylaxis against chemical nerve agent poisoning, and we submitted a bid in November 2005. Our bid was accepted and, in September 2006, we were awarded a multi-year contract by the DoD. The contract provides an initial \$41 million for the advanced development of Protexia® through March 2009 and, thereafter, the US government, in its sole discretion, may elect to continue development assistance with further funding of \$65 million. Assuming development milestones are met and contract extensions are exercised by the US government, in its sole discretion, and that it elects to procure an initial 90,000 doses of Protexia® from PharmAthene, the Company could receive up to \$219 million in funding (including the \$100 million for advanced development).

The worldwide biodefense market can be divided into three segments: US civilian, US military and non-US markets. US government biodefense

military and civilian spending currently averages approximately \$7.0 billion annually, representing the vast majority of the worldwide market. The US civilian market includes funds to protect the US population from biowarfare agents and is largely funded by the Project BioShield

Act of 2004. Project BioShield is the US government's largest biodefense initiative. The DoD is responsible for the development and procurement of countermeasures for the military segment which focuses on providing biowarfare protection for military personnel and civilians who are on active duty. Non-US markets address protection against biowarfare agents for both civilians and military personnel in foreign countries. It is expected that foreign countries will want to procure biodefense products as they are developed and validated by procurement by the US government.

For the next several years, we believe our main customer will be national governments, primarily the United States government. Currently, the United States government can purchase critical biodefense products prior to FDA approval under an Emergency Use Authorization for the United States Strategic National Stockpile ("SNS"). Based on available information, the Company has performed an in-depth analysis of the factors, including comparisons to competitors' products, and has developed revenue and cost projections for sales to the US and other governments. Based on our evaluation, we believe sales can commence during or before 2009.

Prior to the Merger when our operating subsidiary, PharmAthene US, was a privately-held corporation, operations since inception in March 2001 were financed primarily through the issuance of equity securities, convertible notes and proceeds from loans or other borrowings. In addition to the trust funds obtained in the Merger, any or all of these financing vehicles or others may be utilized to fund our future capital requirements.

The Company recognized revenues of \$14.6 million and \$1.7 million during each of the fiscal years ended December 31, 2007 and 2006. These revenues consist primarily of contract and grant funding from the US government for the development of Protexia®.

## ***Merger***

On August 3, 2007, we consummated the Merger pursuant to the Merger Agreement whereby our wholly-owned subsidiary, PAI Acquisition Corp., was merged with and into Former PharmAthene. Immediately following the Merger, we changed our name from "Healthcare Acquisition Corp." to "PharmAthene, Inc." and Former PharmAthene, which became our wholly-owned subsidiary, changed its name to "PharmAthene US Corporation."

As consideration for the Merger, we paid stockholders, optionholders, warrant holders and noteholders of Former PharmAthene (the "Former PharmAthene Security Holders") the following consideration:

- (i) an aggregate of 12,223,296 shares of our common stock, par value \$0.0001 per share, at closing (the "Stock Consideration") including 300,688 shares issued pursuant to the Merger Agreement as adjustment shares calculated on the basis of the total number of shares electing conversion in excess of 5% of our outstanding common stock prior to the Merger; and
- (ii) \$12,312,000 in 8% convertible notes (the "Convertible Notes") issued by the Company (the "Note Consideration");

Recipients of the Stock Consideration were granted registration rights pursuant to a Registration Rights Agreement, dated August 3, 2007, by and among us and the Former PharmAthene Security Holders (the "Registration Rights Agreement") and certain others. A Registration Statement on Form S-3 was declared effective by the Securities and Exchange Commission on January 29, 2008. Additionally, each of the stockholders, noteholders and holders of options or warrants to purchase not less than 100,000 shares of the common stock of Former PharmAthene have executed a lock-up agreement (the "Lock-up Agreement") in connection with the Merger that such person shall not sell, pledge, transfer, assign or engage in any hedging transaction with respect to our common stock issued to such stockholders as part of the Merger Consideration except in accordance with the following schedule: 50% of the Stock Consideration was released from the lock-up on February 3, 2008 and all remaining Stock Consideration shall be released from the lock-up on August 3, 2008. The Note Consideration was allocated among the Former PharmAthene noteholders pursuant to a Note Exchange Agreement, dated August 3, 2007, by and among us, Former PharmAthene and the Former PharmAthene noteholders (the "Note Exchange Agreement"). The Convertible Notes issued in exchange for Former PharmAthene's \$11.8 million outstanding secured convertible notes will mature on August 3, 2009. These Convertible Notes are convertible, at the option of the holders, into common stock at \$10.00 per share and may be redeemed by us without penalty after 12 months. A portion of the Stock Consideration, in the aggregate amount of 1,375,000 shares of our common stock, has been placed in escrow to be held for a period of one (1) year for indemnification claims pursuant to an Escrow Agreement, dated August 3, 2007, by and among us, Former PharmAthene and Continental Stock Transfer & Trust Company, as escrow agent (the "Escrow Agreement").

## **Recent Events**

### ***Purchase and Sale Agreement***

On March 20, 2008, the Company entered into a Sale and Purchase Agreement (the "Purchase Agreement") with Avecia Biologics Limited and certain of its affiliates (collectively, "Avecia") for the acquisition of all of the assets related to Avecia's vaccines business which includes a second generation recombinant protective antigen (rPA) anthrax vaccine, a recombinant dual antigen plague vaccine and a third generation rPA anthrax vaccine program (the "Acquisition"). In consideration for the Acquisition, PharmAthene has agreed to pay Avecia the following:



- (i) \$10 million (exclusive of VAT) at the time of the consummation of the Acquisition (the "Initial Consideration") subject to a working capital adjustment whereby the Initial Consideration shall be reduced or increased by an amount equal to the shortfall or excess over \$100,000; plus
- (ii) an additional \$10 million (exclusive of VAT) payable upon the earlier to occur of (a) the completion of a financing transaction in which PharmAthene receives gross proceeds of not less than \$15 million and (b) the first anniversary of the consummation of the Acquisition (the "Deferred Consideration") which payment is to be secured by a letter of credit; plus
- (iii) additional contingent amounts payable upon the occurrence of certain events (the "Milestone Consideration") as follows:
  - \$10 million upon the entry by PharmAthene into a multi-year funded contract with the US Department of Defense (or other agency or representative or sub-contractor of the US government) for the further development of Avecia's pneumonic and bubonic plague ("rYP") vaccine as a result of (a) a Resources Allocation Decision of the Resource Allocation Review Board and the Resource Allocation Advisory Committee of the US Department of Defense or (b) some other similar substantial funding in excess of \$150 million (including the value of any option elements within such contract; and
  - \$5 million upon the entry by PharmAthene into a multi-year funded development contract to be issued by the Biological Advanced Research and Development Authority (part of the US Department of Health and Human Services) under solicitation number RFP-BARDA-08-15 for the further development of Avecia's anthrax ("rPA") vaccine; and
  - \$5 million upon the entry by PharmAthene into a contract or contracts for the supply of rPA vaccine into the Strategic National Stockpile; and
  - in an amount equal to 2.5% of net sales (as defined under the Purchase Agreement) of rPA vaccine made by PharmAthene to the US government within the period of ten years from the consummation of the Acquisition after the first 25 million doses; and
  - in an amount equal to 1% of net sales (as defined under the Purchase Agreement) of third generation anthrax vaccine made by PharmAthene to the US government within the period of ten years from the consummation of the Acquisition.

In connection with the Acquisition, PharmAthene and Avecia have agreed to enter into certain ancillary agreements upon the consummation of the Acquisition including, without limitation, transitional services agreements, laboratory facilities agreements, master services agreement, supply agreement and subcontract agreement which, in each case, provide for services to be performed by Avecia for PharmAthene both on a transitional and on a going-forward basis. One of such agreements is a long-term manufacturing agreement for the supply by Avecia of the vaccines and component ingredients comprising the vaccines business purchased by PharmAthene in the Acquisition.

Pursuant to the terms of the Purchase Agreement, consummation of the Acquisition is conditioned upon, among other customary conditions, the receipt of all consents, approvals and material permits (i) for the transfer by novation of Avecia's contracts with the Defence Science and Technology Laboratory, an agency of the UK Ministry of Defence (the "DSTL"), (ii) for the entry into a subcontract with respect to Avecia's contracts with the National Institutes of Health, an agency of the US government, and (iii) for the transfer (whether by novation or assignment) of a particular grant from the National Institutes of Health referred to as the Challenge Grant.

On March 28, 2008, Avecia received a letter from the DSTL advising Avecia of the recent Resource Allocation Decision of the US Department of Defense that the DoD had decided not to fund Avecia's plague vaccine candidate beyond the current contractual commitment. The parties are engaged in discussions to amend the terms of the Purchase Agreement to accommodate this change in circumstances. The parties anticipate a closing in early April.

#### ***Consent and First Loan Modification Agreement***

As previously disclosed, PharmAthene is a party to a \$10 million secured credit facility evidenced by a Loan and Security Agreement, dated as of March 30, 2007 (the "Loan Agreement"), with Silicon Valley Bank and Oxford Finance Corporation (together the "Lenders"). Under the credit facility, the Company has borrowed \$10 million which bears interest at the rate of 11.5% per annum. The Loan Agreement contains customary affirmative and negative covenants which, among other things, restrict the Company's ability to undertake certain acquisitions, incur certain indebtedness or make certain investments. As a consequence, PharmAthene sought to obtain the consent of its Lenders to the Acquisition and entered into a Consent and First Loan Modification Agreement, dated as of March 20, 2008, with the Lenders (the "Loan Modification Agreement") pursuant to which, among other things, the Lenders consented to the Acquisition provided that (i) PharmAthene (or its UK subsidiary involved in the Acquisition) is the surviving entity in the Acquisition, (ii) the total initial cash consideration upon the consummation of the Acquisition does not exceed \$11 million, (iii) the consummation

of the Acquisition will not otherwise result in an Event of Default as defined under the Loan Agreement, after giving effect to the Acquisition and (iv) within 20 days following the consummation of the acquisition, PharmAthene shall cause its UK subsidiary to become a co-borrower or a secured guarantor under the Loan Agreement.

The Loan Modification Agreement also amends the Loan Agreement to provide (i) that PharmAthene shall maintain, at all times, at a segregated account, at either Silicon Valley Bank or Silicon Valley Bank Securities, unrestricted and unencumbered cash or cash equivalents in the amount of at least one and one-quarter times all obligations of PharmAthene to the Lenders, (ii) that if PharmAthene or any of its affiliates creates or acquires any subsidiary, PharmAthene shall notify the Lenders and take all such action as to cause each domestic subsidiary to guarantee the obligations of PharmAthene under the Loan Agreement granting a continuing pledge and security interest in and to the assets of such subsidiary, (iii) that PharmAthene shall deliver to the Lenders a control agreement with M&T Bank granting the Lenders a first perfected security interest in the accounts of PharmAthene held at M&T Bank and (iv) amending the definition of "Material Adverse Change" under the Loan Agreement to provide

that a Material Adverse Change shall be a determination of the Lenders based upon information available to it and in its reasonable judgment that there is a reasonable likelihood that PharmAthene shall fail to comply with one or more of the financial covenants contained in the Loan Agreement.

It is contemplated that Silicon Valley Bank will issue the letter of credit in the amount of \$10 million securing the Deferred Consideration payable under the Purchase Agreement.

### **Registration Statement**

On January 29, 2008, the Securities and Exchange Commission (the "SEC") declared effective our Registration Statement on Form S-3 filed October 2, 2007, as amended January 25, 2007, which registered for resale from time to time by certain of the Company's selling stockholders (described in the section entitled "Selling Stockholders" of the prospectus) up to 14,486,784 shares of our common stock which includes (i) 12,223,296 shares of common stock issued to stockholders pursuant to the Merger, (ii) 550,000 shares of common stock acquired by David P. Wright and the funds affiliated with each of MPM Capital L.P. and Healthcare Ventures VII, L.P. on August 2, 2007 and August 3, 2007, (iii) 1,231,273 shares of common stock underlying 8% convertible notes with a fixed conversion price of \$10.00 per share also issued in the Merger, (iv) 366,900 shares of common stock underlying warrants with a fixed exercise price of \$6.00 per share issued prior to the Merger and held by John Pappajohn, Derace L. Schaffer, M.D., Matthew P. Kinley and Edward Berger, our officers and/or directors prior to the Merger, (v) 100,778 shares of common stock underlying warrants with a fixed exercise price of \$4.06 per share issued pursuant to our Credit Facility, and (vi) 14,537 shares of common stock underlying warrants with a fixed exercise price of \$0.20 per share issued to our former landlord, Chesapeake Innovation Center LLC. All of the securities referred to above were issued to "accredited investors" as defined in Regulation D, Rule 501 of the Securities Act, and issued pursuant to an exemption from registration under Section 4(2) or Regulation D, Rule 506 of the Securities Act.

Pursuant to the Registration Statement, 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 such shares in amounts and on terms to be determined at the time of sale. We will not receive any of the proceeds from the resale of shares of our common stock by the selling stockholders.

### **Closing of Canadian Research Facility**

On November 12, 2007, we made the determination to close our Canadian research facility since work performed at the facility was no longer required for production development. We estimate the total direct costs associated with the closing to be approximately \$0.5 million. We expect to vacate the research facilities in the second quarter of 2008. We will still maintain our farm and a small executive office in Quebec for critical corporate functions.

### **Business Concept and Strategy**

Our goal is to become the premier company worldwide specializing in the discovery, development and commercialization of prophylactic and therapeutic drugs for defense against bioterrorism and, eventually, to leverage our biodefense capabilities for non-biodefense products in broader commercial markets. Our strategy to achieve this objective includes the following elements:

- **Maximize the value of Valortim™ and Protexia® and newly acquire products.** The products are targeted towards areas that the United States government has identified as critical biodefense needs and preclinical data supports the potential of these products to meet those needs. The Company intends to aggressively develop these products while fulfilling the requirements of the US government's contracting processes. Development and contracting requirements of biodefense products are unique and the Company is building capabilities to meet the requirements while developing the products.
- **Continue to build and leverage core capabilities in biodefense.** The Company has developed and will continue to develop unique biodefense product development and contracting capabilities. Development of the capabilities has required a substantial investment and will be leveraged by acquiring additional biodefense product candidates through licensing and mergers and acquisitions. The product opportunities will come primarily from companies focused on commercial markets that wish to see their products or technologies exploited in biodefense.
- **Where applicable, expand use of our products from biodefense into commercial markets.** Some of the Company's products may be useful for preventing or treating diseases or conditions outside of biodefense. For example, Protexia® may be useful to treat overdoses of cocaine or heroin and possibly Alzheimer's Disease. Additionally, after products are FDA approved, it may be possible to market biodefense products through commercial channels. The Company will evaluate and develop these opportunities as warranted.

### **Biodefense Industry**

## **Market Overview**

The worldwide biodefense market can be divided into three segments: US civilian, US military and non-US markets. US government biodefense military and civilian spending currently averages approximately \$7.0 billion annually, representing the vast majority of the worldwide market.

- ***US Civilian***

The US civilian market includes funds to protect the US population from biowarfare agents and is largely funded by the Project BioShield Act of 2004. Project BioShield, the US government's largest biodefense initiative, governs and funds with \$5.6 billion the procurement of biodefense countermeasures for the Strategic National Stockpile for the period from July 2004 through 2013. Of the \$5.6 billion, \$3.4 billion was made available through fiscal year 2008 and the remaining \$2.2 billion becomes available in fiscal year 2009. Of the \$3.4 billion \$1.9 billion was awarded in procurement contracts through 2007 and the remaining \$1.5 billion remains available for award in fiscal year 2008 and thereafter.

- ***Military***

The DoD is responsible for the development and procurement of countermeasures for the military segment which focuses on providing biowarfare protection for military personnel and civilians who are on active duty. The President's request for funding in fiscal year 2008 was \$1.57 billion compared to annual spending of \$1.2 billion to \$1.8 billion from 2005 to 2007. It is expected that annual funding for the programs through 2013 will continue in a comparable range.

- ***Non-US Markets***

Non-US markets address protection against biowarfare agents for both civilians and military personnel in foreign countries. It is expected that foreign countries will want to procure biodefense products as they are developed and validated by procurement by the US government.

### ***Project BioShield***

Project BioShield is the US government's largest biodefense initiative and was established under the Project BioShield Act of 2004. Project BioShield is focused on acquiring products with low technology risk that will be available for purchase in the near term. The US government has identified the following indications as priorities: anthrax, smallpox, botulinum toxin, radiation and nerve agent exposure. To evaluate and select the best products for these indications, the Department of Health and Human Services (the "HHS") issues Requests for Information ("RFI") followed by Requests for Proposals ("RFP"). RFPs detail product and procurement requirements including treatment types, numbers of doses and delivery timeframes. To qualify for Project BioShield funding, products must demonstrate product efficacy in an animal model and initial product safety in Phase I clinical trials, and the Company must show that it can provide sufficient manufacturing capability. To date, 10 awards have been made under Project BioShield, including those for anthrax therapeutics, radiation and botulinum.

The US government has acted to facilitate expeditious development of biodefense countermeasures by shortening the development and approval process relative to traditional pharmaceutical products. Development of biodefense products may be less expensive and less risky compared to traditional therapeutics and vaccines because human efficacy trials are not required though there is no assurance that this will be the case.

### ***Immediate Biodefense Focus: Anthrax and Nerve Agent Exposure***

Under Project BioShield, the government has identified anthrax, smallpox, botulinum toxin and radiation as priorities for funding. In addition, the Department of Defense has a requirement to develop recombinant bioscavengers for prophylaxis against nerve agent exposure in the warfighter. PharmAthene is pursuing the development of products for prophylaxis against and treatment of anthrax and nerve agent exposure.

#### ***Anthrax***

The three general modes of infection by *Bacillus anthracis* ("B. anthracis"), the bacterium which causes anthrax infection, are by inhalation, ingestion or skin contact with anthrax spores. Inhalation is the form of infection most likely to be lethal. Inhalation anthrax occurs when anthrax spores become airborne and enter a person's body through the lungs. Persons suffering from inhalation anthrax will experience a series of symptoms consisting of fever, muscle aches, fatigue and cough, which last an average of four days. Following this period, there is rapid onset of severe respiratory distress, low blood oxygen and low blood pressure, which generally culminates in death. Inhalation anthrax has a 95% to 100% mortality rate if left untreated, and at least a 50% mortality rate in patients treated aggressively with antibiotics. Persons infected by *B. anthracis* that is ingested will suffer from gastrointestinal anthrax; those whose skin comes into contact with the anthrax bacteria will suffer from cutaneous anthrax. Gastrointestinal anthrax often presents those exposed with serious gastrointestinal difficulty, vomiting of blood, severe diarrhea, acute inflammation of the intestinal tract and loss of appetite. Gastrointestinal anthrax has a 25% to 65% mortality rate if left untreated. Cutaneous anthrax generally causes skin infections within a week or two after exposure. Cutaneous anthrax is the least fatal. Without treatment, approximately 20% of all skin infection cases are fatal. Treated cutaneous anthrax is rarely fatal.

*B. anthracis* is a spore forming bacterium that has potential use as a bioterror weapon, especially when delivered in an aerosolized form. Following germination of the spores, the bacteria replicates and produces three toxins. The first of the toxins, Anthrax Protective Antigen, initiates the onset of illness by attaching to the outside of healthy cells in the infected person, and then facilitates the entry of the two additional destructive toxins, referred to as Lethal Factor and Edema Factor, into the cells.

The DoD estimates that up to ten countries may possess anthrax weapons and an undetermined number of individuals and terrorist groups could have access to anthrax. Anthrax is an effective bioterrorism agent because the spores are stable, can be milled to a fine powder and may be dispersed widely with readily available instruments and machinery. The World Health Organization estimates that 50 kilograms of *B. anthracis* released upwind of a city of 500,000 people could result in up to 95,000 fatalities, with an additional 125,000 persons being incapacitated.

PharmAthene believes that currently available treatment for inhalation anthrax is limited and suboptimal. Following exposure, but prior to the onset of symptoms, antibiotics like ciprofloxacin, doxycycline or penicillin can be used as post-exposure prophylaxis with the goal of preventing progression of the disease. In order to be fully effective when used in this way, the recommended antibiotic treatment must be continued for sixty days. PharmAthene believes that both compliance and side effects are problematic for anyone asked to take antibiotics for such an extended period of time. A product like Valortim™, with a prolonged half-life, might allow for less frequent dosing to achieve adequate post-exposure prophylaxis.

Once symptoms have developed following exposure, interventions are aimed at reducing mortality. We believe the addition of an anti-toxin like Valortim™ has the potential to significantly improve upon the current therapeutic regimen, and it would have the added benefit of acting against anthrax strains that are resistant to the available antibiotics.

### ***Chemical Weapons and Nerve Agents***

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

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

Nerve agents, which are liquids at room temperature, are generally lethal far more quickly and in far lower quantities than classic chemical weapons, and are effective both when inhaled and when absorbed through the skin. Nerve gases can be classified as either G-agents (such as sarin, soman, tabun) or V-agents (such as VX), both of which are volatile and toxic. Chemical agents can be delivered through explosive devices, spray tanks or most liquid or gas dispersion devices and machinery.

The current standard of care for post-exposure treatment involves repeated doses of a cocktail of drugs, including atropine, oxime reactivators, and anti-convulsants. PharmAthene believes available treatment options are inadequate and there is a need for more efficacious countermeasures, especially as evidence mounts that modified, more toxic forms of organophosphates, VX and G agents may be used in future attacks.

There is only one FDA approved product, pyridostigmine bromide ("PB"), which is used as a "pre-treatment adjunct" against nerve agent poisoning, and it is only usable to counteract poisoning by soman which is a nerve agent. It confers no protection on its own but enhances the protection conferred by post-exposure treatment. The standard of care for post-exposure treatment involves repeated doses of a cocktail of drugs including atropine, oxime reactivators ("2-PAM") and anti-convulsants. However, this type of care acts primarily on the symptoms of nerve agents, not their underlying cause. We believe available pre-and post-treatment options are inadequate and that there is a need for more efficacious countermeasures that act on the cause rather than only on the symptoms after exposure.

### **PharmAthene's Products**

Based on preclinical and clinical trials data, we believe our two product candidates will offer tangible benefits over existing treatments for inhalation anthrax and chemical nerve agent poisoning.

## **Valortim™: Anthrax Monoclonal Antibody**

Valortim™ is a fully human antibody designed to protect against or treat inhalation anthrax, the most lethal form of this illness in humans caused by *B. anthracis*. Valortim™ functions by targeting Anthrax Protective Antigen, a protein component of the lethal toxin produced by the bacterium. Anthrax Protective Antigen ("Anthrax PA") initiates the onset of the illness by attaching to and facilitating the entry of the destructive toxins Lethal Factor ("LF") and Edema Factor ("EF") into healthy cells in the infected person. Valortim™ is designed to bind to Anthrax PA and protect the cells from damage by the anthrax toxins. In preclinical studies, Valortim™ protected animals against infection, and when administered after exposure, facilitated recovery and survival in animals exposed to lethal inhalation doses of anthrax spores.

Anthrax spore challenge studies in animals have demonstrated protection by Valortim™ both when given early following challenge (post-exposure prophylaxis) as well as when given up to 48 hours after challenge (therapeutic intervention). Valortim™ binds to a novel site of anthrax PA, permitting protection after toxins have already attached to the cell. PharmAthene believes Valortim™'s potency and unique mechanism of action differentiate it from competing products, and provides superior activity in the toxin neutralization assay. In the initial Phase I clinical trial in healthy human volunteers, Valortim™ was well-tolerated with no drug-related serious adverse events reported.

### ***Development Timeline***

Valortim™ is being developed by PharmAthene in collaboration with Medarex, Inc. pursuant to a collaboration agreement entered into in November 2004. Under the terms of the collaboration agreement, Medarex received an initial payment of \$2.0 million from PharmAthene to fund planned development activities in 2004 and PharmAthene is responsible for funding all research and development and commercialization activities that exceed current and future government funding. The collaboration agreement provides that Medarex and PharmAthene will share operating profits according to a formula such that PharmAthene's share of the operating profits could increase from an initial level of 20% to as high as 60% generally as follows: (i) upon execution of the collaboration agreement and the \$2.0 million initial payment, PharmAthene's profit share was 20%; (ii) in order to maintain its 20% profit share PharmAthene is required to contribute funding in an amount equivalent to the funding provided by the US Government to Medarex via grants awarded to fund Valortim™ development work (approximately \$7.2 million); (iii) PharmAthene's share of operating profits will increase to 50% if a contract for the procurement of Valortim™ is entered into with the US Government and PharmAthene has satisfied its funding obligation under clause (ii) above (up to an additional approximately \$7.2 million); and (iv) PharmAthene's share of the operating profits can increase by 10% for every \$5 million of funding provided by PharmAthene over and above the initial payment of \$2.0 million and the amount that it provides as funding in excess of the matching by PharmAthene of funds provided to Medarex under clause (ii) above. PharmAthene's aggregate share of the operating profits is capped at 50% if the condition under clause (iii) is not satisfied and 60% if it is satisfied. Should the parties enter into a contract for the procurement of Valortim™ with the US Government prior to PharmAthene satisfying its obligation under clause (ii) above, PharmAthene is required to make a milestone payment to Medarex in an amount up to \$1.5 million in order to achieve a 50% profit share in the program. Prior to distribution of operating profits, each party is entitled to reimbursement of research and development expenses incurred that were not otherwise covered by government funding.

Additional animal model development and testing of Valortim™ for therapeutic efficacy in African green monkeys is being carried out under a Collaborative Research and Development Agreement with the US Army Medical Research Institute of Infectious Diseases.

PharmAthene and Medarex have also completed dosing in a Phase I open-label, dose-escalation clinical trial to evaluate the safety, tolerability, immunogenicity, and pharmacokinetics of a single dose of Valortim™ administered intravenously or intramuscularly in healthy volunteers. Final results from the Phase I study were presented at the Infectious Disease Society of America meeting in October 2006.

Valortim™ has received Fast Track designation from the FDA, which generally indicates that the FDA will facilitate the development and expedite the regulatory review of the product. However, PharmAthene can provide no assurance that the review will be successful. Valortim™ has also been granted orphan drug status, a designation for drugs developed for diseases which affect less than 200,000 persons in the United States and provides for reduced fees to the FDA, market exclusivity for seven years and other FDA-related privileges.

PharmAthene conducted an end-of-Phase I meeting with the FDA in October 2007 during which the FDA agreed that the African green monkey model is acceptable as one of the two required species for licensure of Valortim™ under the Animal Rule (21 CFR 314 Subpart I).

### ***Clinical and Preclinical Studies***

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

### ***Clinical Phase I Studies***

Valortim™ has been tested in a Phase I, single-dose, dose-escalation trial in healthy human volunteers. PharmAthene found that subjects tolerated Valortim™ without drug-related serious adverse events. Minor adverse events reported included pain at the intramuscular injection site, headache, muscle aches, and occasionally bruising at the site of the intravenous catheter inserted for drug dosing and blood draws. Pharmacokinetic data indicate that Valortim™ has good bioavailability following intramuscular injection; additionally, both intravenous and intramuscular injection result in a half-life of 26 to 30 days.

#### ***Preclinical Studies: Post-exposure Prophylaxis Indication***

PharmAthene has conducted two studies in animals to evaluate the use of Valortim™ as a post-exposure prophylaxis, or, in other words, to protect exposed patients from developing the symptoms and from dying of inhalation anthrax. Eighty-five percent of rabbits treated intravenously with doses of Valortim™ survived following inhalation exposure to anthrax spores. One hundred percent of cynomolgus monkeys treated intramuscularly with doses of Valortim™ were protected from death following exposure to inhalation anthrax spores. Treatment of both of these animal models was initiated within one hour following exposure to the anthrax spores.

#### ***Preclinical Studies: Post-exposure Therapeutic Indication***

PharmAthene has conducted a study in rabbits to evaluate the use of Valortim™ as a post-exposure therapeutic. This indication for Valortim™ would be intended to treat patients who have already developed symptoms of inhalation anthrax. In this study, 89% of the animals treated with Valortim™ intravenously twenty-four hours following inhalation exposure to anthrax spores survived. A second group of animals were not treated with Valortim™ until forty-eight hours following exposure; 42% of the animals treated at this timepoint survived. Lower doses have not yet been tested in this model.

PharmAthene has conducted an initial study in African green monkeys treated with Valortim™ at the time they test positive for PA in the blood. The result of a test for PA in the blood is available within 1-2 hours which allows the animals to be treated earlier in the course of their illness than is possible using blood culture results that are not available for 24 or more hours. All control animals in the study died; 56% of treated animals survived following administration with Valortim alone. Additional studies to further test Valortim™ in rabbits and monkeys are planned in 2008.

In addition to the animal efficacy studies to advance Valortim™ toward licensure under the Animal Rule, work is also ongoing to further explore and define its mechanism of action. Preliminary data generated in collaboration with the University of Maryland suggests that Valortim™ has the ability to enhance macrophage killing of *B. anthracis* spores within macrophages; this is in addition to its previously described toxin neutralizing activity. Further work is ongoing to fully elucidate these and other possible effects and functional properties of Valortim™.

### ***Protexia®: Pegylated Recombinant Human Butyrylcholinesterase***

Protexia® is a pegylated recombinant version of human butyrylcholinesterase being developed by PharmAthene under a contract with the DoD. Butyrylcholinesterase (BChE) is a naturally occurring protein found in minute quantities in blood. In its natural form, BChE functions as a natural bioscavenger, like a sponge, to absorb organophosphate poisons (e.g. nerve agents) and eliminate them from the circulation before they cause neurological damage. The BChE is first purified as the unpegylated protein and then modified to arrive at its pegylated form which confers desirable attributes such as enhanced half life for a longer period of protection and decreased potential for immunogenicity.

PharmAthene, in collaboration with the Institute for Chemical Defense ("ICD"), a US military organization where the testing of promising compounds intended for use against traditional and non-traditional nerve agents is performed, has screened rBChE and PEG-rBChE for activity against a number of both traditional and non-traditional nerve agents. Protexia® will also be assessed against traditional agents as part of the work under the DoD contract. The DoD has also indicated that additional testing of Protexia® against non-traditional agents may be performed; the results of this testing, however, will be treated as classified national security information and will not be available to PharmAthene or to the public. In addition, newer more potent forms of rBChE will be screened as second-generation rBChE molecules (having higher affinity binding characteristics and enhanced catalytic activity) become available.

#### ***Development Timeline***

The potential of rBChE and PEG-rBChE as medical countermeasures have been demonstrated by their ability to protect animals from multiple lethal doses of nerve agents and binding to a broad spectrum of agents, including sarin, soman, tabun and VX. Following proof-of-concept studies and award of the DoD contract, PharmAthene has developed the final product manufacturing process including selection of the PEG reagent. The final product is designated Protexia® to distinguish it from earlier versions of the recombinant protein. PharmAthene is completing the manufacture of the first cGMP clinical lot of Protexia® to be used in the IND-enabling toxicology studies scheduled for completion in the third



quarter of 2008 and the Phase I first-time-in-human clinical trial scheduled to begin in September 2008. Two studies were completed to establish the pharmacokinetic profile of Protexia® in rats and cynomolgus monkeys and to guide the dosing strategy for the IND-enabling toxicology studies. The pharmacokinetic profile in rats and monkeys met expectations and compared favorably with that of human plasma-derived BChE. PharmAthene is on target to file the IND in the third quarter of 2008.

### ***Proof of Concept Studies Using rBChE or PEG-rBChE***

#### ***Pre-exposure Prophylaxis Indication:***

Pre-treatment with PEG-rBChE provided 100% survival against multiple lethal doses of the nerve agents VX and soman in animal models and the surviving animals displayed no nerve agent side effects. In these experiments, two groups of animals were pre-treated with either PEG-rBChE or a negative control. Eighteen hours later, they were exposed to multiple lethal doses of nerve agent (VX or soman). Another group of animals was exposed to approximately 75% less nerve agent and then treated immediately with the current standard therapy, a three-drug cocktail of atropine, 2-PAM and diazepam. Animals were videotaped post-exposure and evaluated for toxic signs by observers blinded to the treatment groups. In addition, a functional observation battery neurological function tests (ability to balance and memory tests) were formed six hours after exposure. None of the control animals exposed to nerve agents alone survived while 100% of animals pretreated with PEG-rBChE survived with no visible nerve agent side effects and no loss of balance or memory relative to negative control animals. In contrast, the animals exposed to much lower levels of nerve agents and subsequently treated with the current standard therapy did not respond as well. Survival in these animals was mixed with 100% survival in animals exposed to VX but only 50% survival in animals exposed to soman, although all survivors had significant side effects including a pronounced loss of balance and loss of memory.

#### ***Post-Exposure Therapeutic Indication:***

Based on the demonstration of protection when PEG-rBChE was administered before nerve agent exposure, a series of experiments were conducted to determine whether rBChE was effective as a therapy when administered after exposure to nerve agent. The therapeutic efficacy of rBChE was first evaluated in a domestic pig model with rapid (intravenous) exposure to nerve agent (VX) followed by treatment with rBChE 15 minutes later. All of the control animals receiving nerve agent alone died with an average time to death of 1.5 hours while 50% of animals receiving rBChE survived with a prolonged time to death (average of 5.4 hours) in the animals that died. A second study was conducted to evaluate the therapeutic efficacy of rBChE in a different animal model and to increase the time before treatment with rBChE to one hour. Ninety percent of the animals exposed to VX on the skin and then treated with rBChE survived as compared to no survivors among the group that was not treated.

Additional work for a post-exposure indication is being conducted under grant funding from the National Institutes of Health. One study has been completed to date. The study was designed to build upon the experience in the domestic pig model. Untreated animals exposed to VX applied topically to the ear showed signs of organophosphate (OP) poisoning and died within 2-3 hours. In contrast, animals receiving rBChE administered in 5 equal doses post-VX exposure survived with little or no signs of poisoning. Control animals received rBChE but no nerve agent or were exposed to topical VX and given the standard of care (2PAM and atropine). VX-exposed and treated animals showed mild signs of OP poisoning which cleared within 24 hours. The animals that were exposed to VX and treated with either rBChE or 2PAM-atropine gained weight at a comparable rate to that of the rBChE only animals. None of the surviving animals displayed any signs of cognitive impairment. The data suggest that rBChE is comparable to the current standard of care; future work will further refine this comparison.

### ***Non-Biodefense Products in Development***

In addition to its utility as a broad-spectrum countermeasure against nerve agent chemical weapons, PharmAthene is evaluating the use of rBChE as a potential clinical candidate for the treatment of Alzheimer's disease. Research is being conducted in collaboration with Hebrew University and Dr. Hermona Soreq. To date, Dr. Soreq has demonstrated in vitro that rBChE can arrest the formation of amyloid fibrils which are thought to be involved in the pathogenesis of Alzheimer's disease. Additional studies are planned for 2008 to further characterize this activity and to generate early in vivo proof-of-concept data.

PharmAthene believes that rBChE may also have a role to play in the treatment of cocaine and heroin addiction and the treatment of initial toxicity from overdose of cocaine and heroin. This is due to the unique structure of the enzyme that allows for selective binding to a variety of substrates and inhibitors. Increasing endogenous levels of BChE can reduce risks of complications due to cocaine and heroin abuse.

## US Government Regulatory Pathway

### General

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

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

- completion of preclinical laboratory tests, preclinical animal testing and formulation studies;
- submission to the FDA of an Investigational New Drug, or IND, which must be in effect before clinical trials may commence;
- performance of adequate and well-controlled clinical trials to establish the safety, purity and potency (including efficacy) of the Biologic and to characterize how it behaves in the human body;
- completion of comparability studies, if necessary;
- submission to the FDA of a Biologics License Application, or BLA, that includes preclinical data, clinical trial data and manufacturing information;
- FDA review of the BLA;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facilities; and
- FDA approval of the BLA, including approval of all product labeling.

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

Clinical trials involve the administration of the investigational product to humans under the supervision of qualified principal investigators. Our clinical trials must be conducted in accordance with Good Clinical Practice under protocols submitted to the FDA as part of an IND. In addition, each clinical trial is approved and conducted under the auspices of an institutional review board, or IRB, and with the patients' informed consent.



The IRB considers, among other things, ethical factors, the safety of human subjects and the possibility of liability of the institutions conducting the trial. The IRB at each institution at which a clinical trial is being performed may suspend a clinical trial at any time for a variety of reasons, including a belief that the test subjects are being exposed to an unacceptable health risk. Since our products are being developed using funding from the United States government, additional review by either the National Institutes of Health's IRB or the DoD's IRB-equivalent will also be required. These reviews take place following approval by the independent IRB. As the sponsor, we can also suspend or terminate a clinical trial at any time.

Clinical trials are typically conducted in three sequential phases, Phases I, II, and III, involving an increasing number of human subjects. Phase I trials are safety studies performed in a small number of subjects. Phase II studies, which may involve hundreds of subjects, take an in-depth look at the effectiveness of the drug and may include analysis of dose ranges and dose regimens. Finally, Phase III trials typically involve thousands of individuals and provide the documentation of effectiveness and important additional safety data required for licensing.

In 2002, however, the FDA amended its requirements applicable to BLAs to permit the approval of certain Biologics that are intended to reduce or prevent serious or life-threatening conditions based on evidence of safety from trial in healthy subjects and effectiveness from appropriate animal studies when human efficacy studies are not ethical or feasible. These regulations termed the "Animal Rule" and published in the Code of Federal Regulations (21 CFR 601 Subpart H) authorize the FDA to rely on evidence from animal studies to provide substantial proof of a product's effectiveness under circumstances where there is a reasonably well-understood mechanism for the toxicity of the agent. Under these requirements, Biologics used to reduce or prevent the toxicity of chemical, biological, radiological or nuclear substances may be approved for use in humans based on evidence of effectiveness derived from appropriate animal studies and any additional supporting data. Products evaluated for effectiveness under this rule are evaluated for safety under preexisting requirements for establishing the safety of new drug and biological products, including Phase I through Phase II clinical trials. We intend to rely on the Animal Rule in seeking marketing approval for our product candidates because we cannot ethically expose humans to either anthrax or nerve agents. Other countries do not, at this time, have established criteria for review and approval of these types of products outside their normal review process, i.e. there is no "Animal Rule" equivalent in countries other than the United States.

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

All data obtained from the preclinical studies and clinical trials, in addition to detailed information on the manufacture and composition of the product, would be submitted in a BLA to the FDA for review and approval for the manufacture, marketing and commercial shipments of any of our products. FDA approval of the BLA is required before commercial marketing or non-investigational interstate shipment may begin in the United States. However, Project Bioshield gave authority to FDA to grant Emergency Use Authorization ("EUA") for use of unlicensed/unapproved products should there be an emergency declared by the appropriate authority within the Department of Health and Human Services. This legislation will also allow unlicensed products to be procured for the Strategic National Stockpile so that they are available at the time an emergency is declared. Our products will be eligible both for consideration for procurement into the SNS and for use in the event of an emergency, although there is no guarantee that our products will meet the criteria set forth by HHS or the FDA for procurement and EUA, respectively.

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

Once it approves a BLA, the FDA may revoke or suspend the product approval if compliance with post-market regulatory standards is not maintained or if problems occur after the product reaches the marketplace. In addition, the FDA may require post-marketing studies to monitor the effect of approved products, and may limit further marketing of the product based on the results of these post-market studies. The Animal Rule is clear that post-marketing studies will be required should the products be used in humans; the nature of these studies will be discussed with FDA as part of the BLA process. The FDA has broad post-market regulatory and enforcement powers, including the ability to levy civil and criminal penalties, suspend or delay issuance of approvals, seize or recall products and revoke approvals.

Facilities used to manufacture Biologics are subject to periodic inspection by the FDA and other authorities, where applicable, and must comply with the FDA's cGMP regulations and the FDA's current Good Manufacturing Practices ("cGMP") regulations, the FDA's general biological product standards and the product establishment standards set forth in the approved BLA. Failure to comply with the statutory and regulatory requirements subjects the manufacturer to possible legal or regulatory action, such as suspension of manufacturing, seizure of product or recall of a product. Adverse experiences with the product must be reported to the FDA and could result in the imposition of market restriction through labeling changes or in product

removal. Product approvals may be revoked if compliance with regulatory requirements is not maintained or if problems concerning safety or effectiveness of the product occur following approval. With respect to post-market product advertising and promotion, the FDA imposes a number of complex regulations on entities that advertise and promote Biologics, including, among others, standards and regulations for direct-to-consumer advertising, off-label promotion, industry-sponsored scientific and educational activities and promotional activities involving the Internet. The FDA has very broad enforcement authority under the FDCA, and failure to abide by these regulations can result in administrative and judicial enforcement actions, including the issuance of a Warning Letter directing correction of deviations from FDA standards, a requirement that

future advertising and promotional materials be pre-cleared by the FDA, and state and federal civil and criminal investigations and prosecutions. Foreign regulatory bodies also strictly enforce these and other regulatory requirements.

### ***Orphan Drug Act***

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

PharmAthene has received orphan drug status for Valortim™ as well as Fast Track designation from the FDA, which generally indicates that the FDA will facilitate the development and expedite the regulatory review of the product. However, PharmAthene can provide no assurance that the review will be successful. In addition, the FDA may withdraw its approval of a Fast-Track product on a number of grounds, including the sponsor's failure to conduct any required post-approval study with due diligence and failure to continue to meet criteria for designation.

### ***Fraud and Abuse***

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

### ***Anti-Kickback Laws***

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

### ***Other Regulatory Schemes***

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

### ***Government Funding***

The US government awarded Medarex, PharmAthene's collaboration partner in the development of Valortim™, two separate grants of up to \$7.2 million which will be funded over the next three years for the further development of Valortim™, though PharmAthene does not receive any of these funds. In addition, the DoD Appropriations bills for fiscal years 2006 and 2007 included \$2.05 million and \$1.0 million, respectively, to support PharmAthene's ongoing development of Valortim™. Prior to PharmAthene's acquisition of the recombinant butyrylcholinesterase program, Nexia, the predecessor of PharmAthene Canada, Inc., PharmAthene's subsidiary in Canada, was awarded a \$2.6 million contract by the DoD to support the expression of rBChE in the milk of transgenic goats and to provide proof of concept data that the product can be produced in kilogram quantities.

Additionally, PharmAthene was awarded a multi-year contract by the DoD for the advanced development of Protexia®. The contract provides for an initial \$41 million for the advanced development of Protexia® through March 2009 and, thereafter, the US government, in its sole discretion, may elect to continue development assistance with further funding of \$65 million. Assuming development milestones are met and contract extensions are

exercised by the US government, in its sole discretion, and that it elects to procure an initial 90,000 doses of Protexia® from PharmAthene, the Company could receive up to \$219 million in funding (including the \$100 million for advanced development).

## Manufacturing

PharmAthene has no manufacturing or production facilities and limited manufacturing capabilities and believes that acceptable alternatives are available through third party Contract Manufacturing Organizations, "CMOs," that have experience in operating under the current Good Manufacturing Practices established by the FDA and we rely on them for clinical production of our product candidates.

For Protexia®, the significant raw material, BChE, used to produce the product will come from the milk of transgenic goats raised at a farm owned and operated by PharmAthene. PharmAthene is producing BChE at commercially feasible concentrations. For commercial manufacturing, the initial production will be performed at PharmAthene's farm and the final purification of the bulk drug substance will be performed at a CMO. Final formulation and delivery are still being developed.

For Valortim™, the cell culture process was developed by Medarex, and results in a commercially feasible and high purity product that would be manufactured commercially by a CMO. PharmAthene has determined that the capital investment and high operating costs of a manufacturing operation are not justified at this time and several acceptable CMOs are available to produce the product.

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

## Intellectual Property

PharmAthene's success depends in part on our ability to obtain patents, to protect trade secrets, and to operate without infringing upon the proprietary rights of others. We seek to protect our proprietary position by, among other methods, filing US and foreign patent applications related to the proprietary technology, inventions and improvements that are important to our business. PharmAthene currently holds two US issued patents relating to Protexia® and four corresponding foreign patents. These patents provide PharmAthene with claim coverage for direct gene transfer into the ruminant mammary gland and the method for development of transgenic goats. The issued patents have expiration dates in 2015. In accordance with ongoing research and development efforts, PharmAthene has five pending US patent applications and three corresponding foreign applications covering relevant and newly-developed portions of our transgenic technology.

The following table identifies each of PharmAthene's issued patents and pending applications:

Patent/Patent Application	Patent Number/ Application Number	Country of Issue/Filing	Issue Date/File Date	Expiration Date
Direct Gene Transfer Into the Ruminant Mammary Gland	5,780,009	U.S.	Issued July 14, 1998	July 14, 2015
Method for Development of Transgenic Goats	5,907,080	U.S.	Issued May 25, 1999	November 30, 2015
Method for Development of Transgenic Goats	0871357	Netherlands, Great Britain, France, Germany	May 2, 2003	November 27, 2016
Production of Butyrylcholinesterase in Transgenic Animals	10/326,892	U.S.	Filed December 20, 2002	December 20, 2022
Production of Butyrylcholinesterase in Transgenic Animals	051024531	Hong Kong	March 22, 2005	March 22, 2025
Production of Butyrylcholinesterase in Transgenic Animals	027883958	Spain	December 19, 2002	December 19, 2022
Pulmonary Delivery of Enzymatic Medical Countermeasures	11/195,041	U.S.	Filed August 2, 2005	August 2, 2025
Long Half-Life Recombinant Butyrylcholinesteras	PCT/US07/017279 60/835,827	WO U.S.	August 2, 2007 Filed August 4, 2006	August 2, 2027 August 4, 2007
Embryonic Stem Cell Lines and Transgenic Animals Derived From Them	PCT/US07/018402 60/841,126	WO (abandoned) U.S.	Filed August 30, 2006	August 30, 2007
Production of HAS-Linked Butyryl-	11/401,390	U.S.	Filed April 10, 2006	December 20, 2002



In addition, PharmAthene is a party to various exclusive and non-exclusive licenses, patents and technologies relating to transgenic production of proteins in the milk of non-human animals that are held by other parties. Some of the licenses, which generally extend for the life of any applicable patent, require PharmAthene to pay royalties on sales of products that may be derived from or produced using the licensed technology. PharmAthene derives rights to the patents, patent applications and know how relating to Valortim™ through its collaboration arrangement with Medarex, Inc., which owns such rights.

PharmAthene relies upon certain proprietary trade secrets, know-how and continuing technological advances to develop a competitive position. In efforts to maintain confidentiality and ownership of trade secrets, proprietary information and developments, all of our employees are required to execute agreements regarding confidentiality and assigning to PharmAthene all rights to any inventions and processes they develop while they are employed by PharmAthene.

PharmAthene intends to use license agreements to access external products and technologies, as well as to convey our own intellectual property to others. We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our proprietary rights are covered by valid and enforceable patents or are effectively maintained as trade secrets.

### **Research and Development Costs**

During the fiscal years ended December 31, 2007 and 2006, we incurred \$16.6 million and \$7.3 million, respectively, of development expenses related to our research and development programs.

### **Competition**

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

#### ***Anthrax Product Competition***

Monoclonal antibodies ("MAbs") directed against anthrax PA are being developed for post-exposure prophylaxis and as symptomatic therapy for anthrax infection. There are a limited number of companies of which PharmAthene is aware with anti-anthrax MAbs in development which include: Human Genome Sciences, Inc., Elusys Therapeutics, Inc., Avanir Pharmaceuticals Inc. and IQ Corporation BV.

There are a number of orally available small molecule drugs approved and/or under development for the treatment of anthrax. These include broad spectrum antibiotics as well as anthrax specific products. Bayer Corporation produces Ciprofloxacin, or "Cipro," which has been approved for the post-exposure prophylaxis of inhalation anthrax. In late 2004, generic versions of Cipro were also approved by the FDA.

In addition to anthrax therapeutics, anthrax vaccines are available or in development. At present, only one vaccine is approved for use by the FDA for the prevention of anthrax which is BioThrax manufactured by BioPort Corporation, a subsidiary of Emergent Biosolutions Inc. PharmAthene believes that second generation vaccines consisting of recombinant protective antigen are being developed by VaxGen Inc. PharmAthene also believes that third generation vaccines, consisting of improved formulations of the anthrax protective antigen are being developed by Avant Immunotherapeutics Inc., BioSante Pharmaceuticals, Inc., Cerus Corporation Inc., Dynavax Technologies Inc., Dynport Vaccine Company, LLC and LigoCyte Pharmaceuticals, Inc. If PharmAthene consummates the Acquisition of Avecia's vaccine business, it will have one less competitor in this segment.

#### ***Nerve Agent Product Competition***

Nerve agents are among the most lethal biowarfare agents and there are few antidotes available. Symptoms of intoxication develop within seconds and death can result within minutes after exposure by inhalation, absorption through the skin, or by oral consumption.

The current medical regimen for organophosphate intoxication includes pretreatment with carbamates (i.e. pyridostigmine) to protect acetylcholinesterase (AChE) from irreversible inhibition, followed by anticholinergic drugs (i.e. atropine) to counteract the effects of excess acetylcholine, quaternary ammonium oximes (i.e. 2-PAM) to reactivate AChE that was inhibited by organophosphate binding and anticonvulsant drugs (i.e. diazepam) to minimize convulsions and permanent brain damage. However, these medical countermeasures against nerve agents are not sufficiently effective, particularly at protecting the central nervous system. PharmAthene is aware of antidotes to other nerve agents being developed by pharmaceutical companies, including Meridian Medical Technologies, a subsidiary of King Pharmaceuticals Inc. and Dynport Vaccine Company, LLC, in collaboration with Baxter Healthcare Corporation.

## Employees

As of December 31, 2007, we employed 91 persons on a full-time basis and 1 on a part-time basis, including 54 individuals engaged in research and development activities and 38 individuals engaged in general and administrative functions such as human resources, finance, accounting and investor relations. Our staff includes 6 employees with Ph.D. or M.D. degrees. None of our employees are party to any union and we believe that our relationship with our employees is good.

Information concerning our executive officers and key employees can be found in Part III, Item 10 under the caption "Executive Officers and Key Employees."

## Item 1A. Risk Factors.

Stockholders and potential investors should carefully consider the risks described below relating to investment in our Common Stock. Our most significant risks and uncertainties are described below, however, they are not the only risks we face. If any of the following risks actually occur, our business, financial condition and/or results of operations could be materially adversely affected, the trading price of our Common Stock could decline and a stockholder could lose all or part of his or her investment.

### Risks Related to Our Business

***It is expected that PharmAthene will incur net losses and negative cash flow for the foreseeable future and we cannot guarantee that we will achieve profitability and our business, results of operations and financial condition may be materially adversely affected.***

PharmAthene has incurred significant losses since we commenced operations. For the fiscal year ended December 31, 2007, the Company incurred an operating loss of approximately \$16.5 million and had an accumulated deficit of approximately \$87.4 million at December 31, 2007. The Company's losses to date have resulted principally from research and development costs related to the development of its product candidates and general and administrative costs related to its operations.

As a result of our continuing losses and the contemplated acquisition of Avecia's vaccines business, we may need to seek additional financing. Our available cash at December 31, 2007 was approximately \$40 million. However, we have debt to noteholders of approximately \$12.7 million, we have approximately \$10.0 million outstanding under our credit facility and, in connection with the acquisition of Avecia's vaccines business, we have agreed to pay \$10 million to Avecia upon the closing of the acquisition and an additional \$10 million upon the earlier of the first anniversary of the closing of the acquisition and the consummation of a financing transaction in which we receive gross proceeds of not less than \$15 million. Accordingly, to the extent that our losses continue at the current level, if we do not access additional funding through contracts with the US government, we may need to seek additional financing as soon as twelve months from the date of the closing of the Avecia acquisition. There can be no assurances that we will be successful in obtaining sufficient financing on commercially reasonable terms or at all.

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

The Company's likelihood for achieving profitability will depend on numerous factors, including success in:

- developing and testing new product candidates;
- carrying out the Company's intellectual property strategy;
- establishing the Company's competitive position;
- pursuing third-party collaborations;
- acquiring or in-licensing products;

- receiving regulatory approvals;

- manufacturing and marketing products; and
- continuing to receive government funding and identifying new government funding opportunities.

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 slower 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 might include acquisitions of other businesses, acquisition expenses and any cash used to make these acquisitions will reduce our available cash.

***PharmAthene is in various stages of product development and there can be no assurance of successful commercialization.***

PharmAthene has not commercialized any products or recognized any revenues from product sales. In general, our research and development programs are at early stages. To obtain FDA approval for our biological warfare defense products under current FDA regulations, the Company will be required to perform two animal model studies for efficacy and provide animal and human safety data. The Company's other products will be subject to the relevant approval guidelines under FDA requirements which include a number of phases of testing in humans. Even if PharmAthene initially receives positive pre-clinical or clinical results, such results may not be indicative of similar results that could be anticipated in the later stages of drug development, such as additional pre-clinical testing or human clinical trials.

Other drug candidates developed by PharmAthene will require significant additional research and development efforts, including extensive pre-clinical and clinical testing and regulatory approval, prior to commercial sale. We cannot be sure that our approach to drug discovery will be effective or will result in the development of any drug. In addition, applicable laws, regulations, and policies may change, and our products may be subject to new legislation or regulations that may delay or suspend research and development. PharmAthene does not expect that any drugs resulting from our research and development efforts will be commercially available for several years, if at all. Even if we succeed in developing and commercializing our product candidates, the Company may never generate sufficient or sustainable revenues to enable us to be profitable. Furthermore, even if our product candidates are successful when tested in animals, such success would not be a guarantee of the effectiveness and safety of such product candidates in humans. There can be no assurances that one or more of the Company's future product candidates would not fail to meet safety standards in human testing, even if those product candidates were found to be effective in animal studies. There can be no assurances that any such product candidates will prove to be effective in humans.

***Most of PharmAthene's immediately foreseeable future revenues are contingent upon grants and contracts from the US government and collaborative and license agreements and the Company may not achieve sufficient revenues from these agreements to attain profitability.***

Until and unless PharmAthene successfully markets a product, our ability to generate revenues will largely depend on our ability to enter into additional collaborative agreements, strategic alliances, research grants, contracts and license agreements with third parties, including, without limitation, the US government and branches and agencies thereof, and maintain the agreements we currently have in place. Substantially all of the revenues of the Company for the years ended December 31, 2007 and 2006, respectively, were derived from grants and government contracts.

The Company has an agreement with Medarex, Inc., to develop Valortim™, its fully human monoclonal antibody product designed to protect against and treat inhalation anthrax. Under the agreement with Medarex, the Company will be entitled to a variable percentage of profits derived from sales of Valortim™, depending, in part, on the amount of its investment. In addition, the Company has entered into licensing and research and development agreements with a number of other parties and collaborators.

***PharmAthene may need additional capital in the future. If additional capital is not available or not available on acceptable terms, the Company may be forced to delay or curtail the development of our product candidates.***

PharmAthene's requirements for additional capital may be substantial and will depend on many other factors, including:

- continued funding by the DoD and other branches and agencies of the US government;
- payments received under present or future collaborative partner agreements;
- continued progress of research and development of the Company's products;
- the Company's ability to license compounds or products from others;
- costs associated with protecting the Company's intellectual property rights;



- development of marketing and sales capabilities; and
- market acceptance of the Company's products.

To the extent PharmAthene's capital resources are insufficient to meet future capital requirements, it will have to raise additional funds to continue the development of our product candidates. We cannot assure you that financing will be available on favorable terms, if at all. To the extent the Company raises additional capital through the sale of securities, the issuance of those securities could result in dilution which may be substantial to the Company's stockholders. In addition, if the Company incurs 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 the Company's business activities. If adequate funds are not available, the Company may be required to curtail significantly our development and commercialization activities.

***Biodefense treatment and drug development is an expensive and uncertain process, and delay or failure can occur at any stage of PharmAthene's development process.***

To develop and commercialize biodefense treatment and drug candidates, the Company must provide the FDA and foreign regulatory authorities with clinical data that demonstrates adequate safety. This involves engaging in clinical trials, which is a lengthy and expensive process, the outcome of which is uncertain. Because humans are not normally exposed to anthrax, nerve agents, smallpox or to other lethal biotoxins or chemical agents, statistically significant effectiveness of the Company's biodefense product candidates cannot be demonstrated in humans, but instead must be demonstrated, in part, by utilizing animal models before they can be approved for commercial sale. This effect has to be demonstrated in more than one animal species expected to be predictive of a response in humans, but an effect in a single animal species may be acceptable if that animal model is sufficiently well-characterized for predicting a response in humans. The animal study endpoint must be clearly related to the desired benefit in humans and the information obtained from animal studies allows selection of an effective dose in humans. For many of the biological threats, the animal models are not available and the Company may have to develop the animal models, a time-consuming research effort. Further, we may not be able to sufficiently demonstrate the animal correlation to the satisfaction of the FDA, as these correlates are difficult to establish and are often unclear. 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.

Delays in obtaining results can occur for a variety of reasons such as slower than anticipated enrollment by volunteers in the trials, adverse events related to the products and unsatisfactory results of any trial. Any delay or adverse clinical event arising during any of our clinical trials could force the Company to abandon a product altogether or to conduct additional clinical trials in order to obtain approval from the FDA and other regulatory bodies. The Company's development costs will increase substantially if it experiences material delays in any clinical trials or if it needs to conduct more or larger trials than planned.

Additionally, few facilities in the US have the capability of testing animals with anthrax or nerve agent exposure. PharmAthene may not be able to secure clinical contracts to conduct the testing in a predictable timeframe or at all. Further, if delays are significant, or if any of the Company's products do not prove to be safe, pure, and potent (including efficacy) or do not receive required regulatory approvals, and the Company will be unable to recognize revenues from the sale of products, the commercial prospects for our product candidates will be adversely affected.

***Even if the Company completes the development of our nerve agent and anthrax products, if the Company fails to obtain contracts to supply products to the US government or the US government does not purchase sufficient quantities of our products, PharmAthene may be unable to generate sufficient revenues to continue operations.***

The US government has undertaken commitments to help secure improved countermeasures against bioterrorism including the stockpiling of treatments and vaccines for anthrax through a program known as the SNS. However, the process of obtaining government contracts is lengthy and uncertain and the Company will have to compete with other companies for each contract. There can be no assurances that the Company will be awarded any contracts to supply the US government with our products as such awards may be made, in whole or in part, to the Company's competitors. If the US government makes significant future contract awards for the supply of our emergency stockpile to PharmAthene's competitors, the Company's business will be harmed and it is unlikely that the Company will ultimately be able to commercialize that particular treatment or product.

Further, changes in government budgets and agendas may result in a decreased and de-prioritized emphasis on procuring the biodefense products PharmAthene will develop. In addition, government contracts typically contain provisions that permit cancellation in the event that funds become unavailable to the governmental agency. If the US government makes significant future contract awards to the Company's competitors at the exclusion of the Company or otherwise fails to purchase the Company's products, it is unlikely that the Company will ultimately be able to commercialize that particular treatment or product or that it will be able to generate sufficient revenues to continue operations.

***US government agencies have special contracting requirements which give them the ability to unilaterally control our contracts.***

PharmAthene anticipates that our primary sales will be to the US government. US government contracts typically contain unfavorable termination provisions and are subject to audit and modification by the government at its sole discretion, which will subject the Company to additional risks. These risks include the ability of the US government to unilaterally:

- suspend or prevent the Company 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 PharmAthene's contracts;
- reduce the scope and value of PharmAthene's contracts;
- audit and object to the Company's contract-related costs and fees, including allocated indirect costs;
- control and potentially prohibit the export of the Company's products; and
- change certain terms and conditions in the Company's contracts.

The US government will be able to terminate any of its contracts with the Company either for its convenience or if the Company defaults by failing to perform in accordance with the contract schedule and terms. Termination for convenience provisions would generally enable the Company to recover only the Company's costs incurred or committed, and settlement expenses and profit on the work completed prior to termination. Termination for default provisions do not permit these recoveries and would make the Company liable for excess costs incurred by the US government in procuring undelivered items from another source.

***PharmAthene may fail to fully realize the potential of Valortim™ and of our co-development arrangement with our partner in the development of Valortim™ which would have an adverse affect upon our business.***

PharmAthene and our development partner have completed the first Phase I clinical trial for Valortim™ without any reported adverse reactions. However, before we may begin selling any doses of Valortim™, we will need to conduct a more comprehensive Phase I trial in a significantly larger group of subjects. The Company will be required to expend a significant amount to scale up manufacturing capability through a contract manufacturer in order to conduct the more extensive Phase I clinical trial and the Company expects to commence this trial during 2008. If the Company's contract manufacturer is unable to produce sufficient quantities at a reasonable cost, or has any other obstacles to production, such as violative manufacturing then the Company will be unable to commence the necessary clinical trials necessary to begin marketing Valortim™. Even after the Company expends sufficient funds to complete the development of Valortim™ and when and if it enters into an agreement to market Valortim™ to the US government, it will be required to share any and all profits from the sale of products with our partner in accordance with a pre-determined formula.

***If PharmAthene cannot enter into new licensing arrangements, our ability to develop a diverse product portfolio could be limited and our ability to compete would be harmed.***

A component of the Company's business strategy will be in-licensing compounds and products developed by other pharmaceutical and biotechnology companies or academic research laboratories that may be marketed and developed or improved upon using the Company's novel technologies. Competition for promising compounds or products can be intense. If the Company is not able to identify new licensing opportunities or enter into other licensing arrangements on acceptable terms, it may be unable to develop a diverse portfolio of products.

***PharmAthene will face competition from several companies with greater financial, personnel and research and development resources. Our commercial opportunities may 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. The Company's 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 also are many companies, 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 companies have substantially greater financial, technical, research and development, and human resources than those of the Company. Competitors may develop products or other technologies that are more effective than any that are being developed by the Company or may obtain FDA approval for products more rapidly. If the Company commences 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 companies also have manufacturing facilities and established marketing



capabilities that would enable such companies to market competing products through existing channels of distribution. The Company's commercial opportunities will be reduced or eliminated if our competitors develop and market products for any of the harmful effects that it targets 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 the Company will be developing.

Further, the regulatory climate for generic versions of biological products approved under a BLA in the U.S. remains uncertain. 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 the Company is successful in developing effective products, and obtains 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 PharmAthene may develop, alone or with our collaborators, making our products obsolete, or that are marketed before any products that the Company develops are marketed.

Companies that are developing products that would compete with the Company's products include: VaxGen, Inc., which is developing vaccines against anthrax and smallpox; Avant Immunotherapeutics, Inc., which has vaccine programs for agents of biological warfare, including plague and anthrax; Human Genome Sciences, Inc., Elusys Therapeutics, Inc. and Avair Pharmaceuticals, Inc., all of which are developing monoclonal antibodies as anthrax treatments. Other competitors of the Company include: Emergent Biosolutions Inc., BioSante Pharmaceuticals, Inc., Dynport Vaccine Company, LLC and Ligocyte Pharmaceuticals, Inc.

***Political or social factors may delay or impair PharmAthene's 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 the Company's products to market or limit pricing of our products, which would harm the Company's business.

***The US government's determination to award any contracts to the Company may be challenged by an interested party, such as another bidder, at the General Accounting Office or in federal court. If such a challenge is successful, a contract may be terminated.***

The laws and regulations governing the procurement of goods and services by the US government provide procedures by which other bidders and other interested parties may challenge the award of a government contract. In the event that the Company is awarded a government contract, such 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 to suspend the Company's performance under the contract while such protests are being considered by the General Accounting Office or the applicable federal court, thus potentially delaying delivery of goods and services and payment. In addition, the Company could be forced to expend considerable funds to defend any potential award. If a protest is successful, the government may be ordered to terminate the Company's contract at our convenience and reselect bids. The government could even be directed to award a potential contract to one of the other bidders.

#### **Legal and Regulatory Risks of Development Stage Biotechnology Companies**

***PharmAthene's commercial success will be affected significantly by our ability to obtain protection for our proprietary technology and that of our licensors and collaborators and not infringe the patents and proprietary rights of third parties.***

The patent position of biotechnology firms generally is highly uncertain and involves complex legal and factual questions. To date, no consistent policy has emerged regarding the breadth of claims allowed in biotechnology patents. PharmAthene currently holds two US patents and has five US patent applications pending. 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 the Company will result in patents being issued or that the patents, 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 the Company or our collaborators and limit the ability of the Company or that of our collaborators to obtain meaningful patent protection.

Further, the commercial success of PharmAthene will depend significantly on our ability to operate without infringing the patents and proprietary rights of third parties. The Company is aware of one US patent covering recombinant production of an antibody, which, it has been argued, covers any reproduction of an antibody, as well as another US patent application with claims over pegylated butyrylcholinesterase.

Although PharmAthene believes that neither Valortim™, which is a monoclonal antibody and uses recombinant reproduction of antibodies, nor Protexia®, which uses pegylated butyrylcholinesterase technology, infringes on any valid claims of such patents, the Company cannot provide any assurances that if a legal action based on either of these two patents were to be brought against the Company or our distributors, licensees or collaborators, that the Company or our distributors, licensees or collaborators would prevail or that PharmAthene has sufficient funds or resources to defend such claims. If patents are issued to third parties that contain competitive or conflicting claims, PharmAthene, our licensors or collaborators may be legally prohibited from researching, developing or commercializing potential products or be required to obtain licenses to these patents or to develop or obtain alternative technology. The Company, our licensors and/or our collaborators may be legally prohibited from using patented technology, may not be able to obtain any license to the patents and technologies of third parties on acceptable terms, if at all, or may not be able to obtain or develop alternative technologies.

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 outcome is favorable. An outcome of any patent prosecution or litigation that is unfavorable to PharmAthene or one of our licensors or collaborators may have a material adverse effect on the Company.

***Any inability to protect PharmAthene's intellectual property could harm our competitive position and adversely affect our business.***

PharmAthene's success will depend, in part, on our ability to obtain patents and maintain adequate protection of other intellectual property for our technologies and products in the US and other countries. If the Company does not adequately protect our intellectual property, competitors may be able to use our technologies and erode or negate our competitive advantages. Further, the laws of some foreign countries will not protect the Company's proprietary rights to the same extent as the laws of the U.S., and the Company may encounter significant problems in protecting our proprietary rights in these foreign countries.

The patent positions of pharmaceutical and biotechnology companies, including the Company's patent positions, involve complex legal and factual questions and, therefore, validity and enforceability cannot be predicted with certainty. Patents may be challenged, deemed unenforceable, invalidated or circumvented. PharmAthene will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that it covers our proprietary technologies with valid and enforceable patents or that it effectively maintains such proprietary technologies as trade secrets. The Company will apply for patents covering our technologies and product candidates as it deems appropriate. PharmAthene may fail to apply for patents on important technologies or products in a timely fashion, or at all, and in any event, the applications the Company files may be challenged and may not result in issued patents. Any future patents the Company obtains may not be sufficiently broad to prevent others from practicing our technologies or from developing competing products. Furthermore, others may independently develop similar or alternative technologies or design around the Company's patented technologies. In addition, if challenged, the Company's patents may be declared invalid. Even if valid, the Company's patents may fail to provide it with any competitive advantages.

PharmAthene will rely upon trade secrets protection for our confidential and proprietary information. The Company has taken measures to protect our proprietary information; however, these measures may not provide adequate protection to the Company. The Company has sought to protect their proprietary information by entering into confidentiality agreements with employees, collaborators and consultants. Nevertheless, employees, collaborators or consultants may still disclose the companies' proprietary information, and the Company 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 the Company's trade secrets.

***PharmAthene's use of hazardous materials and chemicals require it to comply with regulatory requirements which may result in significant costs and expose PharmAthene to potential liabilities.***

PharmAthene's research and development involves the controlled use of hazardous materials and chemicals. The Company will be subject to federal, state, local and foreign laws governing the use, manufacture, storage, handling and disposal of such materials. The Company will not be able to eliminate the risk of accidental contamination or injury from these materials. In the event of such an accident, the Company could be held



liable for significant damages or fines, and these damages could exceed our resources and any applicable insurance coverage. In addition, the Company may be required to incur significant costs to comply with regulatory requirements in the future.

***PharmAthene may become subject to product liability claims, which could reduce demand for our product candidates or result in damages that exceed our insurance coverage.***

PharmAthene will face an inherent risk of exposure to product liability suits in connection with our products being tested in human clinical trials or sold commercially. The Company may become subject to a product liability suit if any product it develops causes injury, or if treated individuals subsequently become infected or otherwise 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 the Company's reputation, withdrawal of clinical trial volunteers and loss of revenues.

If a product liability claim is brought against the Company, the cost of defending the claim could be significant and any adverse determination may result in liabilities in excess of our insurance coverage. Additionally, the Company will be applying for indemnification under the Support Anti-terrorism by Fostering Effective Technologies 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, the Company cannot be certain that it will be able to obtain or maintain adequate insurance coverage on acceptable terms, if at all.

***Legislation limiting or restricting liability for medical products used to fight bioterrorism is new, and PharmAthene cannot be certain that any such protection will apply to our products and, therefore, PharmAthene could become subject to product liability suits and other third party claims if such protections do not apply.***

The Public Readiness and Emergency Preparedness Act ("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)), when the Secretary of Defense 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.

Upon a declaration by the Secretary of Health and Human Services, a compensation fund is 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." There is no assurance, however, that the Secretary of Health and Human Services will issue such a declaration. 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. PharmAthene may become subject to standard product liability suits and other third party claims if products it develops 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.

***PharmAthene may be subject to claims that it or our 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, the Company employs individuals who were previously employed at other biotechnology or pharmaceutical companies, including their competitors or potential competitors. Although no claims against the Company are currently pending, the Company may be subject to claims that these employees or it 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 the Company is successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

***If we experience delays in obtaining regulatory approvals, or are unable to obtain or maintain regulatory approvals, PharmAthene may be unable to commercialize any products.***

The Company will need to conduct a substantial amount of additional preclinical and clinical research and development before any US or foreign regulatory authority will approve any of our products. In addition, the Company's product candidates will be subject to extensive and rigorous domestic government regulation. Results of the Company's research and development activities may indicate that our potential products are unsafe or ineffective. In this case, regulatory authorities will not approve them. Even if approved, the Company's products may not be commercially successful. If the Company fails to develop and commercialize our products, it may be forced to curtail or cease operations.

In addition, the commencement and rate of completion of clinical trials for the Company's products may be delayed by many factors, including:

- lack of efficacy during the clinical trials in animals;
- unsatisfactory results of any clinical trial;
- failure to comply with Good Clinical Practices;
- unforeseen safety issues;
- slower than expected rate of patient recruitment; or
- government or regulatory delays.

Delays in obtaining regulatory approvals may:

- adversely affect the commercialization of any products that the Company or our collaborative partners develop;
- impose costly procedures on the Company or our collaborative partners;
- diminish any competitive advantages that the Company or our collaborative partners may attain; and
- adversely affect the Company's receipt of revenues or royalties.

The results from preclinical testing and early clinical trials are often not predictive of results obtained in later clinical trials. Although a new product may show promising results in initial clinical trials, it may subsequently prove unfeasible or impossible to generate sufficient safety and efficacy data to obtain necessary regulatory approvals. Data obtained from preclinical and clinical studies are susceptible to varying interpretations, which may delay, limit or prevent regulatory approval. In addition, the Company may encounter regulatory delays or rejections as a result of many factors, including results that do not support our claims, perceived defects in the design of clinical trials and changes in regulatory policy during the period of product development. The Company's business, financial condition, prospects and results of operations may be materially adversely affected by any delays in, or termination of, our clinical trials or a determination by the FDA that the results of the Company's trials are inadequate to justify regulatory approval.

Any required approvals, once obtained, may be suspended or revoked. Further, if the Company fails to comply with applicable FDA and other regulatory requirements at any stage during the regulatory process, it may encounter difficulties including:

- delays in clinical trials or commercialization;
- product recalls or seizures;
- suspension of production and/or distribution;
- revocation of previously approved marketing applications; and
- injunctions, civil penalties and criminal prosecutions.

PharmAthene's 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. If we fail to obtain required governmental approvals, we or our collaborative partners will experience delays in, or be precluded from, marketing products developed through it or, as applicable, their research.

PharmAthene and our contract manufacturers will also be required to comply with the applicable FDA current Good Manufacturing Practice ("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 before the Company will be able to use them in commercial manufacturing of our products. The Company and our contract manufacturers may not be able to comply with the applicable cGMP requirements and other FDA regulatory requirements. If the Company and our contract manufacturers fail to comply, we could be subject to fines or other sanctions, or be precluded from marketing our products.

***PharmAthene may be required to perform additional clinical trials or change the labeling of our products if we or others identify side effects after***

*our products are on the market. Such events could harm sales of the affected products.*

If the Company or others identify side effects after any of our products are on the market, or if manufacturing problems occur:

- regulatory approval may be revoked;
- reformulation of the affected products, additional clinical trials, or changes in labeling of the Company's products may be required;
- changes to or re-approvals of the Company's manufacturing facilities may be required;
- sales of the affected products may drop significantly;
- the Company's reputation in the marketplace may suffer; and
- lawsuits, including class action suits, may be brought against the Company.

Any of the above occurrences could harm or prevent sales of the affected products or could increase the costs and expenses of commercializing and marketing these products.

### **Risks Related to PharmAthene's Common Stock**

*If the Company's initial stockholders exercise their registration rights, it may have an adverse effect on the market price of our common stock.*

The Company's initial stockholders are entitled to require it to register the resale of their shares of common stock at any time after the date on which their shares are released from escrow, which, except in limited circumstances, will not be before July 29, 2008. If the Company's initial stockholders exercise their registration rights with respect to all of their shares of common stock, then there will be an additional 2,250,000 shares of common stock eligible for trading in the public market. The presence of this additional number of shares of common stock eligible for trading in the public market may have an adverse effect on the market price of the Company's common stock.

*The American Stock Exchange may delist the Company's securities from trading which could limit investors' ability to make transactions in our securities and subject us to additional trading restrictions.*

The Company's common stock and some warrants are listed on the AMEX, a national securities exchange. PharmAthene cannot assure you that our securities will continue to be listed on the AMEX. If the AMEX delists the Company's securities from trading on our exchange and it is not able to list our securities on another exchange or to have them quoted on Nasdaq, the Company's securities could be quoted on the OTC Bulletin Board, or "pink sheets". As a result, we could face significant adverse consequences including:

- a limited availability of market quotations for our securities;
- a determination that the Company's common stock is a "penny stock" which will require brokers trading in the Company's common stock to adhere to more stringent rules and possibly resulting in a reduced level of trading activity in the secondary trading market for the Company's securities;
- a limited amount of news and analyst coverage for the Company; and
- a decreased ability to issue additional securities or obtain additional financing in the future.

### **Item 1B. Unresolved Staff Comments.**

None.

### **Item 2. Properties.**

Our principal executive offices are located at One Park Place, Suite 450, Annapolis, MD 21401 and are comprised of approximately 12,500 square feet. We lease this space for approximately \$32,000 per month. The lease term expires in 2017.

PharmAthene owns a farm in Canada consisting of 180 acres of land where it raises transgenic goats. The Company also leases office space in Canada under a two-year renewable lease agreement. With its closing of the Canadian research facility located in Ville St. Laurent Montreal, this lease has been terminated effective May 31, 2008.

**Item 3. Legal Proceedings.**

The Company is not a party to any legal proceedings, other than ordinary routine litigation incidental to our business, which the Company believes will not have a material affect on our financial position or results of operations.

**Item 4. Submission of Matters to a Vote of Security Holders.**

No matters were submitted to a vote of the Company's security holders during the quarter ended December 31, 2007.

## PART II

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

#### Market

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

Fiscal Year 2007	High	Low
4th Quarter Ended December 31	\$ 5.36	\$ 3.35
3rd Quarter Ended September 30	\$ 7.68	\$ 3.95
2nd Quarter Ended June 30	\$ 7.63	\$ 7.23
1st Quarter Ended March 31	\$ 8.00	\$ 7.28
Fiscal Year 2006	High	Low
4th Quarter Ended December 31	\$ 7.45	\$ 7.04
3rd Quarter Ended September 30	\$ 8.05	\$ 7.12
2nd Quarter Ended June 30	\$ 8.45	\$ 7.40
1st Quarter Ended March 31	\$ 9.08	6.96

#### Holdings

As of March 26, 2008, in accordance with our transfer agent records, we had 56 record holders of our common stock.

#### Dividends

We have not paid any cash dividends on our common stock and do not intend to declare any dividends in the foreseeable future. While subject to periodic review, the current policy of our Board of Directors is to retain all earnings primarily to finance our future growth. We make no assurances that we will ever pay cash dividends. Whether we pay any cash dividends in the future will depend on PharmAthene's financial condition, results of operations and other factors that the Board of Directors will consider.

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

*This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These forward-looking statements deal with management's current expectations regarding our plans and objectives for future operations. This information may involve known and unknown risks, uncertainties and other factors which 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. Forward-looking statements, which involve assumptions and describe our future plans, strategies and expectations, are generally identifiable by use of the words "may," "will," "should," "expect," "anticipate," "estimate," "believe," "intend" or "project" or the negative of these words or other variations on these words or comparable terminology. These forward-looking statements are based on assumptions that may be incorrect, and we cannot assure you that these projections included in these forward-looking statements will come to pass. Our actual results could differ materially from those expressed or implied by the forward-looking statements as a result of various factors.*

*We have based the forward-looking statements included in this Annual Report on Form 10-K on information available to us on the date of this Annual Report, and we assume no obligation to update any such forward-looking statements. 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.*

The following discussion should be read in conjunction with the consolidated financial statements for the Company which present the results of operations of PharmAthene for the years ended December 31, 2007 and 2006 as well as the financial positions at December 31, 2007 and 2006. The following discussion should also be read in conjunction with the Current Report on Form 8-K/A filed on September 24, 2007. All amounts presented, except share data, are rounded to the nearest thousand dollars.



## Overview

PharmAthene is a biodefense company engaged in the business of development and commercialization of medical countermeasures against biological and chemical weapons. In addition to our own research efforts, we collaborate with pharmaceutical companies to support clinical development of product candidates. The Company has two products under development: Valortim™, a fully human monoclonal antibody (an identical population of highly specific antibodies produced from a single clone) for the prevention and treatment of anthrax infection, and Protexia®, which mimics a natural bioscavenger for the treatment or prevention of nerve agent poisoning by organophosphate compounds which include nerve gases and pesticides.

Our lead product candidate, Valortim™, is a fully human monoclonal antibody designed to protect against and treat human inhalation anthrax, the most lethal form of the infection caused by the *Bacillus anthracis* bacterium. The Company is co-developing Valortim™ with Medarex, Inc., a biopharmaceutical company that specializes in developing fully human antibody-based therapeutic products, and will share with Medarex any profits derived from sales of Valortim™. Preclinical trials in animal models have demonstrated Valortim™ to be effective prophylactically and therapeutically for inhalation anthrax infection. The Company and Medarex have completed dosing of healthy volunteers in a Phase I open-label, dose-escalation clinical trial to evaluate the safety, tolerability, immunogenicity (eliciting an undesired immune response), and pharmacokinetics (the study of absorption, metabolism and action of drugs) of a single dose of Valortim™ administered intravenously or intramuscularly. No drug-related serious adverse events were reported. Final results from the Phase I trial were presented at the Infectious Disease Society of America meeting in October 2006. Valortim™ was granted Fast Track Status by the US Food and Drug Administration (the "FDA"), which may permit the Company to submit portions of a Biologics License Application ("BLA") or efficacy supplement before the complete BLA is submitted. This can expedite the review process depending upon whether the FDA has sufficient resources to review the portions submitted. In addition, Valortim™ was granted orphan drug status for the treatment of inhalation anthrax.

Protexia®, the Company's second product candidate, is a recombinant form (that is, produced using genetic engineering technology) of human butyrylcholinesterase, a naturally occurring enzyme ("BChE"), for use in the prophylaxis and treatment of organophosphate chemical nerve agent poisoning. Preclinical trials in animal models suggest that Protexia® may be effective prophylactically and therapeutically for chemical nerve agent poisoning. The Company plans to continue preclinical animal studies of Protexia® through 2008 and file an Investigational New Drug application ("IND") with the FDA in 2008. The procurement process for the scale-up development and sale of Protexia® is already underway with the US Department of Defense (the "DoD"), the department charged with purchasing biodefense countermeasures for military use. The DoD requested competitive bids in a Request for Proposal (an "RFP") for a recombinant form of BChE drug for the prophylaxis treatment of chemical nerve agent poisoning, which the Company submitted in November 2005. In September 2006, the Company was awarded a multi-year contract by the DoD. The contract provides an initial \$41 million for the advanced development of Protexia® through March 2009 and, thereafter, the US government, in its sole discretion, may elect to continue development assistance with further funding of \$65 million. Assuming development milestones are met and contract extensions are exercised by the US government, in its sole discretion, and that it elects to procure an initial 90,000 doses of Protexia® from PharmAthene, the Company could receive up to \$219 million in funding (including the \$100 million for advanced development).

For the next several years, we believe our main customer will be national governments, primarily the United States government. Currently, the United States government can purchase critical biodefense products prior to FDA approval under Project Bioshield for the United States Strategic National Stockpile ("SNS"). Based on available information, the Company has performed an in-depth analysis of the factors, including comparisons to competitors' products, and has developed revenue and cost projections to the United States government for sales to the US and other governments. Based on our evaluation we believe sales can commence during or before 2009.

Prior to the Merger, when our operating subsidiary, PharmAthene US, was a privately-held corporation, our operations since inception in March 2001 were financed primarily through the issuance of equity securities, convertible notes, and proceeds from loans or other borrowings. In addition to the trust funds obtained in the Merger, any, or all, of these financing vehicles or others may be utilized to fund our future capital requirements.

## Recent Events

### *Purchase and Sale Agreement*

On March 20, 2008, PharmAthene entered into a Sale and Purchase Agreement (the "Purchase Agreement") with Avecia Biologics Limited and certain of its affiliates (collectively, "Avecia") for the acquisition of all of the assets related to Avecia's vaccines business which includes a second generation recombinant protective antigen (rPA) anthrax vaccine, a recombinant dual antigen plague vaccine and a third generation rPA anthrax vaccine program (the "Acquisition"). In consideration for the Acquisition, PharmAthene has agreed to pay Avecia the following:

- (i) \$10 million (exclusive of VAT) at the time of the consummation of the Acquisition (the "Initial Consideration") subject to a working capital adjustment whereby the Initial Consideration shall be reduced or increased by an amount equal to the shortfall or excess over \$100,000; plus
- (ii) an additional \$10 million (exclusive of VAT) payable upon the earlier to occur of (a) the completion of a financing transaction in which

PharmAthene receives gross proceeds of not less than \$15 million and (b) the first anniversary of the consummation of the Acquisition (the "Deferred Consideration") which payment is to be secured by a letter of credit; plus

(iii) additional contingent amounts payable upon the occurrence of certain events (the "Milestone Consideration") as follows:

- \$10 million upon the entry by PharmAthene into a multi-year funded contract with the US Department of Defense (or other agency or representative or sub-contractor of the US government) for the further development of Avecia's pneumonic and bubonic plague ("rYP") vaccine as a result of (a) a Resources Allocation Decision of the Resource Allocation Review Board and the Resource Allocation Advisory Committee of the US Department of Defense or (b) some other similar substantial funding in excess of \$150 million (including the value of any option elements within such contract; and
- \$5 million upon the entry by PharmAthene into a multi-year funded development contract to be issued by the Biological Advanced Research and Development Authority (part of the US Department of Health and Human Services) under solicitation number RFP-BARDA-08-15 for the further development of Avecia's anthrax ("rPA") vaccine; and
- \$5 million upon the entry by PharmAthene into a contract or contracts for the supply of rPA vaccine into the Strategic National Stockpile; and
- 2.5% of net sales (as defined under the Purchase Agreement) of rPA vaccine made by PharmAthene to the US government within the period of ten years from the consummation of the Acquisition after the first 25 million doses; and
- 1% of net sales (as defined under the Purchase Agreement) of third generation anthrax vaccine made by PharmAthene to the US government within the period of ten years from the consummation of the Acquisition.

In connection with the acquisition, PharmAthene and Avecia have agreed to enter into certain ancillary agreements upon the consummation of the Acquisition including, without limitation, transitional services agreements, laboratory facilities agreements, master services agreement, supply agreement and subcontract agreement which, in each case, provide for services to be performed by Avecia for PharmAthene both on a transitional and on a going-forward basis. One of such agreements is a long-term manufacturing agreement for the supply by Avecia of the vaccines and component ingredients comprising the vaccines business purchased by PharmAthene in the Acquisition.

Pursuant to the terms of the Purchase Agreement, consummation of the Acquisition is conditioned upon, among other customary conditions, the receipt of all consents, approvals and material permits (i) for the transfer by novation of Avecia's contracts with the Defence Science and Technology Laboratory, an agency of the UK Ministry of Defence, (ii) for the entry into a subcontract with respect to Avecia's contracts with the National Institutes of Health, an agency of the US government, and (iii) for the transfer (whether by novation or assignment) of a particular grant from the National Institutes of Health referred to as the Challenge Grant.

On March 28, 2008, Avecia received a letter from the DSTL advising Avecia of the recent Resource Allocation Decision of the US Department of Defense that the DoD had decided not to fund Avecia's plague vaccine candidate beyond the current contractual commitment. The parties are engaged in discussions to amend the terms of the Purchase Agreement to accommodate this change in circumstances. The parties anticipate a closing in early April.

### ***Consent and First Loan Modification Agreement***

As previously disclosed, PharmAthene is a party to a \$10 million secured credit facility evidenced by a Loan and Security Agreement, dated as of March 30, 2007 (the "Loan Agreement"), with Silicon Valley Bank and Oxford Finance Corporation (together the "Lenders"). Under the credit facility, the Company has borrowed \$10 million which bears interest at the rate of 11.5% per annum. The Loan Agreement contains customary affirmative and negative covenants which, among other things, restrict the Company's ability to undertake certain acquisitions, incur certain indebtedness or make certain investments. As a consequence, PharmAthene sought to obtain the consent of its Lenders to the Acquisition and entered into a Consent and First Loan Modification Agreement, dated as of March 20, 2008, with the Lenders (the "Loan Modification Agreement") pursuant to which, among other things, the Lenders consented to the Acquisition provided that (i) PharmAthene (or its UK subsidiary involved in the Acquisition) is the surviving entity in the Acquisition, (ii) the total initial cash consideration upon the consummation of the Acquisition does not exceed \$11 million, (iii) the consummation of the Acquisition will not otherwise result in an Event of Default as defined under the Loan Agreement, after giving effect to the Acquisition and (iv) within 20 days following the consummation of the acquisition, PharmAthene shall cause its UK subsidiary to become a co-borrower or a secured guarantor under the Loan Agreement.

The Loan Modification Agreement also amends the Loan Agreement to provide (i) that PharmAthene shall maintain, at all times, at a segregated account, at either Silicon Valley Bank or Silicon Valley Bank Securities, unrestricted and unencumbered cash or cash equivalents in the amount of at least one and one-quarter times all obligations of PharmAthene to the Lenders, (ii) that if PharmAthene or any of its affiliates creates or acquires any subsidiary, PharmAthene shall notify the Lenders and take all such action as to cause each domestic subsidiary to guarantee the obligations of PharmAthene under the Loan Agreement granting a continuing pledge and security interest in and to the assets of such subsidiary, (iii) that PharmAthene shall deliver to the Lenders a control agreement with M&T Bank granting the Lenders a first perfected security interest in the accounts of PharmAthene held at M&T Bank and (iv) amending the definition of "Material Adverse Change" under the Loan Agreement to provide that a Material Adverse Change shall be a determination of the Lenders based upon information available to it and in its reasonable judgment that there is a reasonable

likelihood that PharmAthene shall fail to comply with one or more of the financial covenants contained in the Loan Agreement.

It is contemplated that Silicon Valley Bank will issue the letter of credit in the amount of \$10 million securing the Deferred Consideration payable under the Purchase Agreement.

***Closing of Canadian Research Facility***

On November 12, 2007, we made the determination to close our Canadian research facility since work performed at the facility was no longer required for production development. We estimate the total direct costs associated with the closing to be approximately \$0.5 million. We expect to vacate the research facilities in the second quarter of 2008. We will still maintain our farm and a small executive office in Quebec for critical corporate functions.

## Results of Operations

### Revenue

The Company recognized revenues of \$14.6 million and \$1.7 million during the years ended December 31, 2007 and 2006, respectively. These revenues consist primarily of contract funding from the US government for the development of pharmaceutical products for Protexia®, one of the Company's two drug candidates. Other non-grant related revenue of \$19,000 and \$21,500 was recognized for the fiscal years ended December 31, 2007 and 2006, respectively.

### Contract Revenue

During the fiscal years ended December 31, 2007 and 2006, PharmAthene recognized revenues related to US government awarded contracts and grants as follows:

- In connection with the acquisition of Nexia Biotechnologies, Inc. in 2005, the Company was assigned the rights to receive the fixed price grant with the US Army Medical Research and Material Command Center to fund preclinical studies for Protexia® receiving approximately \$2.7 million for the period from April 2003 through September 2006.
- In September 2006, the DoD US awarded the Company a multi-year contract for the advanced development of Protexia® for approximately \$41 million through March 2009 and, thereafter, the US government, in its sole discretion, may elect to continue development assistance with further funding of \$65 million. Assuming development milestones are met and contract extensions are exercised by the US government, in its sole discretion, and that it elects to procure an initial 90,000 doses of Protexia® from PharmAthene, the Company could receive up to \$219 million in funding (including the \$100 million for advanced development). The Company recognized \$14.6 million and \$1.5 million, respectively, under this contract during the fiscal year ended December 31, 2007 and 2006, respectively.
- On September 28, 2007, the National Institute of Allergy and Infectious Diseases ("NIAID") and the Biomedical Advanced Research and Development Authority ("BARDA") awarded to PharmAthene a contract for the advanced development of Valortim™. This contract, of approximately \$13.9 million, supports the development of Valortim™ for use as an anti-toxin therapeutic to treat inhalation anthrax infection. The contract will be funded in installments through fiscal year 2009. The Company recognized \$0.1 million of revenue under this contract in the twelve months ended December 31, 2007.

### Other Revenue

In connection with the acquisition of Nexia Biotechnologies, Inc., the Company acquired property and equipment, including farm facilities. Other income primarily is derived from the leasing of farm facilities that the Company is currently not utilizing.

### Research and Development Expenses

The Company's research and development expenses were \$16.6 million and \$7.3 million for the fiscal years ended December 31, 2007 and 2006, respectively. These expenses resulted from research and development activities related to programs for Valortim™ and for Protexia®. The Company incurred both direct and indirect expenses. Direct expenses included salaries and other costs of personnel, raw materials and supplies. The Company may also incur third-party costs related to these projects, such as contract research, consulting and clinical development costs for individual projects.

Research and development expenses for the fiscal years ended December 31, 2007 and 2006, respectively, were attributable to research programs as follows:

	December 31,	
	2007	2006
Valortim™	\$ 4.5	\$ 1.7
Protexia®	10.9	5.4
Internal research and development	1.2	0.2
Total research and development expenses	\$ 16.6	\$ 7.3

Research and development expense increased \$9.3 million for the fiscal year ended December 31, 2007 as compared to the fiscal year ended

December 31, 2006 primarily as a result of increased process development and manufacturing activities related to Protexia® and Valortim™ of \$9.2 million and employee-related expenses, including stock compensation, of \$1.2 million. These increases were partially offset by fewer pre-clinical and clinical activities of approximately \$0.9 million primarily related to the clinical trial program for Valortim™ which was initiated in fiscal year 2005 in collaboration with Medarex.

For the fiscal years ended December 31, 2007 and 2006, PharmAthene expended approximately \$6.2 million and \$2.0 million, respectively, primarily on process development and manufacturing activities for Protexia®. For the fiscal years ended December 31, 2007 and 2006, the Company spent approximately \$3.5 and \$3.2 million on internal human resources on the Protexia® development program. Additionally, \$0.5 million was incurred related to pre-clinical testing during fiscal year 2006. From inception of the Protexia® development program to date, the Company has expended a total of approximately \$21.0 million related to the Protexia® program (exclusive of amounts spent by Nexia Biotechnologies, Inc. prior to the acquisition by PharmAthene).

For the fiscal years ended December 31, 2007 and 2006, the Company spent approximately \$3.4 and \$1.3 million for the development of Valortim™, respectively, on process and clinical development with the remaining expenditure related to internal resources. From inception of the Valortim™ development program to date, the Company has expended a total of approximately \$10.0 million.

In October 2006, the National Institutes of Health (NIH) Countermeasures Against Chemical Threats, (Counter ACT) Research Network awarded a \$1.7 million grant to support continued development of Protexia®. The Company recognized \$0.1 million and nil, respectively, under this contract during the fiscal years ended December 31, 2007 and 2006, as a reduction to offset research expenses.

Internal research and development costs include activities related to the development of future programs.

### ***General and Administrative Expenses***

General and administrative functions for the Company include executive management, finance and administration, government affairs and regulations, corporate development, human resources, legal, and compliance. For each function, the Company may incur direct expenses such as salaries, supplies and third-party consulting and other external costs. Indirect costs such as facilities, utilities and other administrative overhead are also included in general and administrative expenses.

Expenses associated with general and administrative functions for the Company were \$13.9 million and \$8.5 million for the fiscal years ended December 31, 2007 and 2006, respectively. General and administrative expenses increased \$5.4 million in the fiscal year ended December 31, 2007 as compared to the fiscal year ended December 31, 2006 primarily due to increased employee costs of \$2.8 and related increased travel activities of \$0.4 million, increased stock compensation expense of \$1.2 million and an additional \$0.6 million due to increased facilities expense relating to the increased number of employees and the Company's relocation to larger headquarters. The remaining increase is attributable to additional consulting and legal costs associated with proposal and compliance related activities.

### ***Depreciation and Intangible Amortization***

Depreciation and intangible amortization expense was \$705,400 and \$483,600 for the fiscal years ended December 31, 2007 and 2006, respectively. Depreciation expense for the twelve months ended December 31, 2007 and 2006 was \$542,100 and \$353,900, respectively, and resulted primarily from farm building improvements, leasehold improvements related to newly leased office space and lab equipment. Amortization expense recorded the fiscal years ended December 31, 2007 and 2006 of \$160,300 and \$129,700, respectively related to patents acquired as part of the acquisition of Nexia Biotechnologies, Inc.

### ***Other Income and Expenses***

Other income and expenses primarily consists of income on the Company's investments, interest expense on the Company's debt and other financial obligations and the change in market value of our derivative financial instruments. For the fiscal years ended December 31, 2007 and 2006, the Company's interest income was \$1.1 million and \$289,600, respectively. The increase in interest income for the fiscal year ended December 31, 2007 as compared to the same period in 2006 resulted from higher average investment balances in 2007 primarily as a consequence of the \$58.7 million cash proceeds from the Merger received in September 2007.

The Company incurred interest expense of \$2.1 million and \$538,900 for the fiscal years ended December 31, 2007 and 2006, respectively. During the second and third quarters of fiscal year 2006, the Company entered into \$11.8 million 8% convertible notes. The Company recognized \$557,900 and \$538,700, respectively, in interest expense related to these notes for the fiscal years ended December 31, 2007 and 2006. These notes were converted to new \$12.3 million convertible 8% notes in conjunction with the Merger on August 3, 2007. The Company recognized interest expense of \$632,900 related to the new notes for the twelve months ended December 31, 2007. Additionally, the Company recognized a \$0.9 million gain on the extinguishment of debt as a result of the conversion of notes and the reduced market valuation of the converted notes.

On March 30, 2007, the Company entered into a \$10.0 million credit facility. Approximately \$923,400 in interest expense has been recognized for the fiscal year ended December 31, 2007.

PharmAthene has historically recorded a change in market value of our derivative instruments on a quarterly basis, which consisted of warrants to purchase 5,699,895 shares of Series C Preferred Stock of Former PharmAthene at an exercise price of \$0.91 per share. These warrants were cancelled on August 3, 2007 in connection with the Merger and resulted in a \$2.4 million write-off. For the fiscal years ended December 31, 2007 and 2006, the

Company incurred income of \$6,800 and an expense \$350,400, respectively, related to the change in market value of these warrants. The fair values of these warrants were estimated using the Black-Scholes valuation model.

## **Liquidity and Capital Resources**

### *Overview*

The Company's primary cash requirements are to fund our research and development programs, to fund general corporate overhead and to fund the acquisition of Avecia's vaccines business. Our cash requirements could change materially as a result of changes in our business and strategy. These changes could arise from the Company's management team's evaluation of our business strategy, the progress of our research and development activities and clinical programs, licensing activities, acquisitions, divestitures or other corporate developments.

Prior to the Merger when our operating subsidiary, PharmAthene US, was a privately-held corporation, operations since inception in March 2001 primarily through the issuance of equity securities, convertible notes and proceeds from loans or other borrowings. In addition to the use of the trust funds obtained in the Merger, any or all of these financing vehicles or others may be utilized to fund our future capital requirements. In evaluating alternative sources of financing, we consider, among other things, the dilutive impact, if any, on our stockholders, the ability to leverage stockholder returns through debt financing, the particular terms and conditions of each alternative financing arrangement and our ability to service our obligations under such financing arrangements.

Our Consolidated Financial Statements have been prepared on a basis which assumes that PharmAthene will continue as a going concern and which contemplates the realization of assets and the satisfaction of liabilities and commitments in the normal course of business. The Company has incurred cumulative net losses and expects to incur additional losses to perform further research and development activities. The Company does not have commercial products and, given the substantial costs relating to the development of pharmaceutical products, has limited capital resources. Our plans with regard to these matters include continued development of our products as well as seeking additional funds to support our research and development efforts. Although the Company continues to pursue these plans, there is no assurance that we will be successful in obtaining sufficient financing on commercially reasonable terms or that we will be able to secure financing through government contracts and grants.

Continuation of PharmAthene as a going concern is dependent upon, among other things, the success of the Company's research and development programs and our ability to obtain adequate financing. The Company's Consolidated Financial Statements do not include any adjustments relating to recoverability of the carrying amount of recorded assets and liabilities that might result from the outcome of these uncertainties.

### *Sources and Uses of Cash*

Cash and cash equivalents for the Company were \$40.6 million and \$5.1 million at December 31, 2007 and 2006, respectively. The \$35.5 million increase in cash and cash equivalents as of December 31, 2007 from December 31, 2006 primarily was attributable to the August 2007 Merger which resulted in cash proceeds of \$57.9 million and to our \$10 million credit facility, partially offset by the funding of operations for the fiscal year ended December 31, 2007.

### *Operating Activities*

Net cash used in operating activities was \$13.6 million and \$13.5 million for the fiscal years ended December 31, 2007 and 2006, respectively. The 2007 cash used in operations reflects a net loss after the effect of non-cash adjustments of \$13.8 million and an increase in accounts receivable of \$3.6 million partially offset by an increase in accrued expenses and accounts payable of \$3.4 million. Non-cash adjustments for the fiscal year ended December 31, 2007 included a \$2.4 million credit that resulted from the cancellation of Former PharmAthene's preferred stock warrants and a \$0.9 million gain on the extinguishment of debt and stock compensation expense of \$1.7 million. Accounts receivable increased due to contract award receivables due from the DoD related to increased activities related to the advanced development of Protexia®. Accounts payable and accrued expenses increased due to approximately \$1.1 million in increased development activities, approximately \$0.5 million for performance based employee bonuses, approximately \$0.4 million of deferred rent expenses related to the Company's newly leased office space and approximately \$0.8 million in increased legal and other administrative activities.

The 2006 cash used in operations results primarily from a net loss after the effect of non-cash adjustments of \$13.9 million and increased accounts receivable of approximately \$1.0 million due to contract award receivables. These increases were partially offset by increased accounts payable and accrued expenses of approximately \$1.0 million resulting from increased development activities and decreased prepaid expenses of approximately \$0.6 million primarily attributable to the use of funds for development activity related to the collaboration with Medarex or the Valortim™ program. Prepaid expenses fluctuate from period to period depending upon the timing and level of preparation and initiation of research and development activity and clinical trials.

### *Investing Activities*

Net cash used in investing activities was \$12.9 million for the fiscal year ended December 31, 2007 as compared to \$0.8 million for the fiscal year ended December 31, 2006. In the fourth quarter of fiscal year 2007, the Company purchased approximately \$12.1 million of available for sale securities. The remaining \$0.8 million of investing activities for the period ended December 31, 2007 and all investing activities in 2006, related to the purchase of

property and equipment. The Company finances capital expenditures primarily through direct purchases utilizing the Company's existing cash.

In March 2006 in connection with the proposed merger with SIGA Technologies, Inc. ("SIGA"), the Company entered into a Bridge Note Purchase Agreement with SIGA providing SIGA with interim financing, through a bridge loan, subject to the execution of a definitive merger agreement. Through September 30, 2006, the Company funded \$3.0 million of this interim financing. This note and accrued interest was paid in full in October 2006.

### ***Financing Activities***

Net cash provided by financing activities was \$61.9 million for the period ended December 31, 2007 resulting from the \$57.9 million in cash proceeds from the Merger and the \$10 million credit facility partially offset by \$4.7 million of Merger related costs and \$1.2 million in debt repayment.

On August 3, 2007, the Company consummated the Merger and as consideration for the Merger, the Company paid stockholders, option holders, warrant holders and noteholders of Former PharmAthene the following consideration:

- (i) an aggregate of 12,223,296 shares of common stock of the Company at closing including 300,688 shares in adjustment shares calculated on the basis of the number of shares electing conversion in excess of 5% of the Company's outstanding common stock prior to the Merger; and
- (ii) \$12,312,000 in 8% convertible notes issued by the Company.

On March 30, 2007, the Company entered into a \$10.0 million credit facility with Silicon Valley Bank and Oxford Finance Corporation. Under the credit facility, the Company borrowed \$10 million which loan bears interest at the rate of 11.5% per annum. Pursuant to the terms of the loan and security agreement evidencing the credit facility, the Company made monthly payments of interest only through September 30, 2007 and now makes monthly payments of principal and interest over the remaining 30-month term of the loan. The loan is secured by a security interest on all of the Company's and PharmAthene Canada's assets other than certain intellectual property. Under the terms of the loan and security agreement, PharmAthene may prepay the debt provided we pay certain prepayment fees. In connection with the credit facility, the Company issued to Silicon Valley Bank and Oxford Financial Corporation warrants to purchase an aggregate 100,778 shares of the Company's common stock at an exercise price of \$4.06 per share (which warrants were converted in the Merger into warrants to purchase 100,778 shares of the Company's common stock at an exercise price of \$4.06 per share) (which includes 2,478 shares as adjustment shares calculated on the basis of the number of shares electing conversion in excess of 5% of the Company's outstanding common stock prior to the Merger). The Company has made principal repayments of \$1.0 million through December 31, 2007.

### ***Future Cash Needs***

The Company has financed our operations since inception in March 2001 primarily through the issuance of equity securities, convertible notes and proceeds from loans or other borrowings. Any, or all, of these financing vehicles or others may be utilized to fund the Company's future capital requirements.

The Company's future capital requirements and liquidity will depend on many factors including, but not limited to, the progress of our research and development programs; the progress of pre-clinical and clinical testing; the time and cost involved in obtaining regulatory approval; the cost of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights; the changes in our existing research relationships, competing technological and marketing developments; our ability to establish collaborative arrangements and to enter into licensing agreements and contractual arrangements with others; and any future change in our business strategy.

The Company expects to fund its development activities for Protexia® primarily using the funds available from the contract with the DoD. Under the agreement, the DoD has agreed to fund up to \$41 million of development costs as incurred over a three-year period. Management believes this funding will be sufficient to complete the development of Protexia®. In connection with the collaboration with Medarex for the development of Valortim™, we have expended \$2.1 million of our own funds and Medarex has received \$7.2 million in grants from the United States Government. On September 28, 2007, PharmAthene was awarded a \$13.9 million contract for the advanced development of Valortim™ from the National Institute of Allergy and Infectious diseases, (NIAID) and the Biomedical Advanced Research and Development Authority (BARDA). Management believes that the remaining costs for this development program will be financed through additional grants to the Company (not Medarex) anticipated to be received from the United States Government and from the Company's available cash.

However, as a result of the contemplated acquisition of Avecia, in addition to other future payments that may be payable to Avecia based on the achievement of certain milestones, we have agreed to pay to Avecia \$10 million upon the closing of the acquisition and an additional \$10 million upon the earlier of the first anniversary of the closing of the acquisition and the consummation of a financing transaction in which we receive gross proceeds of not less than \$15 million. PharmAthene has incurred cumulative net losses and expects to incur additional losses to perform further research and development activities. It does not have commercial products and has limited capital resources. To the extent that our losses continue at the current level, if we do not access additional funding through contracts with the US government, we may need to seek additional financing through a combination of collaborative agreements, strategic alliances, research grants, equity and debt financing as soon as twelve months from the date of the closing of the Avecia acquisition. There can be no assurances that the Company will be successful in obtaining sufficient financing on commercially reasonable terms or at all or that we will be able to secure financing from anticipated government contracts and grants.

### ***Off-Balance Sheet Arrangements***

The Company has entered into facility and equipment operating lease agreements. The Company's obligations under these agreements are presented in this section under "Contractual Obligations."

## Critical Accounting Policies

### *Estimates*

The preparation of financial statements in conformity with US generally accepted accounting principles requires the Company to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. We base our estimates and assumptions on historical experience and various other factors that are believed to be reasonable under the circumstances. Actual results could differ from our estimates and assumptions. The Company believes the following critical accounting policies, among others, affect our more significant estimates and assumptions and require the use of complex judgment in their application.

### *Adoption of FASB 123R regarding share-based payments*

The FASB issued FAS 123R, which requires that all share-based payments to employees, including grants of employee stock options, be recognized in the income statement based on their grant date fair values. Costs of all Share-based payments are recognized over the requisite service period that an employee must provide to earn the award (i.e. usually the vesting period) and charged to the operating expense associated with that employee. The Company adopted FAS 123R on January 1, 2006 using the "modified prospective" method. Because the Company has a limited history as a publicly held company, it has based such measurements as volatility on publicly held companies similar to the Company.

### *Revenue Recognition*

The Company recognizes revenue when all terms and conditions of the agreements providing for the receipt of revenues have been met including persuasive evidence of an arrangement, services have been rendered, price is fixed or determinable, and collectibility is reasonably assured. For reimbursable cost research grants, the Company recognizes revenue as costs are incurred and appropriate regulatory approvals have been obtained or approval criteria are met for invoicing the related government agency.

All of the grant revenue the Company recognized historically was received under cost reimbursement grants from the US government to fund the development of pharmaceutical products for biodefense applications. In addition, reimbursed costs are subject to review and adjustment by the granting agency. As the Company develops experience with contracting authorities and as our incurred cost submissions are reviewed and approved by the responsible government authorities, estimates of the assumptions related to these uncertainties may change.

### *Research and Development Expenses*

Research and development costs include salaries, facilities expense, overhead expenses, material and supplies, pre-clinical expense, clinical trials and related clinical manufacturing expenses, stock based compensation expense, contract services and other outside services. Such costs are charged to expense as incurred.

### *Intangible Assets*

When the Company acquires development products, it allocates the purchase price, including expenses and assumed liabilities, to tangible and intangible assets. The portion allocated to intangible assets may be allocated to trademarks, patents and other intangibles. The Company estimates the useful lives of the assets by considering the remaining life of the patents, estimated future introductions of competing products, and other related factors.

Because of the nature of pharmaceutical research, and particularly because of the difficulties associated with efficacy studies in humans related to the bioterrorist products with which the Company works and the government's related funding provisions, factors that affect the estimate of the life of the asset are often more uncertain than other non-bioterrorist pharmaceutical research. On an annual basis, the Company assesses recoverability of intangibles from future operations, using undiscounted future cash flows derived from the intangible assets.

Any impairment would be recognized in operating results to the extent the carrying value exceeds the fair value, which is determined based on the net present value of estimated future cash flows; in certain situations, where the carrying value is dependent upon the outcome of a single study and that study is unsuccessful, that impairment may be significant in amount and immediate in timing.

### *Contractual Obligations*

The following are contractual commitments at December 31, 2007 associated with leases, research and development arrangements, collaborative development obligations and long term debt:

Contractual Obligations(1)	Total	Less than 1 Year	1-3 Years	3-5 Years	More than 5 years
Operating facility leases	\$ 4,441,400	\$ 566,000	\$ 882,600	\$ 845,000	\$ 2,153,800

Research and development agreements	13,196,600	9,891,600	3,305,000	—	—
Notes payable, including interest	24,699,300	4,840,200	19,859,100	—	—
Total contractual obligations	\$ 42,343,300	\$ 15,247,800	\$ 24,046,700	\$ 845,000	\$ 2,153,800

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

## Item 8. Financial Statements and Supplementary Data

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

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

- (a) On September 10, 2007, we terminated the engagement of LWBJ, LLP ("LWBJ"), as our independent registered public accountants. The termination of the engagement was following the closing of the Merger. The decision to terminate LWBJ was approved by the Company's Audit Committee.

The report of LWBJ on the Company's balance sheets as of December 31, 2006 and 2005 and the related statements of operations, stockholders' equity and cash flows for the year ended December 31, 2006, for the period from April 25, 2005 (date of inception) to December 31, 2005, and from the period from April 25, 2005 (date of inception) to December 31, 2006, respectively, did not contain an adverse opinion or disclaimer of opinion, nor was either qualified or modified as to uncertainty, audit scope or accounting principles.

During the period from April 25, 2005 (inception) to December 31, 2006 and any subsequent interim period preceding the termination, there were no disagreements with LWBJ on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure, which disagreements, if not resolved to the satisfaction of LWBJ would have caused LWBJ to make reference to the subject matter of the disagreements in connection with our report on the financial statements for such years or subsequent interim periods.

There were no reportable events as described in Item 304(a)(i)(v) of Regulation S-K during the period April 25, 2005 (inception) to December 31, 2006.

PharmAthene has provided a copy of the foregoing disclosures to LWBJ and requested that LWBJ furnish the Company with a letter addressed to the Securities and Exchange Commission stating whether or not it agrees with the Company's statements which were disclosed under Item 4.01(a) to our Form 8-K filed on September 14, 2007. A copy of the letter furnished by LWBJ in response to that request is filed as Exhibit 16.1 to that Form 8-K.

- (b) On September 10, 2007, Ernst & Young LLP ("E&Y") was engaged as the Company's new independent registered accountants. E&Y had been the independent auditors of PharmAthene US Corporation since its inception.

## Item 9A(T). Controls and Procedures

### Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of our disclosure controls and procedures, as such term is defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended, as of the end of the period covered by this report. Based on this evaluation, our principal executive officer and our principal financial officer concluded that our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed by us in reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosures.

### Management's Annual Report on Internal Control Over Financial Reporting

PharmAthene's management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934. PharmAthene's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. PharmAthene's internal control over financial reporting includes those policies and procedures that:

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

- (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of PharmAthene's management and directors; and
- (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of PharmAthene's assets that could have a material effect on the financial statements.

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

Management assessed the effectiveness of PharmAthene's internal control over financial reporting as of December 31, 2007. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control-Integrated Framework*.

Based on this assessment, management determined that PharmAthene maintained effective internal control over financial reporting as of December 31, 2007.

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

#### **Changes in Internal Control Over Financial Reporting**

There were no changes in our internal control over financial reporting that occurred during the period covered by this annual report on Form 10-K that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

#### **Inherent Limitations on Internal Control**

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

#### **Item 9B. Other Information**

None.

### **PART III**

#### **Item 10. Directors, Executive Officers and Corporate Governance**

The information required by this Item 10 will be incorporated by reference from the Company's definitive proxy statement or will be filed as an amendment to the Company's Annual Report on Form 10-K within 120 days of the Company's fiscal year end.

#### **Item 11. Executive Compensation**

The information required by this Item 11 will be incorporated by reference from the Company's definitive proxy statement or will be filed as an amendment to the Company's Annual Report on Form 10-K within 120 days of the Company's fiscal year end.

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

The information required by this Item 12 will be incorporated by reference from the Company's definitive proxy statement or will be filed as an amendment to the Company's Annual Report on Form 10-K within 120 days of the Company's fiscal year end.

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

The information required by this Item 13 will be incorporated by reference from the Company's definitive proxy statement or will be filed as an amendment to the Company's Annual Report on Form 10-K within 120 days of the Company's fiscal year end.

### Item 14. Principal Accountant Fees and Services

The information required by this Item 14 will be incorporated by reference from the Company's definitive proxy statement or will be filed as an amendment to the Company's Annual Report on Form 10-K within 120 days of the Company's fiscal year end.

## PART IV

### Item 15. Exhibits and Financial Statement Schedules

- (a) (1) Financial Statements

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

- (2) Financial Statement Schedules

None.

- (b) Exhibit Index

Exhibit No.	Description
2.1	Agreement and Plan of Merger, dated January 19, 2007, by and among Healthcare Acquisition Corp., PAI Acquisition Corp., and PharmAthene, Inc. (6)
2.2	Sale and Purchase Agreement, dated March 20, 2008, by and among the Registrant and Avecia Investments Limited, Avecia Biologics Limited and Avecia Biologics, Inc. (10)
3.1	Amended and Restated Certificate of Incorporation. (8)
3.2	By-laws. (1)
4.1	Specimen Unit Certificate. (1)
4.2	Specimen Common Stock Certificate. (9)
4.3	Specimen Warrant Certificate. (1)
4.4	Form of Warrant Agreement between Continental Stock Transfer & Trust Company and the Registrant. (3)
4.5	Form of Note Exchange Agreement. (6)
4.6	Form of 8% Convertible Note of Healthcare Acquisition Corp. (6)
4.7	Amendment to Unit Purchase Option. (7)
4.8	Warrant Clarification Agreement. (7)
10.1.1	Letter Agreement among the Registrant, Maxim Group LLC and John Pappajohn. (2)
10.1.2	Letter Agreement among the Registrant, Maxim Group LLC and Derace L. Schaffer, M.D. (2)

- 10.1.3 Letter Agreement among the Registrant, Maxim Group LLC and Matthew P. Kinley. (2)
- 10.1.4 Restated Letter Agreement among the Registrant, Maxim Group LLC and Edward B. Berger. (3)
- 10.1.5 Letter Agreement among the Registrant, Maxim Group LLC and Wayne A. Schellhammer. (3)
- 10.2 Form of Investment Management Trust Agreement between Continental Stock Transfer & Trust Company and the Registrant. (3)
- 10.2.1 Amendment No. 1 to of Investment Management Trust Agreement between Continental Stock Transfer & Trust Company and the Registrant. (5)

- 10.3 Form of Stock Escrow Agreement between the Registrant, Continental Stock Transfer & Trust Company and the Initial Stockholders. (3)
- 10.4 Form of Registration Rights Agreement among the Registrant and the Initial Stockholders. (1)
- 10.5.1 Office Services Agreement by and between the Registrant and Equity Dynamics, Inc. (1)
- 10.5.2 Office Services Agreement by and between the Registrant and The Lan Group. (1)
- 10.6.1 Promissory Note, dated April 28, 2005, issued to John Pappajohn, in the amount of \$70,000. (1)
- 10.6.2 Promissory Note, dated April 28, 2005, issued to Derace L. Schaffer, M.D., in the amount of \$70,000. (1)
- 10.6.3 Promissory Note, dated April 28, 2005, issued to Matthew P. Kinley, in the amount of \$35,000. (1)
- 10.6.4 Promissory Note, dated July 26, 2005, issued to John Pappajohn, in the amount of \$30,000. (4)
- 10.6.5 Promissory Note, dated July 26, 2005, issued to Derace L. Schaffer, M.D., in the amount of \$30,000. (4)
- 10.6.6 Promissory Note, dated July 26, 2005, issued to Matthew P. Kinley, in the amount of \$15,000. (4)
- 10.7 Form of Unit Option Purchase Agreement between the Registrant and Maxim Group LLC. (3)
- 10.8 Form of Warrant Purchase Agreement by and between the Registrant, John Pappajohn and Maxim Group LLC. (2)
- 10.9 Form of Registration Rights Agreement by and among Healthcare Acquisition Corp. and the former stockholders and note holders of PharmAthene, Inc. (6)
- 10.10 Stock Escrow Agreement, dated August 3, 2007, by and among the Registrant, a representative of the former stockholders and option holders of PharmAthene, Inc. and Continental Stock Transfer and Trust Company. \*
- 10.11 Advisory Agreement. (7)
- 10.12 2007 Long-Term Incentive Compensation Plan. (8)
- 10.13 Employment Agreement, dated August 3, 2007, between the Registrant and David P. Wright. (8)
- 10.14 Employment Agreement, dated December 22, 2006, between the Registrant and Christopher C. Camut. (9)
- 10.15 Employment Agreement, dated November 3, 2003, between the Registrant and Francesca Marie Cook. (9)
- 10.16 Employment Agreement, dated November 3, 2003, between the Registrant and Eric Ian Richman. (9)
- 10.17 Employment Agreement, dated November 3, 2003, between the Registrant and Valerie Riddle. (9)
- 10.18 Employment Agreement, dated January 31, 2005, between the Registrant and Wayne Morges. (9)
- 10.19.1 Loan and Security Agreement, dated March 30, 2007, by and among the Company, Silicon Valley Bank, Oxford Finance Corporation, and other lenders listed on Schedule 1.1 thereof. (9)
- 10.19.2 Consent and First Loan Modification Agreement, dated March 20, 2008, by and among the Registrant, Silicon Valley Bank and Oxford Finance Corporation (10).



- 10.20 U.S. Army Space & Missile Defense Command—"Development and Licensure of Bioscavenger Increment II (Recombinant Drug Candidate)" Award/Contract No. W9113M-06-C-0189, dated September 22, 2006, by and between the Company and the U.S. Army Space & Missile Defense Command. (9)+
- 10.21 Cooperative Research and Development Agreement, dated September 12, 2006, by and between the Company and the U.S. Army Medical Research Institute of Infectious Diseases. (9)+
- 10.22 Center for Scientific Review, National Institute of Health, Research Project Cooperative Agreement, Notice of Grant Award No. 1 U01 NS058207-01, dated September 30, 2006, awarded to the Company. (9)+
- 10.23 Collaboration Agreement, dated November 29, 2004, by and between the Company and Medarex, Inc. (9)+
- 10.24 License Agreement, dated August 8, 2006, by and between the Company and Nektar Therapeutics AL, Corporation. (9)+
- 10.25 License Agreement, dated March 12, 2007, by and between the Company and GTC Biotherapeutics, Inc. (9)+
- 10.26 Office Lease, dated September 14, 2006, by and between the Company and Park Place Trust, as amended by First Amendment to Office Lease, dated January 22, 2007. (9)
- 10.27 Biopharmaceutical Development and Manufacturing Services Agreement, dated June 15, 2007, by and between the Company and Laureate Pharma, Inc. (9)+
- 10.28 Services Agreement, dated March 2, 2007, by and between the Company and GTC Biotherapeutics, Inc. (9)+
- 14 Code of Ethics. (3)
- 21 Subsidiaries. \*
- 23 Consent of Ernst & Young, LLP\*
- 31.1 Certification of Chief Executive Officer and Principal Financial Officer Pursuant to SEC Rule 13a-14(a)/15d-14(a).\*
- 31.2 Certification of Chief Executive Officer and Principal Financial Officer Pursuant to SEC Rule 13a-14(a)/15d-14(a).\*
- 32.1 Certification of Chief Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350.\*
- 32.2 Certification of Chief Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350.\*
1. Incorporated by reference to the Registration Statement on Form S-1 of the Registrant filed on May 6, 2005.
2. Incorporated by reference to the Registration Statement on Form S-1/A of the Registrant filed on June 10, 2005.
3. Incorporated by reference to the Registration Statement on Form S-1/A of the Registrant filed on July 12, 2005.
4. Incorporated by reference to the Registration Statement on Form S-1/A of the Registrant filed on July 27, 2005.
5. Incorporated by reference to the Quarterly Report on Form 10-Q filed by the Registrant on November 14, 2005.

6. Incorporated by reference to the Current Report on Form 8-K filed by the Registrant on January 22, 2007.
7. Incorporated by reference to the Current Report on Form 8-K filed by the Registrant on January 25, 2007.
8. Incorporated by reference to the Current Report on Form 8-K filed by the Registrant on August 9, 2007.
9. Incorporated by reference to the Current Report on Form 8-K filed by the Registrant on September 24, 2007.
10. Incorporated by reference to the Current Report on Form 8-K filed by the Registrant on March 25, 2008.

\* Filed herewith.

+ Certain confidential portions of this exhibit have been omitted and filed separately with the Securities and Exchange Commission pursuant to a request for confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934.

(c) Financial Statements and Schedules of Subsidiaries and Affiliates

None.

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized, in the city of Annapolis, State of Maryland, on the 31<sup>st</sup> day of March, 2008.

### PHARMATHENE, INC.

By: /s/ DAVID P. WRIGHT

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David P. Wright  
*Chief Executive Officer*

### POWER OF ATTORNEY

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

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

Signature	Title	Date
<hr/> <i>/s/ DAVID P. WRIGHT</i> David P. Wright	Chief Executive Officer and Director (Principal Executive Officer)	March 31, 2008
<hr/> <i>/s/ CHRISTOPHER C. CAMUT</i> Christopher C. Camut	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	March 31, 2008
<hr/> <i>/s/ JOHN PAPPAJOHN</i> John Pappajohn	Chairman of the Board	March 31, 2008
<hr/> <i>/s/ JOHN GILL</i> John Gill	Director	March 31, 2008
<hr/> <i>/s/ JAMES H. CAVANAUGH</i> James H. Cavanaugh	Director	March 31, 2008
<hr/> <i>/s/ STEVEN ST. PETER</i> Steven St. Peter, M.D.	Director	March 31, 2008
<hr/> <i>/s/ ELIZABETH CZEREPAK</i> Elizabeth Czerepak	Director	March 31, 2008
<hr/> <i>/s/ JOEL MCCLEARY</i>	Director	March 31, 2008



**PHARMATHENE, INC.**

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## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholders of PharmAthene, Inc.

We have audited the accompanying consolidated balance sheet of PharmAthene, Inc. and subsidiaries as of December 31, 2007 and 2006, and the related consolidated statements of operations, stockholders' equity (deficit), and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of PharmAthene, Inc. and subsidiaries at December 31, 2007 and 2006, and the consolidated results of their operations and their cash flows for the years then ended, in conformity with U.S. generally accepted accounting principles.

As discussed in Note 2 to the consolidated financial statements, the Company changed its method of accounting for share-based compensation in 2006 upon adoption of Statement of Financial Accounting Standards No. 123(R), "Share-Based Payments".

/s/ Ernst & Young LLP

McLean, Virginia  
March 31, 2008

PHARMATHENE, INC.

CONSOLIDATED BALANCE SHEETS

	December 31,	
	2007	2006
<b>Current assets:</b>		
Cash and cash equivalents	\$ 40,582,643	\$ 5,112,212
Short-term investments	12,153,945	—
Accounts receivable	5,245,763	1,455,538
Prepaid expenses	476,511	877,621
Other current assets	15,783	104,772
<b>Total current assets</b>	<b>58,474,645</b>	<b>7,550,143</b>
Property and equipment, net	6,571,024	5,230,212
Patents, net	1,312,991	1,246,236
Other long term assets	183,588	153,336
Deferred costs	68,884	587,577
<b>Total assets</b>	<b>\$ 66,611,132</b>	<b>\$ 14,767,504</b>
<b>LIABILITIES, CONVERTIBLE REDEEMABLE PREFERRED STOCK, AND STOCKHOLDERS' DEFICIT</b>		
<b>Current Liabilities:</b>		
Accounts payable	\$ 1,393,664	\$ 839,120
Accrued expenses and other liabilities	3,602,886	1,587,017
Notes payable	—	11,768,089
Current portion of long term debt	4,000,000	—
<b>Total current liabilities</b>	<b>8,996,550</b>	<b>14,194,226</b>
Warrants to purchase Series C convertible redeemable preferred stock	—	2,423,370
Other long term liabilities	374,040	—
Long term debt	16,668,458	—
<b>Total liabilities</b>	<b>26,039,048</b>	<b>16,617,596</b>
Minority interest—Series C convertible redeemable preferred stock of PharmAthene Canada, Inc. \$0.001 par value; unlimited shares authorized; 2,591,654 issued and outstanding; liquidation preference in the aggregate of \$2,719,178		
	—	2,545,785
Series A convertible redeemable preferred stock; \$0.001 par value; 16,442,000 shares authorized, issued and outstanding; liquidation preference in the aggregate of \$19,355,388	—	19,130,915
Series B convertible redeemable preferred stock; \$0.001 par value; 65,768,001 shares authorized; 30,448,147 issued and outstanding; liquidation preference in the aggregate of \$33,010,797	—	31,780,064
Series C convertible redeemable preferred stock; \$0.001 par value; 22,799,574 shares authorized; 14,946,479 issued and outstanding; liquidation preference in the aggregate of \$15,681,930	—	14,480,946
<b>Stockholders' deficit:</b>		
Common stock, \$0.0001 par value; 100,000,000 shares authorized; 22,138,723 and 22,087,121 shares issued and outstanding; respectively, at December 31, 2007, and 621,281 shares issued and outstanding at December 31, 2006	2,209	63
Additional paid-in capital	126,490,647	—

Accumulated other comprehensive income	1,481,779	63,954
Accumulated deficit	(87,402,551)	(69,851,819)
<b>Total stockholders' equity (deficit)</b>	<b>40,572,084</b>	<b>(69,787,802)</b>
Total liabilities, convertible redeemable preferred stock, and stockholders' equity (deficit)	\$ 66,611,132	\$ 14,767,504

See the accompanying notes to the consolidated financial statements.

PHARMATHENE, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

	Year ended December 31,	
	2007	2006
Contract and grant revenue	\$ 14,624,595	\$ 1,641,822
Other revenue	19,020	21,484
	<u>14,643,615</u>	<u>1,663,306</u>
Operating expenses:		
Research and development	16,559,670	7,259,359
General and administrative	13,882,023	8,453,941
Depreciation and amortization	705,370	483,646
	<u>31,147,063</u>	<u>16,196,946</u>
Total operating expenses	31,147,063	16,196,946
Loss from operations	(16,503,448)	(14,533,640)
Other income (expense):		
Interest income	1,122,565	289,606
Gain on extinguishment of debt	886,963	—
Interest expense	(2,122,624)	(538,948)
	<u>3,029,241</u>	<u>(350,405)</u>
Change in market value of derivative instruments	3,029,241	(350,405)
Total other income (expense)	2,916,145	(599,747)
Net loss	(13,587,303)	(15,133,387)
Accretion of redeemable convertible preferred stock to redemptive value	(4,133,733)	(6,589,671)
	<u>(17,721,036)</u>	<u>(21,723,058)</u>
Net loss attributable to common shareholders	\$ (17,721,036)	\$ (21,723,058)
Basic and diluted net loss per share	\$ (1.88)	\$ (38.26)
Weighted average shares used in calculation of basic and diluted net loss per share	<u>9,442,885</u>	<u>567,753</u>

See the accompanying notes to the consolidated financial statements.

PHARMATHENE, INC.

CONSOLIDATED STATEMENTS OF CONVERTIBLE REDEEMABLE PREFERRED

STOCK AND STOCKHOLDERS' DEFICIT

	Convertible Redeemable Preferred Stock								Stockholders' Deficit			
	Series A		Series B		Series C		Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Stockholders' Deficit
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount				
Balance as of 12/31/2005	16,442,000	17,564,998	30,448,147	28,886,718	14,946,479	12,652,687	10,942,906	10,943	—	115,160	(48,708,201)	(48,582,098)
Net loss	—	—	—	—	—	—	—	—	—	—	(15,133,387)	(15,133,387)
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—	(51,206)	—	(51,206)
Comprehensive loss	—	—	—	—	—	—	—	—	—	—	—	(15,184,593)
Exercise of common stock options	—	—	—	—	—	—	1,340,566	1,341	242,450	—	—	243,791
Exercise of common stock warrants	—	—	—	—	—	—	200,000	200	1,800	—	—	2,000
Accrual of Series A Dividends	—	1,433,732	—	—	—	—	—	—	(567,018)	—	(866,714)	(1,433,732)
Accretion of Series A issuance costs	—	21,100	—	—	—	—	—	—	—	—	(21,100)	(21,100)
Accretion of Series A deemed dividend	—	111,085	—	—	—	—	—	—	—	—	(111,085)	(111,085)
Accrual of Series B Dividends	—	—	—	2,445,244	—	—	—	—	—	—	(2,445,244)	(2,445,244)
Accretion of Series B issuance costs	—	—	—	41,458	—	—	—	—	—	—	(41,458)	(41,458)
Accretion of common stock purchase warrants	—	—	—	406,644	—	—	—	—	—	—	(406,644)	(406,644)
Accrual of Series C dividends	—	—	—	—	—	1,161,622	—	—	—	—	(1,363,042)	(1,363,042)
Accretion of Series C issuance costs	—	—	—	—	—	95,846	—	—	—	—	(95,846)	(95,846)
Accretion of common stock purchase warrants	—	—	—	—	—	62,172	—	—	—	—	(73,144)	(73,144)
Accretion of preferred stock purchase warrants	—	—	—	—	—	508,619	—	—	—	—	(598,375)	(598,375)
Stock compensation	—	—	—	—	—	—	—	—	322,768	—	—	322,768
Recapitalization	—	—	—	—	—	—	(11,862,191)	(12,421)	—	—	12,421	—
Balance as of 12/31/2006	16,442,000	\$ 19,130,915	30,448,147	\$ 31,780,064	14,946,479	\$ 14,480,946	621,281	\$ 63	\$ —	\$ 63,954	\$ (69,851,819)	(69,787,802)
Net loss	—	—	—	—	—	—	—	—	—	—	(13,587,303)	(13,587,303)
Mark to market of available for sale securities	—	—	—	—	—	—	—	—	—	(99,250)	—	(99,250)
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—	1,517,075	—	1,517,075
Comprehensive loss	—	—	—	—	—	—	—	—	—	1,417,825	—	(12,169,478)

Source: PHARMATHENE, INC, 10-K, March 31, 2008

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Exercise of common stock options	—	—	—	—	—	—	62	—	13	—	—	13
Accrual of Series A dividends	—	912,090	—	—	—	—	—	—	(181,477)	—	(730,613)	(912,090)
Accretion of Series A issuance costs	—	12,429	—	—	—	—	—	—	—	—	(12,429)	(12,429)
Accretion of Series A deemed dividend	—	65,434	—	—	—	—	—	—	—	—	(65,434)	(65,434)
Accrual of Series B dividends	—	—	—	1,555,577	—	—	—	—	—	—	(1,555,577)	(1,555,577)
Accretion of Series B issuance costs	—	—	—	24,420	—	—	—	—	—	—	(24,420)	(24,420)
Accretion of common stock purchase warrants	—	—	—	241,305	—	—	—	—	—	—	(241,305)	(241,305)
Accrual of Series C dividends	—	—	—	—	—	738,983	—	—	—	—	(878,293)	(878,293)
Accretion of Series C issuance costs	—	—	—	—	—	56,875	—	—	—	—	(56,875)	(56,875)
Accretion of common stock purchase warrants	—	—	—	—	—	36,893	—	—	—	—	(43,404)	(43,404)
Accretion of preferred stock purchase warrants	—	—	—	—	—	301,818	—	—	—	—	(355,079)	(355,079)
Conversion of stock resulting from reverse merger	(16,442,000)	(20,120,868)	(30,448,147)	(33,601,366)	(14,946,479)	(15,615,515)	—	—	72,284,048	—	—	72,284,048
Issuance of common stock	—	—	—	—	—	—	21,465,778	2,146	57,884,045	—	—	57,886,191
Merger acquisition costs	—	—	—	—	—	—	—	—	(5,279,591)	—	—	(5,279,591)
Stock compensation	—	—	—	—	—	—	—	—	1,783,609	—	—	1,783,609
Balance as of 12/31/2007	— \$	—	— \$	—	— \$	—	22,087,121 \$	2,209	\$ 126,490,647	\$ 1,481,779	\$ (87,402,551)	40,572,084

See the accompanying notes to the consolidated financial statements.

**PHARMATHENE, INC.**

**CONSOLIDATED STATEMENTS OF CASH FLOWS**

	Year ended December 31,	
	2007	2006
<b>Operating activities</b>		
Net loss	\$ (13,587,303)	\$ (15,133,387)
Adjustments to reconcile net loss to net cash used in operating activities:		
Change in market value of derivative instruments	(3,029,241)	350,405
Extinguishment of debt	(886,963)	—
Depreciation and amortization	655,210	483,646
Compensatory option expense	1,783,609	322,768
Non cash interest expense on debt	1,246,754	—
Changes in operating assets and liabilities:		
Accounts receivable	(3,631,770)	(960,886)
Prepaid expenses and other current assets	422,576	575,975
Other assets	24,924	(153,336)
Accounts payable	564,426	56,050
Accrued expenses	2,801,066	928,760
Net cash used in operating activities	(13,636,712)	(13,530,005)
<b>Investing activities</b>		
Purchase of property and equipment	(882,345)	(786,483)
Purchase of available-for-sale investments	(12,054,695)	—
Net cash used in investing activities	(12,937,040)	(786,483)
<b>Financing activities</b>		
Net proceeds from reverse merger with Healthcare Acquisition Corp	57,907,248	—
Proceeds from stock options exercised	13	245,790
Proceeds from issuance of debt	9,904,622	—
Payments of debt obligations	(1,192,694)	—
Proceeds from issuance of note payable	—	11,768,089(1)
Financing costs	(4,692,011)	(587,577)
Net cash provided by financing activities	61,927,178	11,426,302
Effects of exchange rates on cash	117,005	64,282
(Decrease) increase in cash and cash equivalents	35,470,431	(2,825,904)
Cash and cash equivalents, at beginning of year	5,112,212	7,938,116
Cash and cash equivalents, at end of year	\$ 40,582,643	\$ 5,112,212
<b>Supplemental disclosure of cash flow information</b>		
Cash paid for interest	\$ 867,526	\$ —
Cash paid for income taxes	\$ —	\$ —

- (1) Bridge notes issued in June and August 2006 to certain investors were exchanged for \$12.3 million in convertible 8% notes in August 2007 in connection with the Merger. See Note 7 of the notes to the consolidated financial statements.

See the accompanying notes to the consolidated financial statements.



## **Note 1—Organization and Business**

PharmAthene, Inc. ("PharmAthene" or the "Company") was incorporated under the laws of the State of Delaware as Healthcare Acquisition Corp. ("HAQ") on April 25, 2005, a blank check company formed to serve as a vehicle for the acquisition of a then unidentified business. The Company became a public company on August 3, 2005. On August 3, 2007, we consummated a merger (the "Merger") with PharmAthene, Inc., a Delaware corporation ("Former PharmAthene"), pursuant to an Agreement and Plan of Merger, dated as of January 19, 2007, by and among HAQ, PAI Acquisition Corp., a Delaware corporation and a wholly-owned subsidiary of HAQ, and Former PharmAthene, whereby Former PharmAthene became a wholly-owned subsidiary of HAQ and effective upon the consummation of the Merger, HAQ changed its name from "Healthcare Acquisition Corp." to "PharmAthene, Inc." and Former PharmAthene changed its name to "PharmAthene US Corporation." Our operations are conducted by our wholly-owned subsidiary, PharmAthene US Corporation.

Upon completion of the Merger, approximately 12.2 million shares of common stock were issued to the stockholders of Former PharmAthene and PharmAthene assumed all of Former PharmAthene's stock options and warrants that were not cancelled as part of the Merger and 587,249 shares of common stock have been reserved for issuance upon the exercise of such options and warrants. Also, Former PharmAthene's \$12.8 million of outstanding secured convertible notes ("Bridge Notes"), including interest, were exchanged for \$12.3 million of new unsecured 8% convertible notes maturing on August 3, 2009. The Bridge Notes are convertible at the option of the holders into common stock at \$10.00 per share and may be redeemed by PharmAthene without penalty after August 3, 2008. Immediately following the closing of the Merger, the Former PharmAthene stockholders, option holders and warrant holders held approximately 56% of the common stock of PharmAthene on a fully diluted basis and former stockholders, option holders and warrant holders of HAQ prior to the merger owned approximately 44% of PharmAthene on a fully-diluted basis after the Merger. Following completion of the Merger, the business conducted by PharmAthene became the one operated by Former PharmAthene prior to the completion of the Merger.

PharmAthene is a biopharmaceutical company focused on developing anti-infectives' for biodefense applications. The Company is subject to those risks associated with any biopharmaceutical company that has substantial expenditures for research and development. There can be no assurance that the Company's research and development projects will be successful, that products developed will obtain necessary regulatory approval, or that any approved product will be commercially viable. In addition, the Company operates in an environment of rapid technological change and is largely dependent on the services and expertise of its employees and consultants.

## **Note 2—Summary of Significant Accounting Policies**

### **Basis of Presentation**

Since Former PharmAthene security holders own, after the Merger, approximately 56% of the combined company on a fully-diluted basis and as a result of certain other factors, including that Former PharmAthene directors constitute a majority of the Board of Directors and all members of the executive management team of the combined company are from Former PharmAthene, Former PharmAthene is deemed to be the acquiring company for accounting purposes and the transaction was accounted for as a reverse acquisition and recapitalization of Former PharmAthene in accordance with accounting principles generally accepted in the United States. These financial statements reflect the historic results of Former PharmAthene prior to the Merger and that of the combined company following the Merger, and do not include the historic financial results of HAQ prior to the completion of the Merger. Stockholders' equity has been retroactively restated to reflect the number of shares of common stock received by the holders of securities of Former PharmAthene and HAQ common stock, with the offset to additional paid in capital.

Unless specifically noted otherwise, as used throughout these consolidated financial statements, "the Company", "PharmAthene", "we", "us" or "our" refers to the business of the combined company after the Merger and the business of Former PharmAthene prior to the Merger. Unless specifically noted otherwise, as used throughout these consolidated financial statements, "HAQ" refers to the business of the Healthcare Acquisition Corp. prior to the completion of the Merger. The accompanying audited consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States.

### **Principles of Consolidation**

The consolidated financial statements include the accounts of PharmAthene and its subsidiaries, PharmAthene US and PharmAthene Canada, Inc., which was formed in March 2005. All significant intercompany transactions and balances have been eliminated.

### **Use of Estimates**

The preparation of financial statements in conformity with generally accepted accounting principles in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

### **Segment Information**

The Company currently operates one material business segment. The Company is managed and operated in one business. The entire business is comprehensively managed by a single management team that reports to the Chief Executive Officer. The Company does not operate any material separate lines of business or separate business entities with respect to products or product candidates. Accordingly, the Company does not have separately reportable segments as defined by Statement of Financial Accounting Standards ("SFAS") No. 131, *Disclosures about Segments of a Enterprise and Related Information*.

## Comprehensive Loss

The Company reports comprehensive income (loss) in accordance with the provisions of Statement of Financial Accounting Standards ("SFAS") No. 130, *Reporting Comprehensive Income*. Comprehensive income (loss) includes all changes in equity for cumulative translation adjustments resulting from the consolidation of foreign subsidiaries as the financial statements of the subsidiary located outside of the United States are measured using the local currency as the functional currency. Assets and liabilities of these subsidiaries are translated at the rates of exchange at the balance sheet date. The resultant translation adjustments are included in accumulated other comprehensive income (loss), a separate component of stockholders' equity. Comprehensive loss for each of the twelve month periods ended December 31, 2007 and 2006 was approximately \$12.2 million and \$15.2 million, respectively.

## Cash and Cash Equivalents

Cash and cash equivalents, which consist of short-term money market accounts, are stated at cost, which approximates market value. The Company considers all highly liquid investments with maturities of three months or less when purchased to be cash equivalents. Interest income resulting from cash and cash equivalents and short-term investments was \$1.1 million and \$0.3 million for the years ended December 31, 2007 and 2006, respectively.

## Short-Term Investments

Short-term investments consist of investment grade government agency and corporate debt securities due within one year. All investments are classified as available-for-sale and are recorded at market value. Unrealized gains and losses are reflected in other comprehensive income. The estimated fair value of the available for sale securities is determined based on quoted market prices or rates for similar instruments. Management reviews the Company's investment portfolio on a regular basis and seeks guidance from its professional portfolio manager related to US and global market conditions. We assess the risk of impairment related to securities held in our investment portfolio on a regular basis and noted no impairment during the year ended December 31, 2007.

## Accounts Receivable

Through its inception to date, substantially all of PharmAthene's accounts receivable have been associated with US government contracts and grants or with the receipt of Quebec provincial or Canadian Federal credits for internally and externally generated research and development expenditures. Amounts invoiced or recorded as billed under these programs but not yet collected are reported as outstanding accounts receivable.

While the Company has a policy to provide an allowance for any amount of accounts receivable which it determines to be uncollectible and the Company will write off any uncollectible account when the likelihood of that account's collection is determined to be not probable, the Company has not historically found it necessary to record any write-offs of accounts receivable or to record an allowance for uncollectible accounts. At December 31, 2007, the Company's accounts receivable balance included approximately \$4.0 million, including unbilled receivables of approximately \$3.6 million, related to U.S government contracts. The remaining receivables balance resulted from Quebec provincial or Canadian Federal credits for internally and externally generated research and development expenditures.

## Property and Equipment

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

Asset Category	Estimated Useful Life (in Years)
Building and leasehold improvements	4 - 20
Laboratory equipment	7
Furniture, farm and office equipment	5 - 7
Computer equipment	3

## Intangible Assets

Intangible assets consist of patents and are being amortized using the straight-line method over an 11 year period.

## Impairment of Long-Lived Assets

Long-lived assets consist primarily of patents and property and equipment. In accordance with Statement of Financial Accounting Standards (SFAS) No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*, the Company reviews long-lived assets and certain identifiable intangibles for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to future undiscounted net cash flows expected to be generated by the asset. Recoverability measurement and estimating of undiscounted cash flows is done at the lowest possible level for which there is identifiable assets. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of assets exceeds the fair value of the assets. Assets to be disposed of are reported at the lower of the carrying amount or fair value less costs to sell.

## Revenue Recognition

The Company generates its revenue from two different type of contractual arrangements: cost-plus-fee contracts and cost reimbursable grants. Revenues on cost-plus-fee contracts are recognized to the extent of costs incurred plus an estimate of the applicable fees earned. The Company considers fixed fees under cost-plus-fee contracts to be earned in proportion to the allowable costs incurred in performance of the contract. The Company analyzes each cost reimbursable grant to ensure reporting of revenues gross versus net is appropriate based on the guidance in the AICPA Federal Government Contractors Guide or the Financial Accounting Standards Board's (FASB's) Emerging Issues Task Force (EITF) Issue 99-19, *Gross Versus Net*, whichever is most appropriate. For the year ended December 31, 2007, the Company recorded approximately \$0.2 million of costs reimbursed from the government as a reduction to research and development expense as they are viewed as reduction of costs under the guidance.

The Company's contracts may include the provisions of more than one of its services. In these situations, the Company recognizes revenue in accordance with the Financial Accounting Standards Board's (FASB's) Emerging Issues Task Force (EITF) Issue 00-21, *Revenue Arrangements with Multiple Deliverables*. Accordingly, for applicable arrangements, revenue recognition includes the proper identification of separate units of accounting and the allocation of revenue across all elements based on relative fair values, with proper consideration given to the guidance provided by other authoritative literature.

In September 2006, the Company was awarded a multi-year cost reimbursement contract valued at up to \$219 million from the Department of Defense Army Space and Missile Command for advanced development of the Company's broad spectrum chemical nerve agent prophylaxis, Protexia®. The Department of Defense has allocated \$40.5 million for the initial stage of development, including manufacturing process development, preclinical and toxicity testing activities, of this contract. The Company recognized \$14.6 million and \$1.5 million of revenue on this contract for the twelve months ended December 31, 2007 and 2006, respectively.

On September 28, 2007, PharmAthene was awarded a contract for the advanced development of Valortim™ from the National Institute of Allergy and Infectious diseases ("NIAID") and the Biomedical Advanced Research and Development Authority ("BARDA"). This approximately \$13.9 million contract supports the development of Valortim™ for use as anti-toxin therapeutic to treat inhalation anthrax infection. The contract will be incrementally funded through fiscal year 2009. The Company recognized \$0.1 million of revenue on this contract for the twelve months ended December 31, 2007.

## Research and Development and In-Process Research and Development

Research and development costs include salaries, facilities expense, overhead expenses, material and supplies, pre-clinical expense, clinical trials and related clinical manufacturing expenses, stock based compensation expense, contract services and other outside services. Such costs are charged to expense as incurred.

## Share-Based Compensation

On January 1, 2006, the Company adopted Statement of Financial Accounting Standards ("SFAS") No. 123 (Revised 2004), *Share-Based Payment* ("SFAS No. 123R") which establishes accounting for share-based awards exchanged for employee services and requires companies to expense the estimated fair value of these awards over the requisite employee service period. Under SFAS No. 123R, share-based compensation cost is determined

at the grant date using an option pricing model. The value of the award that is ultimately expected to vest is recognized as expense on a straight line basis over the employee's requisite service period. The Company adopted SFAS No.123R Under this method, prior periods are not restated for comparative purposes. Rather, compensation for awards outstanding, but not vested, at the date of adoption using the grant date value determined under SFAS No. 123, *Accounting for Share-Based Compensation*, as well as new awards granted after the date of adoption using the grant date value under SFAS No. 123R are recognized as expense in the statement of operations over the remaining service period of the award.

The Company has estimated the fair value of each award using the Black-Scholes option pricing model, which was developed for use in estimating the value of traded options that have no vesting restrictions and that are freely transferable. The Black-Scholes model considers, among other factors, the expected life of the award and the expected volatility of the Company's stock price.

Employee share-based compensation expense recognized in the twelve months ended December 31, 2007 and 2006 was calculated based on awards ultimately expected to vest and has been reduced for estimated forfeitures at a rate of 18.6 percent, based on the Company's historical option forfeitures. SFAS No. 123R requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

Share-based compensation expense recognized under SFAS No. 123R for the twelve months ended December 31, 2007 and 2006, respectively, was:

	December 31,	
	2007	2006
Research and development	\$ 431,847	\$ 119,021
General and administrative	1,351,762	203,747
<b>Total share-based compensation expense</b>	<b>\$ 1,783,609</b>	<b>\$ 322,768</b>
Share-based compensation expense, per common share:		
Basic and diluted	\$ 0.19	\$ 0.57

### Basic and Diluted Net Loss Per Share

The Company applies Statement of Financial Accounting Standards No. 128, *Earnings per Share*, which establishes standards for computing and presenting earnings per share. Basic net loss per share of common stock excludes dilution for potential common stock issuances and is computed by dividing net loss by the weighted-average number of shares outstanding for the period. Diluted net loss per share reflects the potential dilution that could occur if securities were exercised into common stock. However, for all periods presented, diluted net loss per share is the same as basic net loss attributable to common shareholders per share as the inclusion of weighted average shares of common stock issuable upon the exercise of stock options and warrants would be anti-dilutive. Securities outstanding in the amount of 14,673,000 and 126,502,000 shares for the years ended December 31, 2007 and 2006, respectively, were excluded from the calculation of diluted net loss per share since their inclusion would be anti-dilutive.

The following table provides a reconciliation of the numerators and denominators used in computing basic and diluted net loss per share:

	Year ended December 31,	
	2007	2006
<b>Numerator:</b>		
Net loss	\$ (13,587,303)	\$ (15,133,387)
Dividends on and accretion of convertible preferred stock	(4,133,733)	(6,589,671)
<b>Net loss available to common stockholders</b>	<b>\$ (17,721,036)</b>	<b>\$ (21,723,058)</b>
<b>Denominator:</b>		
Weighted-average shares of common stock outstanding—basic diluted	9,442,885	567,753

## Income Taxes

The Company accounts for income taxes in accordance with Statement of Financial Accounting Standards No. 109, *Accounting for Income Taxes* ("SFAS 109"), which requires that deferred tax assets and liabilities be recognized using enacted tax rates for the effect of temporary differences between the book and tax bases of recorded assets and liabilities. SFAS 109 also requires that deferred tax assets be reduced by a valuation allowance if it is more likely than not that some portion of the deferred tax asset will not be realized. In evaluating the need for a valuation allowance, the Company takes into account various factors, including the expected level of future taxable income and available tax planning strategies. If actual results differ from the assumptions made in the evaluation of the Company's valuation allowance, the Company records a change in valuation allowance through income tax expense in the period such determination is made.

## Note 2—Summary of Significant Accounting Policies

The Company adopted the provisions of Financials Accounting Standards Board ("FASB") Interpretation No. 48, *Accounting for Uncertainty in Income Taxes- and Interpretation of FASB Statement No. 109* ("FIN 48") on January 1, 2007. The Company has analyzed tax positions in all jurisdictions where we are required to file an income tax return and we have concluded that we do not have any material unrecognized tax benefits. As a result, there were no material effects on our financials position or results of operations due to the implementation of FIN 48. As of December 31, 2007, the Company had recognized a valuation allowance to the full extent of its deferred tax assets since the likelihood of realization of the benefit cannot be determined. The Company believes that any of its uncertain tax positions would not result in adjustments to its effective income tax rate because likely corresponding adjustments to deferred tax assets would be offset by adjustments to recorded valuation allowances. We file a US federal income tax return as well as returns for various state and foreign jurisdictions. The Company's income taxes have not been subject to examination by any tax jurisdiction since its inception. Accordingly, all income tax returns filed the by the Company are subject to examination by taxing jurisdictions.

The Company policy is to recognize interest and penalties accrued on any unrecognized tax benefits as a component of tax expense. As of the date of adoption of FIN 48, we did not have interest or penalties accrued for any unrecognized tax benefits and there was no interest expense recognized during the current year.

### Fair Value of Financial Instruments

The Company's financial instruments include primarily cash and cash equivalents, accounts receivable, short-term investments and other current assets, accounts payable, accrued and other liabilities, notes payable and long-term debt. Due to the short-term nature of the cash and cash equivalents, accounts receivable, short-term investments and other current assets, accounts payable and accrued and other liabilities, the carrying amounts of these assets and liabilities approximate their fair value. The fair value of the Company's notes payable and long term debt approximates fair value, based on current incremental borrowing rates of the Company.

### Concentration of Credit Risk

Financial instruments which potentially subject the Company to concentrations of credit risk are primarily cash and cash equivalents, investments and accounts receivable. The Company maintains its cash, cash equivalent and investment balances in the form of money market accounts, debt and equity securities and overnight deposits with financial institutions that management believes are creditworthy. All of the Company's accounts receivables are from either the US government or the Canadian government.

### Reclassifications

Certain prior year amounts in the consolidated financial statements have been reclassified to conform to the current year presentation.

### Recent Accounting Pronouncements

In December 2007, the EITF reached a consensus on Issue No. 07-1, *Accounting for Collaborative Arrangements*. In EITF 07-1, the EITF defined a collaborative arrangement as a contractual agreement involving a joint operating activity between two (or more) parties, each of which is both (1) an active participant in the activity and (2) exposed to significant risks and rewards that are dependent on the joint activity's commercial success. Additionally, EITF 07-1 provides information to be disclosed on an annual basis by each collaborative arrangement participant for every significant collaborative arrangement, including the nature of the arrangement, the participant's rights and obligations under the arrangement, the accounting policy followed for collaborative arrangements, and the income statement classification and amounts arising from the collaborative arrangement. EITF 07-01 is effective for financial statements issued for fiscal years beginning after December 15, 2008. This consensus is to be applied retrospectively for all periods presented. We are evaluating the potential impact of this consensus and do not expect it to have a material effect on our financial statements.

In September 2006, the FASB issued SFAS No. 157, *Fair Value Measurements*, or SFAS 157, which established a framework for measuring fair value, and expanded disclosures about fair value measurements. The FASB partially deferred the effective date of SFAS 157 for nonfinancial assets and liabilities that are recognized or disclosed at fair value in the financial statements on a nonrecurring basis. For nonfinancial and financial assets and liabilities that are recognized or disclosed at fair value in the financial statements on a recurring basis, SFAS 157 is effective beginning January 1, 2008. We expect that the adoption of SFAS 157 will have no impact on our consolidated financial position or results of operations.

In February 2007, the FASB issued SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities—Including an Amendment of FASB Statement No. 115* ("SFAS 159"). SFAS No. 159 permits entities to choose to measure many financial instruments and certain other items at fair value. The objective is to improve financial reporting by providing entities with the opportunity to mitigate volatility in reported earnings caused by measuring related assets and liabilities differently without having to apply complex hedge accounting provisions. The provisions of SFAS No. 159 are effective for fiscal years beginning after November 15, 2007. We expect that the adoption of SFAS 159 will have no impact on our consolidated financial position or results of operations.

In June 2007, the FASB ratified EITF 07-3, *Accounting for Nonrefundable Advance Payments for Goods or Services Received for Use in Future*

*Research and Development Activities* ("EITF 07-3"). EITF 07-3 requires that nonrefundable advance payments for goods or services that will be used or rendered for future research and development activities be deferred and capitalized and recognized as an expense as the goods are delivered or the related services are performed. On a prospective basis, the Company will capitalize prepaid research and development costs in accordance with this guidance.

In December 2007, the FASB issued SFAS No. 141 (revised 2007), *Business Combinations* ("SFAS 141R"). SFAS 141R establishes principles and requirements for how an acquirer recognizes and measures in its financial statements the identifiable assets acquired, the liabilities assumed, any noncontrolling interest in the acquiree and the goodwill acquired. SFAS 141R also establishes disclosure requirements to enable the evaluation of the nature and financial effects of the business combination. SFAS 141R is effective for financial statements issued for fiscal years beginning after December 15, 2008. The Company is currently evaluating the potential impact, if any, of the adoption of SFAS 141R on its consolidated financial position and results of operations.

### Note 3—Investments—Available for Sale

The amortized cost, gross unrealized gains, gross unrealized losses and fair value of available-for-sale investments by security classification, all of which are short term, at December 31, 2007 were as follows:

	Amortized Cost	Gross Unrealized Gain	Gross Unrealized Loss	Estimated Fair Value
Corporate debt securities	\$ 8,084,453	\$ 80,450	\$ —	\$ 8,164,903
Government debt securities	3,970,242	18,800	—	3,989,042
<b>Total securities</b>	<b>\$ 12,054,695</b>	<b>\$ 99,250</b>	<b>\$ —</b>	<b>\$ 12,153,945</b>

During the year ended December 31, 2007, there were no gross realized gains or losses on sales of available-for-sale securities. The gains and losses on available-for-sale securities are based on the specific identification method.

### Note 4—Property and Equipment

Property and equipment consisted of the following:

	December 31,	
	2007	2006
Land	\$ 560,081	\$ 471,536
Building and leasehold improvements	5,670,628	4,188,746
Furniture, farm and office equipment	219,855	83,293
Laboratory equipment	866,084	797,653
Computer equipment	556,601	372,055
	7,873,249	5,913,283
Less accumulated depreciation	(1,302,225)	(683,071)
<b>Property and equipment, net</b>	<b>\$ 6,571,024</b>	<b>\$ 5,230,212</b>

Depreciation expense for the years ended December 31, 2007 and 2006 was \$542,076 and \$353,949, respectively.

### Note 5—Patents

In conjunction with the Company's purchase of the assets of Nexia Biotechnologies Ltd. in March 2005 (the "Nexia Acquisition"), the Company recorded intangible assets related to patents of \$1,407,000 with a useful life of 11 years. The gross carrying value and accumulated amortization, adjusted based on current foreign currency rates, was \$1,761,329 and \$448,338, respectively, at December 31, 2007. The gross carrying value and accumulated amortization, adjusted based on current foreign currency rates, was \$1,481,952 and \$235,716, respectively, at December 31, 2006. For the years ended December 31, 2007 and 2006, the Company has recorded amortization expense of \$163,294 and \$129,697, respectively. Amortization expense related to the above intellectual property is expected to be approximately \$127,910 per year for the next five years.

### Note 6—Accrued Expenses and Other Liabilities

Accrued expenses and other liabilities consisted of the following:

December 31.

	2007	2006
Accrued expenses	\$ 2,039,016	\$ 974,509
Accrued employee expenses	856,659	58,889
Restructuring liability	498,596	—
Deferred Rent	46,754	—
Accrued Interest	89,357	542,968
Other	72,504	10,651
<b>Accrued expenses and other liabilities</b>	<b>\$ 3,602,886</b>	<b>\$ 1,587,017</b>

Accrued expenses consist primarily of research and development activities and legal and professional services.

## Note 7—Long Term Debt

### Convertible 8% Notes

In connection with the Merger, the Company issued convertible 8% notes (the "Notes") in the aggregate principal amount of \$12.3 million to Former PharmAthene's noteholders replacing the existing \$12.8 million (principal and accrued interest of 8%) Bridge Notes. The original Bridge Notes were entered into in June and August 2006 with certain investors in Former PharmAthene's Series B Redeemable Convertible Preferred Stock and Series C Redeemable Convertible Preferred Stock. The transaction was treated as a debt extinguishment under Emerging Issues Task Force No. 96-19 ("EITF 96-19"). *Debtor's Accounting for a Modification or Exchange of Debt Instruments*. Under EITF 96-19, the new debt was recorded at fair value with the difference between the new and the old debt recorded as an extinguishment in the income statement. This resulted in a gain of approximately \$0.9 million for the twelve months ended December 31, 2007. In accordance with EITF 00-19, Accounting for Derivative Financial Instruments Indexed to, and Potentially Settled in, a Company's Own Stock, the Company analyzed the conversion feature and determined that it was an embedded derivative that required bifurcation due to the potential for adjustment to the conversion price and considering the contract does not have a fixed or determinable maximum number of shares that may be required to be issued there is the potential that an infinite number of share could be required to settle the contract. The Company is marking to market the derivative and recorded the changes in other income and expense. For the year ended December 31, 2007 the Company recorded \$0.6 million as a mark to market gain relating to the convertible debt.

The Notes accrue interest at an interest rate of 8% per annum, except in the event of a default in which instance the interest rate will increase to 12%. The principal amount of the Notes and any accrued interest are convertible into shares of PharmAthene common stock at the option of the holder at any time based upon a conversion rate of \$10.00 per share. The Notes have a maturity date of August 3, 2009. The Company recognized interest expense of \$632,900 on the Notes for the twelve months ended December 31, 2007. The Company recognized interest expense of approximately \$557,900 and \$543,000 for the twelve months ended December 31, 2007 and 2006, respectively, related to Former PharmAthene's Bridge Notes.

In connection with the Merger, the Company agreed to pay off two of the holders of the Bridge Notes rather than issue new Notes to them. The Company paid \$242,694, in the aggregate, to such holders in fulfillment of this obligation.

### \$10 Million Debt Financing

On March 30, 2007, the Company entered into a \$10 million credit facility with Silicon Valley Bank and Oxford Finance Corporation. Under the credit facility the Company borrowed \$10 million, which bears interest at the rate of 11.5%. Pursuant to the terms of the loan and security agreement evidencing the credit facility, the Company made monthly payments of interest only through September 30, 2007 and, thereafter, will make monthly payments of principal and interest over the remaining 30 months of the loan. The loan is secured by a security interest on all of the Company's assets other than certain intellectual property. The Company may prepay the debt provided it pays certain prepayment fees. In connection with the credit facility, the Company issued to Silicon Valley Bank and Oxford Financial Corporation warrants to purchase an aggregate of 438,453 shares of PharmAthene Series C Preferred Stock through March 30, 2017 at an exercise price of \$0.91. In connection with the Merger, these preferred stock warrants were assumed and converted to warrants to purchase 100,778 shares of common stock with an exercise price of \$4.06 per share (which includes 2,478 shares as adjustment shares calculated on the basis of the number of shares electing conversion in excess of 5% of the Company's outstanding common stock prior to the Merger).

The Company has recognized interest expense of approximately \$923,400 for the twelve months ended December 31, 2007.

## Note 8—Commitments and Contingencies

### Leases

The Company leases offices in the United States under a 10 year office lease, which commenced on May 1, 2007. Additionally, following the Nexia Acquisition in March 2005, the Company entered into a two year renewable lease agreement for office space in Canada. This lease was renewed during the third quarter of 2007, however, with the closing of the Canadian research facility located in Ville St-Laurent Montreal this lease has been terminated effective May 31, 2008. Annual minimum payments are as follows:

2008	\$	456,900
2009		381,100
2010		392,500
2011		404,300
2012 and thereafter		2,570,200
	\$	<u>4,205,000</u>

For the twelve months ended December 31, 2007 and 2006, total rent expense under operating lease agreements approximated \$589,850 and \$310,518, respectively.

## License Agreements

In January 2006, the Company licensed certain patent rights from a research company. The license agreement required a \$50,000 up-front payment. Additionally, payments within the agreement included a sublicense fee of 20% and milestone payments of \$25,000 upon the granting of a US patent, \$200,000 upon the initiation of certain studies or trials, and \$250,000 upon BLA approval. Upon commercialization, the license agreement requires royalty payments equal to a specified percentage of future sales of products for both government procurement and commercial market sales subject to the license through the expiration of the licensed patents. During fiscal year 2006, the Company expensed \$50,000 related to this agreement. No sublicense fee or milestone payments have been incurred for fiscal year 2007.

In August 2006, the Company entered into a research and licensing agreement allowing for the licensing of certain patent rights. The agreement includes research expense reimbursement payments and certain development milestone payments. Upon commercialization, the license agreement requires royalty payments equal to a specified percentage of future sales of products for both government procurement and commercial market sales subject to the license through the expiration of the licensed patents. During fiscal years 2006 and 2007, the Company expensed \$50,000 and nil related to this agreement, respectively.

In connection with the Nexia Acquisition, the Company acquired a license agreement originally executed in September 2004 for the rights to certain technologies. This agreement included an option to license product processing technology necessary to perform development of Protexia® as required under its government contract with the Department of Defense.

The Company executed a new licensing agreement with the development company on March 2, 2007 which results in a license to all technology provided under the original agreement including the necessary purification technology previously included in an option and access to additional information and technology deemed to be essential for development of Protexia® and performance under the Department of Defense contract. Under the new agreement, the Company must pay \$200,000 over a period of six years with \$100,000 due in the first year. This expense is eligible for reimbursement by the US government under the contract with the Department of Defense. During 2007, the Company expensed \$100,000 related to this agreement.

## Note 9—Related Party Transaction

Through July 2007, the Company leased its office space from an entity that was affiliated with the organization to which Former PharmAthene had issued warrants for 263,296 shares of common stock in August 2003. The Company paid \$93,386 and \$118,109 in rent expense related to this operating lease for the twelve months ended December 31, 2007 and 2006, respectively. The Company relocated to its new office space and the lease with the affiliate entity was terminated. Additionally, in conjunction with the Merger as further discussed in Note 1, these warrants were assumed and converted into 14,180 common stock warrants with an exercise price of \$0.19 per share.

Several directors and officers of the Company invested in Former PharmAthene's Bridge Notes in the second and third quarters of 2006. Additionally, an investor in the Company's new office space also invested in Former PharmAthene's Bridge Notes in the second and third quarters of 2006. In connection with the Merger, these Bridge Notes were converted into approximately \$248,000 of Notes.

Prior to the closing of the Merger, a director of HAQ loaned approximately \$85,000 to HAQ to fund the renewal of the directors and officers insurance policy which expired in July 2007. This non-interest bearing loan was repaid by the Company in October 2007.

In connection with the Merger, the Company paid approximately \$1.3 million to an investment bank affiliated with one of its directors.

## Note 10—Medarex Collaboration

In November 2004, the Company and Medarex, Inc. ("Medarex") entered into a collaboration agreement under which the companies plan to develop and commercialize MDX-1303, a fully human monoclonal antibody targeting the *Bacillus anthracis* protective antigen. MDX-1303 was developed by Medarex using its UltiMAB Human Antibody Development System®, and this antibody is currently in clinical development by PharmAthene for use against human anthrax infection.

Under the terms of the agreement, Medarex and PharmAthene have agreed jointly to continue to investigate the potential for MDX-1303 to be used as a therapeutic for individuals with active disease as well as for prophylactic treatment of individuals exposed to anthrax. In December 2004, Medarex received a deposit from PharmAthene against potential future development activities for MDX-1303, against which Medarex must submit reports of the use of costs as they are incurred in order to take draw downs against the deposit. The agreement provided that if the project was terminated or if development activities for MDX-1303 by Medarex were completed prior to exhaustion of the deposit, amounts remaining under the deposit were to be returned to PharmAthene. As of December 31, 2006 approximately \$419,510 of this deposit remained; this deposit was fully utilized by June 30, 2007. For the twelve months ended December 31, 2007 and 2006, PharmAthene recorded research and development expenses of approximately \$685,700 and \$917,000 related to the development activities for MDX-1303. PharmAthene is fully responsible for funding all future research and development activities that are not supported by government funds. The companies will share profits according to a pre-agreed allocation percentage.



## Note 11—Stockholders' Equity

Stockholders' equity has been retroactively restated to reflect the number of shares of common stock received by Former PharmAthene security holders in the Merger, after giving effect to the difference between the par values of the capital stock of Former PharmAthene and HAQ common stock, with the offset recorded to additional paid in capital.

### Conversion Ratio for Class or Series of Former PharmAthene Stock

Series A	Series B	Series C	Common Stock
0.113777	0.180586	0.224199	0.049769

In connection with the Merger, the Company issued 22,138,723 shares of common stock which included 51,602 shares held in escrow related to shares reserved for issuance upon the exercise of outstanding option awards. The Company has 22,087,121 shares outstanding as of December 31, 2007.

### 2002 Long-Term Incentive Plan

In connection with the Merger, the Company assumed awards that were granted by Former PharmAthene under Former PharmAthene's 2002 Long-Term Incentive Plan (the "2002 Plan") which provided for the grant of incentive stock options, restricted common stock and stock appreciation rights. Under the 2002 Plan, option awards were granted to eligible employees, consultants, officers and directors. The fair value of each option grant was estimated on the date of grant using the Black-Scholes option-pricing model based on selected inputs. The board of directors of Former PharmAthene established the vesting schedule for the awards. Grants made to new employees upon commencement of employment, typically provided for annual vesting of 25% of shares on the first anniversary date of hire. For annual grants to existing employees, grants typically provided for monthly vesting over four years. These options had a maximum term of no more than 10 years. As of December 31, 2007, an aggregate of 441,857 shares of common stock are reserved for issuance upon the exercise of outstanding assumed awards. The 2002 Plan was not assumed by the Company following the Merger; therefore, no further grants may be made under the 2002 Plan.

The following table summarizes the activity of the 2002 Plan:

	Shares	Weighted-Average Exercise Price	Weighted-Average Contractual Term
Outstanding, January 1, 2006	430,109	\$ 3.57	
Granted	87,879	3.90	
Exercised	72,200	3.38	
Forfeited	41,474	3.90	
Outstanding, December 31, 2006	404,314	\$ 3.64	
Exercisable, December 31, 2006	207,050	\$ 3.54	
Outstanding, January 1, 2007	404,314	\$ 3.64	7.7 years
Granted	121,950	3.90	
Exercised	67	3.90	
Forfeited	84,340	4.10	
Outstanding, December 31, 2007	441,857	\$ 3.67	7.7 years
Exercisable, December 31, 2007	255,444	\$ 3.54	7.3 years
Vested, December 31, 2007	255,444		

Range of Exercise Price	Number Outstanding at 12/31/07	Average Remaining Contractual Life in Years	Weighted Average Exercise Price	Number Exercisable at 12/31/07	Weighted Average Exercise Price

\$0.00-\$3.00	121,129	5.7	\$ 2.96	104,979	\$ 2.96
\$3.01-\$5.36	320,728	4.4	\$ 3.76	150,465	\$ 3.79
	441,857	4.7	\$ 3.69	255,444	\$ 3.45

The aggregate intrinsic value is calculated as the difference between (i) the closing price of the common stock at December 31, 2007 and (ii) the weighted average exercise price of the underlying awards, multiplied by the number of options that had an exercise price less than the closing price on the last trading day of 2007. The aggregate intrinsic value of options outstanding was approximately \$113,000 as of December 31, 2007.

## 2007 Long-Term Incentive Plan

On August 3, 2007, our stockholders approved the 2007 Long Term Incentive Plan (the "2007 Plan") which provides for the granting of incentive and non-qualified stock options, stock appreciation rights, performance units, restricted common awards and performance bonuses (collectively "awards") to our officers and employees. Additionally, the 2007 Plan authorizes the granting of non-qualified stock options and restricted stock awards to our directors and to any independent consultants. The Company reserved 3,500,000 shares of common stock for distribution of awards under the 2007 Plan. The Board of Directors in conjunction with management determines who receives awards, the vesting conditions which are generally four years, and the exercise price. Options may have a maximum term of no more than 10 years.

On August 30, 2007, the Board of Directors of the Company granted to the Company's Chief Executive Officer, options to purchase 780,000 shares of common stock pursuant to the 2007 Plan at an exercise price of \$5.36 per share, determined as the closing price of the Company's common stock on such date, and granted him 100,000 restricted shares of common stock. The options have a term of ten years and both the options and restricted stock award vest over a five year period with 25% vesting on the first anniversary of the grant, and the remainder vesting monthly on a pro rata basis over the succeeding 48 months following the first anniversary.

The following tables summarize the activity of the 2007 Plan:

	Shares	Weighted-Average Exercise Price	Weighted-Average Contractual Term
<b>Options</b>			
Outstanding, January 1, 2007	0	\$ —	—
Granted	2,356,867	5.25	9.5 years
Exercised	—	—	
Forfeited	54,717	5.20	
Outstanding, December 31, 2007	2,302,150	\$ 5.25	9.5 years
Exercisable, December 31, 2007	348,680	\$ 5.21	9.5 years
Vested, December 31, 2007	348,680		

Range of Exercise Prices	Number Outstanding at 12/31/07	Weighted Average Remaining Contractual Life in Years	Weighted Average Exercise Price	Number Exercisable at 12/31/07	Weighted Average Exercise Price
\$0.00-\$5.00	32,500	9.9	\$ 4.54	0	0
\$5.01-\$5.36	2,269,650	9.7	\$ 5.20	348,680	\$ 5.20
	2,302,150	9.7	\$ 5.19	348,680	\$ 5.20

The following tables summarize the activity of the 2007 plan for restricted shares.

	Shares	Weighted-Average Exercise Price	Weighted-Average Contractual Term
<b>Restricted Shares</b>			
Outstanding, January 1, 2007	0	\$ —	—
Granted	216,836	5.27	9.9 years
Exercised	—	—	—
Forfeited	1,529	5.20	—
Outstanding, December 31, 2007	215,307	\$ 5.27	9.9 years
Exercisable, December 31, 2007	—	\$ —	—
Vested, December 31, 2007	—	—	—

Range of Exercise Prices	Number Outstanding at 12/31/07	Weighted Average Remaining Contractual Life in Years	Weighted Average Exercise Price	Number Exercisable at 12/31/07	Weighted Average Exercise Price
\$5.01-\$5.36	215,307	9.7	\$ 5.21	0	\$ —
	215,307	9.7	\$ 5.21	0	\$ —

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

The fair value for the 2007 and 2006 awards were estimated at the date of grant using the Black-Scholes option-pricing model using the following assumptions:

	December 31,	
	2007	2006
Weighted average volatility	66-72%	72.0%
Risk-free interest rate	3.7-4.9%	4.2-5.1%
Expected annual dividend yield	—	—
Expected weighted average life, in years	7.0	9.9

The valuation assumptions were determined as follows:

- Weighted average volatility: We determine the expected volatility by using an average historical volatility from comparable public companies with an expected term consistent with ours.

- Risk-free interest rate: The yield on zero-coupon US Treasury securities for a period that is commensurate with the expected term of the award.
- Expected annual dividend yield: The estimate for annual dividends is zero because we have not historically paid a dividend and do not intend to do so in the foreseeable future.
- Expected life: The expected term of the awards represents the period of time that the awards are expected to be outstanding. We use historical data and expectations for the future to estimate employee exercise and post-vest termination behavior and therefore do not stratify employees into multiple groups.

#### *Determination of Fair Value*

Prior to the closing of the Merger, PharmAthene's common stock had never been publicly traded. From inception through the closing of the Merger, the fair value of its common stock for accounting purposes was determined by Former PharmAthene's board of directors with input from management. Upon the closing of the Merger on August 3, 2007, PharmAthene's stock price was used as the basis for determining fair value.

#### **Unit Purchase Option**

In connection with the initial public offering, HAQ agreed to sell to Maxim Group, LLC, the underwriters in HAQ's initial public offering, for \$100, an option to purchase up to a total of 225,000 units. The units issuable upon exercise of this option are identical to those offered in the initial public offering except that the associated warrants have a different exercise price as further discussed in the warrant section below. This option became exercisable at \$10.00 per unit on August 3, 2008, and expires on July 28, 2010. The exercise price and number of units issuable upon the exercise of the option may be adjusted in certain circumstances including in the event of a stock dividend, or recapitalization, reorganization, merger or consolidation.

On January 23, 2007, HAQ and Maxim Partners, LLC entered into an amendment to the unit purchase option. Such amendment clarifies that (i) if a registration statement covering the securities issuable upon the exercise of the unit purchase option was not effective at the time Maxim Partners, LLC desired to exercise it, then the unit purchase option could expire unexercised, and (ii) in no event would HAQ be obligated to pay cash or other consideration to the holders of the unit purchase option or "net-cash settle" the obligation of HAQ under the unit purchase option.

#### **Warrants**

In connection with the initial public offering, and the subsequent closing on the exercise of the over-allotment option, HAQ sold 9,400,000 warrants to acquire shares of common stock. Each warrant entitles the holder to purchase from the Company one share of common stock at an exercise price of \$6.00 and expires four years from the effective date of the offerings. The warrants are redeemable by the Company at a price of \$0.01 per warrant, upon 30 days notice after the warrants become exercisable and only in the event that the last sales price of the common stock is at least at \$11.50 per share for any 20 days within a 30 trading day period ending on the third day prior to the date on which notice of redemption is given. These warrants began trading separately from the Company's common stock on October 5, 2005. Further in connection with the initial public offering, HAQ issued to the representative of the underwriters 225,000 warrants to acquire shares of common stock. These warrants have an exercise price of \$7.50 (125% of the exercise price of the warrants in the offering). These warrants expire five years from the date of the prospectus.

On January 23, 2007, HAQ entered into a warrant clarification agreement to clarify the terms of the warrant agreement between HAQ and Continental Stock Transfer & Trust Company, the warrant agent for the warrants. The warrant clarification agreement clarifies that (i) if a registration statement covering the securities issuable upon the exercise of a warrant is not effective at the time a holder desired to exercise the instrument, then the warrant would expire unexercised, and (ii) in no event would HAQ be obligated to pay cash or other consideration to the holders of the warrants to "net-cash settle" the obligation of HAQ under the warrants.

In connection with the Merger, a total of 16,118,359 warrants held by Former PharmAthene preferred stockholders were canceled as well as all related agreements previously entered into by the holders of Former PharmAthene preferred stock. Common stock warrants to purchase 263,296 shares of common stock of Former PharmAthene, which resulted from an office lease entered into in August 2003, were converted into 14,537 common stock warrants with an exercise price of \$0.19 (which includes 357 shares as adjustment shares calculated on the basis of the number of shares electing conversion in excess of 5% of the Company's outstanding common stock prior to the Merger). Former PharmAthene's preferred stock warrants to purchase 438,453 shares of common stock of Former PharmAthene issued in connection with the credit facility further discussed in Note 7 were converted to 100,778 common stock warrants of PharmAthene with an exercise price of \$4.06 per share (which includes 2,478 shares as adjustment shares calculated on the basis of the number of shares electing conversion in excess of 5% of the Company's outstanding common stock prior to the Merger).



The following table summarizes the activity of the Company's warrants:

	Warrants for Shares of Common Stock	Weighted- Average Exercise Price	Warrants for Shares of Preferred Stock	Weighted- Average Exercise Price
Outstanding at December 31, 2005	10,223,911	5.69	—	—
Granted	—	—	1,179,610	4.07
Exercised	—	—	—	—
Outstanding at December 31, 2006	10,223,911	5.69	1,179,610	4.07
Granted	—	—	98,300	4.07
Converted	98,300	4.07	(98,300)	4.07
Forfeited	(584,731)	0.19	(1,179,610)	4.07
Outstanding at December 31, 2007	9,737,480	\$ 6.01	—	—

### Convertible Redeemable Preferred Stock

In September 2003, Former PharmAthene issued 13,769,230 shares of Series A Preferred Stock at a price of \$1.09 per share. Proceeds from this stock issuance were \$14,894,498, net of issuance costs of \$105,502. In October 2004, Former PharmAthene sold 30,448,147 shares of Series B Convertible Redeemable Preferred Stock to the Series A Preferred Stock investor and four additional investors at a price of approximately \$0.91 per share for net proceeds of \$27,570,490, net of issuance costs of \$207,288. In conjunction with this financing, the conversion price of the Series A Preferred Stock was adjusted in accordance with the terms of Former PharmAthene's Certificate of Incorporation, which resulted in the Series A Preferred Stock being convertible into an additional 2,672,770 shares, or a total of 16,442,000 shares, of Former PharmAthene's common stock at a price of \$0.91. Contemporaneously with the consummation of the Nexia Acquisition transaction in March 2005, Former PharmAthene sold 14,946,479 shares of Series C Preferred Stock to investors at a price of approximately \$0.91 per share for net proceeds of \$15,669,505, net issuance costs of \$330,495. In connection with the Merger, all outstanding Series A, Series B and Series C preferred stock was converted to common stock of the Company on August 3, 2007. No shares of convertible preferred stock were authorized or outstanding at December 31, 2007.

#### Series A Convertible Redeemable Preferred Stock

At December 31, 2006, the Company has reserved 16,442,000 shares of common stock for the potential conversion. The Company recorded the Series A Preferred Stock at its fair value on the date of issuance of approximately \$15,000,000, less issuance costs of \$105,502. The issuance costs are accreted to the carrying value of the preferred stock up to the earliest redemption period using the effective interest method. The Company has classified the Series A Preferred Stock outside of permanent equity as a result of certain redemption features. Because the Series A Preferred Stock contains contingently adjustable conversion ratios, the Company evaluated the Series A Preferred Stock for potential beneficial conversion features under EITF 98-5, *Accounting for Convertible Securities with Beneficial Conversion Features or Contingently Adjustable Conversion Ratios*, and EITF 00-27, *Application of Issue No. 98-5 to Certain Convertible Instruments*. The contingently adjustable conversion ratio changed with the issuance of Series B Preferred Stock causing the Company to re-evaluate the potential beneficial conversion feature. In both cases, based on the fact that the adjusted implied conversion price of the Series A Preferred Stock exceeded the fair value of the common stock into which the Series A Preferred Stock converts, no beneficial conversion feature was deemed to exist. The implied conversion price was calculated by dividing the fair value of the Series A Preferred Stock, net of the fair value allocated to the warrants issued to the holders of Series A Preferred Stock in conjunction with the Series B Preferred Stock offering, by the adjusted number of common shares into which the Series A Preferred Stock converts.

The Series A Preferred Stock bears a cumulative dividend rate of 8% per annum. Accrued and unpaid dividends for Series A Preferred Stock at December 31, 2006 totaled \$4,355,388.

#### Series B Convertible Redeemable Preferred Stock

At December 31, 2006, the Company has reserved 65,768,001 shares of common stock for the potential conversion. The Company recorded the Series B Preferred Stock at its fair value on the date of issuance of approximately \$27,777,778, less the fair value assigned to warrants of \$3,332,589, less issuance costs of \$207,288. The issuance costs are accreted to the carrying value of the preferred stock up to the earliest redemption period using the effective interest method. The Company has classified the Series B Preferred Stock outside of permanent equity as a result of certain redemption features. Because detachable warrants were granted with the financing and the Series B Preferred Stock contains contingently adjustable conversion ratios, the Company evaluated the Series B Preferred Stock for potential beneficial conversion features under EITF 98-5, *Accounting for Convertible Securities with Beneficial Conversion Features or Contingently Adjustable Conversion Ratios*, and EITF 00-27, *Application of Issue No. 98-5 to*

*Certain Convertible Instruments.* Based on the fact that the adjusted implied conversion price of the Series B Preferred Stock exceeded the fair value of the common stock into which the Series B Preferred Stock converts, no beneficial conversion feature was deemed to exist. The implied conversion price was calculated by dividing the fair value of the Series B Preferred Stock, net of the fair value of the warrants, by the number of common shares into which the Series B Preferred Stock converts.

The Series B Preferred Stock bears a cumulative dividend rate of 8% per annum. Accrued and unpaid dividends for Series B Preferred Stock at December 31, 2006 total \$5,232,953.

## Note 11—Stockholders' Equity

### Series C Convertible Redeemable Preferred Stock

At December 31, 2006, the Company has reserved 22,799,574 shares of common stock for the potential conversion. The Company recorded the Series C Preferred Stock at its fair value on the date of issuance of approximately \$13,261,481, less the fair value assigned to warrants of \$2,408,024 and issuance costs of \$330,495. The discount on the Series C Preferred Stock from the value assigned to the warrants and issuance costs is accreted to the carrying value of the preferred stock up to the earliest redemption period using the effective interest method. The Company has classified the Series C Preferred Stock outside of permanent equity as a result of certain redemption features. Because detachable warrants were granted with the financing and the Series C Preferred Stock contains contingently adjustable conversion ratios, the Company evaluated the Series C Preferred Stock for potential beneficial conversion features under EITF 98-5, *Accounting for Convertible Securities with Beneficial Conversion Features or Contingently Adjustable Conversion Ratios*, and EITF 00-27, *Application of Issue No. 98-5 to Certain Convertible Instruments*. Based on the fact that the adjusted implied conversion price of the Series C Preferred Stock exceeded the fair value of the common stock into which the Series C Preferred Stock converts, no beneficial conversion feature was deemed to exist. The implied conversion price was calculated by dividing the fair value of the Series C Preferred Stock, net of the fair value of the

The Series C Preferred Stock bears a cumulative dividend rate of 8% per annum. Accrued and unpaid dividends for Series C Preferred Stock at December 31, 2006 totaled \$2,046,257.

### Minority Interest—Series C Convertible Redeemable Preferred Stock of PharmAthene Canada, Inc.

Through its ownership of 100% of the common stock in PharmAthene Canada, Inc., the Company controls all of the voting stock of PharmAthene Canada, Inc. and considers itself to be the majority interest primary beneficiary of PharmAthene Canada, Inc., a variable interest entity. In March 2005, a Canadian investor purchased 2,591,654 shares of Series C Convertible Preferred Stock of PharmAthene Canada, Inc. for net proceeds of \$2,364,366. The Series C Convertible Preferred Stock of PharmAthene Canada, Inc. bears a cumulative dividend rate of 8% per annum. Accrued and unpaid dividend for the Series C Convertible Preferred Stock of PharmAthene Canada, Inc. at December 31, 2006 totaled \$354,812.

## Note 12—Income Taxes

For the years ended December 31, 2007 and 2006, there is no current provision for income taxes, and the deferred tax provision has been entirely offset by a valuation allowance. Actual income tax benefit differs from the expected income tax benefit computed at the federal statutory rate as follows:

	December 31,	
	2007	2006
Statutory federal tax benefit	\$ (4,620,323)	\$ (5,059,836)
State income tax, net of federal benefit	(689,367)	(465,700)
Other permanent differences	602,249	250,100
Book gain on warrants	(823,936)	—
Canada deferred rate change	682,832	—
Other, net	0	16,985
Increase in valuation allowance	4,848,545	5,258,451
Income tax expense	\$ —	\$ —

The Company's net deferred tax assets consisted of the following:

	December 31,	
	2007	2006
<i>Deferred tax assets:</i>		
Net operating loss carryforwards	\$ 20,819,453	\$ 15,183,957
Depreciation/amortization	3,716,752	3,429,465
Research and development credits	1,384,691	1,056,414
Accrued expenses and other	413,381	67,149

Total deferred tax assets	26,522,964	19,737,255
<hr/>		
<i>Deferred tax liabilities:</i>		
Bridge Note Revaluation	(411,243)	—
<hr/>		
Total deferred tax liabilities	(411,243)	—
Net deferred tax assets	25,923,033	19,737,255
Less: valuation allowance	(25,923,033)	(19,737,255)
<hr/>		
Net deferred tax assets	\$ —	\$ —
<hr/>		

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The deferred tax amounts discussed above are classified as follows:

	December 31,	
	2007	2006
Current deferred tax assets	\$ 378,620	\$ 67,149
Non-current deferred tax assets	25,544,413	19,669,836
		19,736,985
Less: valuation allowance	(25,923,033)	(19,736,985)
Net deferred tax assets	\$ —	\$ —

In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some or all of the deferred tax asset will not be realized. The ultimate realization of the deferred tax asset is dependent upon the generation of future taxable income during the periods in which the net operating loss carryforwards are available. Management considers projected future taxable income, the scheduled reversal of deferred tax liabilities and available tax planning strategies that can be implemented by the Company in making this assessment. Based upon the level of historical taxable income and projections for future taxable income over the periods in which the net operating loss carryforwards are available to reduce income taxes payable, management has established a full valuation allowance against the net deferred tax asset in 2007 consistent with 2006.

The US federal net operating loss carryforwards of approximately \$43 million will begin to expire in various years beginning 2021. The use of the Company's net operating loss carryforwards may be restricted because of changes in company ownership in accordance with I.R.C. Section 382. The Canadian federal net operating loss carryforwards of approximately \$9.0 million will expire in 2014. Certain Canadian net operating losses may have an unlimited life. Additionally, despite the net operating loss carryforwards, the Company may have a future tax liability due to alternative minimum tax or state minimum tax requirements.

The Company adopted the provisions of Financials Accounting Standards Board ("FASB") Interpretation No. 48, *Accounting for Uncertainty in Income Taxes- and Interpretation of FASB Statement No. 109* ("FIN 48") on January 1, 2007. The Company has analyzed tax positions in all jurisdictions where we are required to file an income tax return and we have concluded that we do not have any material unrecognized tax benefits. As a result, there were no material effects on our financials position or results of operations due to the implementation of FIN 48. As of December 31, 2007, the Company had recognized a valuation allowance to the full extent of its deferred tax assets since the likelihood of realization of the benefit cannot be determined. The Company believes that any of its uncertain tax positions would not result in adjustments to its effective income tax rate because likely corresponding adjustments to deferred tax assets would be offset by adjustments to recorded valuation allowances.

The Company policy is to recognize interest and penalties accrued on any unrecognized tax benefits as a component of tax expense. As of the date of adoption of FIN 48, we did not have interest or penalties accrued for any unrecognized tax benefits and there was no interest expense recognized during the current year.

The following tax years remain subject to examination

Major Jurisdictions	Open Years
US Federal	2003 - 2006
States	2003 - 2006
Canada	2005 - 2006

The Company intends to permanently reinvest foreign earnings within the foreign country.

### Note 13—Terminated Merger Agreement

On March 9, 2006, the Company entered into a term sheet for the merger of the Company with SIGA Technologies Inc. (SIGA). On September 9, 2006, the boards of directors of both companies approved the merger in a definitive agreement. In conjunction with the transaction, the Company agreed to enter into a Bridge Note Purchase Agreement providing SIGA with interim financing, subject to the execution of a definitive merger agreement, of up to \$3.0 million. The Company paid \$3.0 million of this interim financing to SIGA.

On October 4, 2006, SIGA terminated the merger agreement and subsequently repaid the \$3.0 million bridge notes including interest. Additionally, the Company expensed approximately \$1.5 million in merger related costs which had been recorded on the balance sheet as of September 30, 2006.

On December 20, 2006, the Company filed a complaint against SIGA in the Delaware Chancery Court. The Company's complaint alleges that it has the right to license exclusively development and marketing rights for SIGA's drug candidate, SIGA-246, pursuant to the terminated merger agreement with SIGA. The complaint further alleges that SIGA failed to negotiate in good faith the terms of such a license pursuant to the terminated merger agreement.

On January 16, 2008, the Delaware Chancery Court issued a ruling denying a motion by SIGA to dismiss the complaint filed by the Company.

## **Note 14—Subsequent Events**

### ***Purchase and Sale Agreement***

On March 20, 2008, PharmAthene, Inc. and certain of its affiliates (including a newly-formed UK subsidiary) (collectively, "PharmAthene" or the "Company") entered into a Sale and Purchase Agreement (the "Purchase Agreement") with Avecia Biologics Limited and certain of its affiliates (collectively, "Avecia") for the acquisition of all of the assets related to Avecia's vaccines business which includes a second generation recombinant protective antigen (rPA) anthrax vaccine, a recombinant dual antigen plague vaccine and a third generation rPA anthrax vaccine program (the "Acquisition"). In consideration for the Acquisition, PharmAthene has agreed to pay Avecia the following:

(i) \$10 million (exclusive of VAT) at the time of the consummation of the Acquisition (the "Initial Consideration") subject to a working capital adjustment whereby the Initial Consideration shall be reduced or increased by an amount equal to the shortfall or excess over \$100,000; plus

(ii) an additional \$10 million (exclusive of VAT) payable upon the earlier to occur of (a) the completion of a financing transaction in which PharmAthene receives gross proceeds of not less than \$15 million and (b) the first anniversary of the consummation of the Acquisition which payment is to be secured by a letter of credit (the "Deferred Consideration"); plus

(iii) additional contingent amounts payable upon the occurrence of certain events (the "Milestone Consideration") as follows:

- \$10 million upon the entry by PharmAthene into a multi-year funded contract with the US Department of Defense (or other agency or representative or sub-contractor of the US government) for the further development of Avecia's pneumonic and bubonic plague ("rYP") vaccine as a result of (a) a Resources Allocation Decision of the Resource Allocation Review Board and the Resource Allocation Advisory Committee of the US Department of Defense or (b) some other similar substantial funding in excess of \$150 million (including the value of any option elements within such contract; and
- \$5 million upon the entry by PharmAthene into a multi-year funded development contract to be issued by the Biological Advanced Research and Development Authority (part of the US Department of Health and Human Services) under solicitation number RFP-BARDA-08-15 for the further development of Avecia's anthrax ("rPA") vaccine; and
- \$5 million upon the entry by PharmAthene into a contract or contracts for the supply of rPA vaccine into the Strategic National Stockpile; and
- in an amount equal to 2.5% of net sales (as defined under the Purchase Agreement) of rPA vaccine made by PharmAthene to the US government within the period of ten years from the consummation of the Acquisition after the first 25 million doses; and
- in an amount equal to 1% of net sales (as defined under the Purchase Agreement) of third generation anthrax vaccine made by PharmAthene to the US government within the period of ten years from the consummation of the Acquisition.

In connection with the acquisition, PharmAthene and Avecia have agreed to enter into certain ancillary agreements upon the consummation of the Acquisition including, without limitation, transitional services agreements, laboratory facilities agreements, master services agreement, supply agreement and subcontract agreement which, in each case, provide for services to be performed by Avecia for PharmAthene both on a transitional and on a going-forward basis. One of such agreements is a long-term manufacturing agreement for the supply by Avecia of the vaccines and component ingredients comprising the vaccines business purchased by PharmAthene in the Acquisition.

Pursuant to the terms of the Purchase Agreement, consummation of the Acquisition is conditioned upon, among other customary conditions, the receipt of all consents, approvals and material permits (i) for the transfer by novation of Avecia's contracts with the Defence Science and Technology Laboratory, an agency of the UK Ministry of Defence, (ii) for the entry into a subcontract with respect to Avecia's contracts with the National Institutes of Health, an agency of the US government, and (iii) for the transfer (whether by novation or assignment) of a particular grant from the National Institutes of Health referred to as the Challenge Grant.

On March 28, 2008, Avecia received a letter from the DSTL advising Avecia of the recent Resource Allocation Decision of the US Department of Defense that the DoD had decided not to fund Avecia's plague vaccine candidate beyond the current contractual commitment. The parties are engaged in discussions to amend the terms of the Purchase Agreement to accommodate this change in circumstances. The parties anticipate a closing in early April.

### ***Consent and First Loan Modification Agreement***

As previously disclosed, PharmAthene is a party to a \$10 million secured credit facility evidenced by a Loan and Security Agreement, dated as of March 30, 2007 (the "Loan Agreement"), with Silicon Valley Bank and Oxford Finance Corporation (together the "Lenders"). Under the credit facility,

the Company has borrowed \$10 million which bears interest at the rate of 11.5% per annum. The Loan Agreement contains customary affirmative and negative covenants which, among other things, restrict the Company's ability to undertake certain acquisitions, incur certain indebtedness or make certain investments. As a consequence, PharmAthene sought to obtain the consent of its Lenders to the Acquisition and entered into a Consent and First Loan Modification Agreement, dated as of March 20, 2008, with the Lenders (the "Loan Modification Agreement") pursuant to which, among other things, the Lenders consented to the Acquisition provided that (i) PharmAthene (or its UK subsidiary involved in the Acquisition) is the surviving entity in the Acquisition, (ii) the total initial cash consideration upon the consummation of the Acquisition does not exceed \$11 million, (iii) the consummation of the Acquisition will not otherwise result in an Event of Default as defined under the Loan Agreement, after giving effect to the Acquisition and (iv) within 20 days following the consummation of the acquisition, PharmAthene shall cause its UK subsidiary to become a co-borrower or a secured guarantor under the Loan Agreement.

The Loan Modification Agreement also amends the Loan Agreement to provide (i) that PharmAthene shall maintain, at all times, at a segregated account, at either Silicon Valley Bank or Silicon Valley Bank Securities, unrestricted and unencumbered cash or cash equivalents in the amount of at least one and one-quarter times all obligations of PharmAthene to the Lenders, (ii) that if PharmAthene or any of its affiliates creates or acquires any subsidiary, PharmAthene shall notify the Lenders and take all such action as to cause each domestic subsidiary to guarantee the obligations of PharmAthene under the Loan Agreement granting a continuing pledge and security interest in and to the assets of such subsidiary, (iii) that PharmAthene shall deliver to the Lenders a control agreement with M&T Bank granting the Lenders a first perfected security interest in the accounts of PharmAthene held at M&T Bank and (iv) amending the definition of "Material Adverse Change" under the Loan Agreement to provide that a Material Adverse Change shall be a determination of the Lenders based upon information available to it and in its reasonable judgment that there is a reasonable likelihood that PharmAthene shall fail to comply with one or more of the financial covenants contained in the Loan Agreement.

It is contemplated that Silicon Valley Bank will issue the letter of credit in the amount of \$10 million securing the Deferred Consideration payable under the Purchase Agreement.

(b) Exhibits.

No.	Description
2.1	Agreement and Plan of Merger, dated January 19, 2007, by and among Healthcare Acquisition Corp., PAI Acquisition Corp., and PharmAthene, Inc.(6)
2.2	Sale and Purchase Agreement, dated March 20, 2008, by and among the Registrant and Avecia Investments Limited, Avecia Biologics Limited and Avecia Biologics, Inc.(10)
3.1	Amended and Restated Certificate of Incorporation.(8)
3.2	By-laws.(1)
4.1	Specimen Unit Certificate.(1)
4.2	Specimen Common Stock Certificate.(9)
4.3	Specimen Warrant Certificate.(1)
4.4	Form of Warrant Agreement between Continental Stock Transfer & Trust Company and the Registrant.(3)
4.5	Form of Note Exchange Agreement.(6)
4.6	Form of 8% Convertible Note of Healthcare Acquisition Corp.(6)
4.7	Amendment to Unit Purchase Option.(7)
4.8	Warrant Clarification Agreement.(7)
10.1.1	Letter Agreement among the Registrant, Maxim Group LLC and John Pappajohn.(2)
10.1.2	Letter Agreement among the Registrant, Maxim Group LLC and Derace L. Schaffer, M.D.(2)
10.1.3	Letter Agreement among the Registrant, Maxim Group LLC and Matthew P. Kinley.(2)
10.1.4	Restated Letter Agreement among the Registrant, Maxim Group LLC and Edward B. Berger.(3)
10.1.5	Letter Agreement among the Registrant, Maxim Group LLC and Wayne A. Schellhammer.(3)
10.2	Form of Investment Management Trust Agreement between Continental Stock Transfer & Trust Company and the Registrant.(3)
10.2.1	Amendment No. 1 to of Investment Management Trust Agreement between Continental Stock Transfer & Trust Company and the Registrant.(5)
10.3	Form of Stock Escrow Agreement between the Registrant, Continental Stock Transfer & Trust Company and the Initial Stockholders.(3)
10.4	Form of Registration Rights Agreement among the Registrant and the Initial Stockholders.(1)
10.5.1	Office Services Agreement by and between the Registrant and Equity Dynamics, Inc.(1)
10.5.2	Office Services Agreement by and between the Registrant and The Lan Group.(1)
10.6.1	Promissory Note, dated April 28, 2005, issued to John Pappajohn, in the amount of \$70,000.(1)
10.6.2	Promissory Note, dated April 28, 2005, issued to Derace L. Schaffer, M.D., in the amount of \$70,000.(1)

10.6.3 Promissory Note, dated April 28, 2005, issued to Matthew P. Kinley, in the amount of \$35,000.(1)

10.6.4 Promissory Note, dated July 26, 2005, issued to John Pappajohn, in the amount of \$30,000.(4)

- 10.6.5 Promissory Note, dated July 26, 2005, issued to Derace L. Schaffer, M.D., in the amount of \$30,000.(4)
- 10.6.6 Promissory Note, dated July 26, 2005, issued to Matthew P. Kinley, in the amount of \$15,000.(4)
- 10.7 Form of Unit Option Purchase Agreement between the Registrant and Maxim Group LLC.(3)
- 10.8 Form of Warrant Purchase Agreement by and between the Registrant, John Pappajohn and Maxim Group LLC.(2)
- 10.9 Form of Registration Rights Agreement by and among Healthcare Acquisition Corp. and the former stockholders and note holders of PharmAthene, Inc.(6)
- 10.10 Stock Escrow Agreement, dated August 3, 2007, by and among the Registrant, a representative of the former stockholders and option holders of PharmAthene, Inc. and Continental Stock Transfer and Trust Company.\*
- 10.11 Advisory Agreement.(7)
- 10.12 2007 Long-Term Incentive Compensation Plan.(8)
- 10.13 Employment Agreement, dated August 3, 2007, between the Registrant and David P. Wright.(8)
- 10.14 Employment Agreement, dated December 22, 2006, between the Registrant and Christopher C. Camut.(9)
- 10.15 Employment Agreement, dated November 3, 2003, between the Registrant and Francesca Marie Cook.(9)
- 10.16 Employment Agreement, dated November 3, 2003, between the Registrant and Eric Ian Richman.(9)
- 10.17 Employment Agreement, dated November 3, 2003, between the Registrant and Valerie Riddle.(9)
- 10.18 Employment Agreement, dated January 31, 2005, between the Registrant and Wayne Morges.(9)
- 10.19.1 Loan and Security Agreement, dated March 30, 2007, by and among the Company, Silicon Valley Bank, Oxford Finance Corporation, and other lenders listed on Schedule 1.1 thereof.(9)
- 10.19.2 Consent and First Loan Modification Agreement, dated March 20, 2008, by and among the Registrant, Silicon Valley Bank and Oxford Finance Corporation.(10)
- 10.20 U.S. Army Space & Missile Defense Command—"Development and Licensure of Bioscavanger Increment II (Recombinant Drug Candidate)" Award/Contract No. W9113M-06-C-0189, dated September 22, 2006, by and between the Company and the U.S. Army Space & Missile Defense Command.(9)+
- 10.21 Cooperative Research and Development Agreement, dated September 12, 2006, by and between the Company and the U.S. Army Medical Research Institute of Infectious Diseases.(9)+
- 10.22 Center for Scientific Review, National Institute of Health, Research Project Cooperative Agreement, Notice of Grant Award No. 1 U01 NS058207-01, dated September 30, 2006, awarded to the Company.(9)+
- 10.23 Collaboration Agreement, dated November 29, 2004, by and between the Company and Medarex, Inc.(9)+
- 10.24 License Agreement, dated August 8, 2006, by and between the Company and Nektar Therapeutics AL, Corporation. (9)+
- 10.25 License Agreement, dated March 12, 2007, by and between the Company and GTC Biotherapeutics, Inc.(9)+
- 10.26 Office Lease, dated September 14, 2006, by and between the Company and Park Place Trust, as amended by First Amendment to Office Lease, dated January 22, 2007.(9)

- 10.27 Biopharmaceutical Development and Manufacturing Services Agreement, dated June 15, 2007, by and between the Company and Laureate Pharma, Inc.(9)+
- 10.28 Services Agreement, dated March 2, 2007, by and between the Company and GTC Biotherapeutics, Inc.(9)+
- 14 Code of Ethics.(3)
- 21 Subsidiaries.\*
- 23 Consent of Ernst & Young LLP\*

- 31.1 Certification of Chief Executive Officer and Principal Financial Officer Pursuant to SEC Rule 13a-14(a)/15d-14(a).\*
  - 31.2 Certification of Chief Executive Officer and Principal Financial Officer Pursuant to SEC Rule 13a-14(a)/15d-14(a).\*
  - 32.1 Certification of Chief Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350.\*
  - 32.2 Certification of Chief Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350.\*
- 

- (1) Incorporated by reference to the Registration Statement on Form S-1 of the Registrant filed on May 6, 2005.
- (2) Incorporated by reference to the Registration Statement on Form S-1/A of the Registrant filed on June 10, 2005.
- (3) Incorporated by reference to the Registration Statement on Form S-1/A of the Registrant filed on July 12, 2005.
- (4) Incorporated by reference to the Registration Statement on Form S-1/A of the Registrant filed on July 27, 2005.
- (5) Incorporated by reference to the Quarterly Report on Form 10-Q filed by the Registrant on November 14, 2005.
- (6) Incorporated by reference to the Current Report on Form 8-K filed by the Registrant on January 22, 2007.
- (7) Incorporated by reference to the Current Report on Form 8-K filed by the Registrant on January 25, 2007.
- (8) Incorporated by reference to the Current Report on Form 8-K filed by the Registrant on August 9, 2007.
- (9) Incorporated by reference to the Current Report on Form 8-K filed by the Registrant on September 24, 2007.
- (10) Incorporated by reference to the Current Report on Form 8-K filed by the Registrant on March 25, 2008.

\* Filed herewith.

+ Certain confidential portions of this exhibit have been omitted and filed separately with the Securities and Exchange Commission pursuant to a request for confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934.

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## STOCK ESCROW AGREEMENT

This STOCK ESCROW AGREEMENT, dated as of August 3, 2007 (the "*Escrow Agreement*") is entered into by and among Healthcare Acquisition Corp., a Delaware corporation ("*Parent*"), MPM BioVentures III-QP, LP, as the stockholders' representative, being the representative of the former securityholders of PharmAthene, Inc., a Delaware corporation (the "*Stockholders' Representative*"), John Pappajohn being the representative of Parent ("Parent Representative") and Continental Stock Transfer & Trust Company (the "*Escrow Agent*").

**WHEREAS**, Parent has entered into an agreement and plan of merger (the "*Merger Agreement*"), dated as of January 19, 2007, with PharmAthene, Inc. ("*PAI*"), pursuant to which, as of the date hereof, Parent is merging its wholly-owned subsidiary into PAI as a result of which PAI will be the surviving corporation; and

**WHEREAS**, pursuant to Article VIII of the Merger Agreement, the stockholders and holders of options and warrants of PAI (collectively, the "*Stockholders*") have agreed, in order to secure certain indemnification obligations under the Merger Agreement, to deposit into escrow (the "*Escrow Fund*") an aggregate of 1,375,000 shares of common stock of Parent (collectively, the "*Escrow Shares*") which they have received or have the right to receive pursuant to the terms of the Merger Agreement in the respective amounts set forth opposite their names on Exhibit A attached hereto, which Escrow Shares shall be the sole and exclusive source for payment of any indemnification obligations contained in the Merger Agreement; and

**WHEREAS**, the Stockholders have appointed the Stockholders' Representative as their attorney-in-fact and authorized and empowered it to act for and on behalf of the Stockholders (with full power of substitution) in connection with responding to the assertion of any and all claims for indemnification by Parent pursuant to this Escrow Agreement and the Merger Agreement;

**WHEREAS**, Parent has appointed the Parent Representative as its attorney-in-fact and authorized and empowered it to act for and on behalf of Parent (with full power of substitution) in connection with responding to the assertion of any and all claims for indemnification Parent pursuant to this Escrow Agreement and the Merger Agreement; and

**WHEREAS**, Parent and the Stockholders' Representative desire that the Escrow Agent establish the Escrow Fund and accept the Escrow Shares, in escrow, to be held and disbursed as hereinafter provided;

*Capitalized terms used and not otherwise defined herein shall have the meanings given such terms in the Merger Agreement.*

**NOW THEREFORE, IT IS AGREED**, in consideration of the covenants, promises and representations set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. *Appointment of Escrow Agent.* Parent, Parent Representative and the Stockholders' Representative hereby designate and appoint the Escrow Agent as escrow agent to establish the Escrow Fund and receive, hold and disburse the Escrow Shares and otherwise act in accordance with and subject to the terms of this Escrow Agreement and the Merger Agreement and the Escrow Agent hereby accepts such appointment and agrees to act in accordance with and subject to such terms. The Escrow Agent shall treat the Escrow Fund as a trust fund and not as the property of Parent. Its duties hereunder shall cease upon its distribution of the entire Escrow Fund in accordance with this Escrow Agreement.

2. *Deposit of Escrow Shares.* Parent has with the execution of this Escrow Agreement delivered to its transfer agent instructions to deliver to the Escrow Agent certificates representing the Escrow Shares in the amounts and made out to the Stockholders (and with respect to certain shares attributable to Company option and Company warrants, to Parent) set forth on Exhibit A, to be held and disbursed subject to the terms and conditions of this Escrow Agreement. The Stockholders' Representative acknowledges, on behalf of each of the Stockholders, that the certificate representing his, her or its Escrow Shares will bear a legend to reflect the deposit of such Escrow Shares under this Escrow Agreement, it being agreed that such legend shall be removed upon the disbursement of the Escrow Shares, as described in Section 3 below.

### 3. *Disbursement of the Escrow Shares.*

3.1 *Duration of Escrow; Release of Escrow Shares.* Subject to the terms and conditions of this Escrow Agreement, the Escrow Agent shall hold the Escrow Shares in the Escrow Fund for a period of twelve months (the "*Escrow Period*"), and shall disburse the Escrow Shares at the times and subject to the conditions and notices set forth in and required by this Escrow Agreement and the Merger Agreement. Upon the expiration of the Escrow Period, the Escrow Agent shall release the remainder of the Escrow Shares, if any, less the number of Escrow Shares with a Fair Market Value equal to the amount of any Adverse Consequences set forth in any Indemnification Notice from the Company with respect to any pending but unresolved claim for indemnification which release shall be allocated among the Stockholders (with certain shares reverting to Parent to be reserved for issuance upon exercise of any Company Options and Company Warrants) in accordance with Exhibit A. The Escrow Agent shall have no further duties hereunder after the disbursement of the Escrow Shares in accordance with this Section 3.

3.2 *Disbursements under Escrow Fund.* All disbursements under this Escrow Agreement shall be made upon either a certificate to the Escrow Agent signed by both Parent Representative and the Stockholders' Representative or a final determination of an arbitrator in connection with any dispute between Parent and the Stockholders' Representative regarding disbursement under this Escrow Agreement as provided under Section 8.6(d) of the Merger Agreement. Any certificate of the parties regarding disbursement shall indicate the number of Escrow Shares to be disbursed to Parent and how many shares are to be deducted from each Stockholder's holdings, if any.

3.3 *Stockholder Option to Replace Escrow Shares with Cash.* At the time of any proposed disbursement to Parent of Escrow Shares hereunder, each Stockholder shall have the option of replacing the Escrow Shares to be disbursed to Parent with a cash payment based upon the value of the Escrow Shares to be disbursed. In the event that any Stockholder exercises such option and makes cash payment directly to Parent in lieu of Escrow Shares, the certificate issued to the Escrow Agent shall direct, in addition to how many Escrow Shares are to be disbursed to Parent, the number of Escrow Shares to be disbursed to the Stockholder(s) who exercises such option.

### 4. *Rights of Stockholders in Escrow Shares.*

4.1 *Voting Rights as a Stockholder.* The Stockholders shall retain all of their rights as stockholders, option holders and warrant holders of Parent, as the case may be, during the Escrow Period, including, without limitation, the right to vote their respective Escrow Shares, as applicable. The Escrow Agent shall from time to time deliver to the Stockholders such proxies, consent or other documents as may be necessary, as applicable, to enable such Stockholders to exercise such rights.

4.2 *Dividends and Other Distributions in Respect of the Escrow Shares.* During the Escrow Period, all dividends payable in cash with respect to the Escrow Shares shall be paid to the Stockholders. In the event that Parent issues any additional shares of Parent Common Stock to the Stockholders for any reason, including as dividends payable in Parent Common Stock with respect to the Escrow Shares, such additional shares of Parent Common Stock shall be issued in the name of such Stockholders, as applicable, and shall not be subject to escrow.

4.3 *Restrictions on Transfer.* During the Escrow Period, no sale, transfer or other disposition may be made of any of the Escrow Shares. During the Escrow Period, the Stockholders shall not pledge or grant a security interest in the Escrow Shares or grant a security interest in their rights under this Escrow Agreement.

### 5. *Concerning the Escrow Agent.*

5.1 *Good Faith Reliance.* The Escrow Agent shall not be liable for any action taken or omitted by it in good faith and in the exercise of its own best judgment, and may rely conclusively, and shall be protected in acting upon, any order, notice, demand, certificate, opinion or advice of counsel (including counsel chosen by the Escrow Agent), statement, instrument, report or other paper or document (not only as to its due execution and the validity and effectiveness of its provisions, but also as to the truth and acceptability of any information therein contained), which is reasonably believed by the Escrow Agent to be genuine and to be signed or presented by the proper person or persons. The Escrow Agent shall not be bound by any notice or demand, or any waiver, modification, termination or rescission of this Escrow Agreement, unless evidenced by a writing delivered to the Escrow Agent signed by the proper party or parties and, if the duties or rights of the Escrow Agent are affected, unless the Escrow Agent shall have given its prior written consent thereto.

5.2 *Indemnification.* The Escrow Agent shall be indemnified and held harmless by Parent from and against any expenses, including attorneys' fees and expenses, or loss suffered by the Escrow Agent in connection with any action, suit or other proceeding involving any claim, which in any way, directly or indirectly, arises out of or relates to this Escrow Agreement, the services of the Escrow Agent hereunder, or the Escrow Shares held by it hereunder, other than expenses or losses arising from the gross negligence or willful misconduct of the Escrow Agent.

Promptly after the receipt by the Escrow Agent of notice of any demand or claim or the commencement of any action, suit or proceeding, the Escrow Agent shall notify the other parties hereto in writing. In the event of the receipt of such notice, the Escrow Agent, in its sole discretion, may commence an action in the nature of interpleader in an appropriate court to determine ownership or disposition of the Escrow Shares or it may deposit the Escrow Shares with the clerk of any appropriate court or it may retain the Escrow Shares pending receipt of a final, non-appealable order of a court having jurisdiction over all of the parties hereto directing to whom and under what circumstances the Escrow Shares are to be disbursed and delivered. The provisions of this Section 5.2 shall survive in the event the Escrow Agent resigns or is discharged pursuant to Sections 5.5 or 5.6 below.

**5.3 Compensation.** The Escrow Agent shall be entitled to reasonable compensation from Parent for all services rendered by it hereunder, as set forth on Exhibit B hereto. The Escrow Agent shall also be entitled to reimbursement from Parent for all reasonable expenses paid or incurred by it in the administration of its duties hereunder including, but not limited to, all attorneys', advisors' and agents' fees and expenses and all taxes or other governmental charges.

**5.4 Further Assurances.** From time to time on and after the date hereof, Parent and the Stockholders' Representative shall deliver or cause to be delivered to the Escrow Agent such further documents and instruments and shall do or cause to be done such further acts as the Escrow Agent shall reasonably request to carry out more effectively the provisions and purposes of this Escrow Agreement, to evidence compliance herewith or to assure itself that it is protected in acting hereunder.

**5.5 Resignation.** The Escrow Agent may resign at any time and be discharged from its duties as escrow agent hereunder by its giving the other parties hereto written notice and such resignation shall become effective as hereinafter provided. Such resignation shall become effective at such time that the Escrow Agent shall turn over to a successor escrow agent mutually appointed by Parent Representative and the Stockholders' Representative, the Escrow Shares held hereunder. If no new escrow agent is so appointed within the 60 day period following the giving of such notice of resignation, the Escrow Agent may deposit the Escrow Shares with any court it deems appropriate.

**5.6 Discharge of Escrow Agent.** The Escrow Agent shall resign and be discharged from its duties as escrow agent hereunder if so requested in writing at any time by the other parties hereto, jointly, provided, however, that such resignation shall become effective only upon acceptance of appointment by a successor escrow agent as provided in Section 5.5 hereof.

**5.7 Liability.** Notwithstanding anything herein to the contrary, the Escrow Agent shall not be relieved from liability hereunder for its own gross negligence or its own willful misconduct.

## 6. Miscellaneous.

**6.1 Governing Law.** This Escrow Agreement shall for all purposes be deemed to be made under and shall be construed in accordance with the laws of the State of Delaware. Each of the parties hereby agrees that any action, proceeding or claim against it arising out of or relating in any way to this Escrow Agreement shall be brought and enforced in the courts of the State of Delaware, and irrevocably submits to such jurisdiction, which jurisdiction shall be exclusive. Each of the parties hereby waives any objection to such exclusive jurisdiction and that such courts represent an inconvenient forum.

**6.2 Entire Agreement.** This Escrow Agreement contains the entire agreement of the parties hereto with respect to the subject matter hereof and, except as expressly provided herein, may not be changed or modified except by an instrument in writing signed by the party to the charged.

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

**6.4 Binding Effect.** This Escrow Agreement shall be binding upon and inure to the benefit of the respective parties hereto and their legal representatives, successors and assigns.

6.5 *Notices.* Any notice or other communication required or which may be given hereunder shall be in writing and either be delivered personally or by private national courier service, or be mailed, certified or registered mail, return receipt requested, postage prepaid, and shall be deemed given when so delivered personally or, if sent by private national courier service, on the next business day after delivery to the courier, or, if mailed, two business days after the date of mailing, as follows:

If to Parent or Parent Representative, to:

Healthcare Acquisition Corp.

666 Walnut Street, Suite 2116  
Des Moines, Iowa 50309  
Attn: Matthew P. Kinley  
Phone: (515) 244-5746  
Fax: (515) 244-2346

With a copy to:

Ellenoff Grossman & Schole LLP  
370 Lexington Ave.  
New York, New York 10017  
Attn: Barry I. Grossman, Esq.  
Phone: (212) 370-1300  
Fax: (212) 370-7889

If to a Stockholder, to the Stockholders' Representative as follows:

MPM BioVentures III- QP, LP  
MPM Capital  
The John Hancock Tower  
200 Clarendon Street, 54<sup>th</sup> floor  
Boston, Massachusetts 02116  
Attn: Steven St. Peter  
Phone: (617) 425-9235  
Fax: (617) 425-9201

With a copy to:

Edwards Angell Palmer & Dodge LLP  
111 Huntington Avenue  
Boston, Massachusetts 02116  
Attn: James T. Barrett, Esq.  
Phone: (617)239-0385  
Fax: (617) 227-4420

and if to the Escrow Agent, to:

Continental Stock Transfer & Trust Company  
17 Battery Place  
New York, New York 10004  
Attn:  
Phone: (212) 509-4000  
Fax: (212) 509-5150

A copy of any notice sent hereunder shall be sent to:

PharmAthene, Inc.  
175 Admiral Cochrane Drive, Suite #101 Annapolis, MD 21401  
Attn: David P. Wright  
President & Chief Executive Officer  
Phone: (410) 571-8920



with a copy to

McCarter & English, LLP  
Four Gateway Center  
100 Mulberry Street  
Newark, New Jersey 07102  
Attn: Jeffrey A. Baumel, Esq.  
Phone: (973) 639-5904  
Fax: (973) 297-3814

The parties may change the persons and addresses to which the notices or other communications are to be sent by giving written notice to any such change in the manner provided herein for giving notice.

6.6 *Counterparts.* This Escrow Agreement may be executed in several counterparts each one of which shall constitute an original and may be delivered by facsimile transmission and together shall constitute one instrument.

[Signature Page Follows]

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WITNESS the execution of this Escrow Agreement as of the date first above written.

**HEALTHCARE ACQUISITION CORP.**

By: /s/ MATTHEW KINLEY

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Name: Matthew Kinley

Title: President

**MPM BIOVENTURES III—QP, LP**, Stockholders' Representative

By: /s/ ANSBERT GADICKE

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Name: Ansbert Gadicke

Title: Series A Member

**CONTINENTAL STOCK TRANSFER & TRUST COMPANY,**  
as Escrow Agent

By: /s/ STEVEN NELSON

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Name: Steven Nelson

Title: Chairman

/s/ JOHN PAPPAJOHN

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John Pappajohn, as Parent Representative

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[Exhibit 10.10](#)

[STOCK ESCROW AGREEMENT](#)

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**Exhibit 21**

**Subsidiaries**

<b>Entity Name</b>	<b>Jurisdiction of Organization</b>
PharmAthene US Corporation	Delaware
PharmAthene Canada, Inc.	Canada
PharmAthene UK Limited	United Kingdom

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[Exhibit 21](#)

[Subsidiaries](#)

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**Exhibit 23**

**Consent of Independent Registered Public Accounting Firm**

We consent to the incorporation by reference in the Registration Statement on Form S-3/A (No. 333-146463) of PharmAthene, Inc. and in the related Prospectus of our report dated March 31, 2008, with respect to the consolidated financial statements of PharmAthene, Inc. included in this Annual Report (Form 10-K) for the year-ended December 31, 2007.

/s/ Ernst & Young LLP  
McLean, Virginia  
March 31, 2008

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[Exhibit 23](#)

[Consent of Independent Registered Public Accounting Firm](#)

**CERTIFICATION**

I, David P. Wright, hereby certify that:

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

Date: March 31, 2008

/s/ David P. Wright

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David P. Wright  
Chief Executive Officer  
(Principal Executive Officer)



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[Exhibit 31.1](#)

[CERTIFICATION](#)

**CERTIFICATION**

I, Christopher C. Camut, hereby certify that:

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

Date: March 31, 2008

/s/ Christopher C. Camut

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Christopher C. Camut  
Chief Financial Officer  
(Principal Financial Officer and



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[Exhibit 31.2](#)

[CERTIFICATION](#)

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**Exhibit 32.1**

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of PharmAthene, Inc., a Delaware corporation (the "Company") on Form 10-K for the year ended December 31, 2007, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, David P. Wright, Chief Executive Officer of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

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

/s/ David P. Wright

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David P. Wright  
Chief Executive Officer

Date: March 31, 2008

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[Exhibit 32.1](#)

[CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002](#)

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of PharmAthene, Inc., a Delaware corporation (the "Company") on Form 10-K for the year ended December 31, 2007, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Christopher C. Camut, the Chief Financial Officer of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

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

/s/ Christopher C. Camut

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Christopher C. Camut  
Chief Financial Officer  
(Principal Financial Officer and  
Principal Accounting Officer)

Date: March 31, 2008

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[Exhibit 32.2](#)

[CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002](#)