

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, DC 20549

FORM 8-K

CURRENT REPORT  
Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): July 20, 2010

PHARMATHENE, INC.  
(Exact name of registrant as specified in its charter)

Delaware

001-32587

20-2726770

(State or other jurisdiction  
of incorporation)

(Commission  
File Number)

(IRS Employer  
Identification No.)

One Park Place, Suite 450, Annapolis, Maryland

21401

(Address of principal executive offices)

(Zip Code)

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

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
  - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
  - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
  - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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## Item 1.01 Entry Into a Material Definitive Agreement.

As of July 20, 2010, PharmAthene, Inc. (the “Company”) entered into a placement agency agreement (the “Placement Agency Agreement”) with Roth Capital Partners, LLC (the “Placement Agent”), relating to the Company’s registered offer and sale of shares of its common stock and warrants to purchase its common stock. A copy of the Placement Agency Agreement is attached as Exhibit 1.1 to this Current Report on Form 8-K, and is incorporated herein by reference.

The Company also entered into a Securities Purchase Agreement (the “Securities Purchase Agreement”) with an accredited investor. The Securities Purchase Agreement relates to the issuance and sale to this investor in a registered offering by the Company of an aggregate of 2,785,714 shares of its common stock, at a price of \$1.40 per share (each a “Share,” and, collectively, the “Shares”) and warrants (the “Warrants”) to purchase up to an additional 1,323,214 shares of common stock. The Company expects to receive gross proceeds of approximately \$3.9 million before placement agent fees and other expenses. The Securities Purchase Agreement contains representations, warranties, and covenants of the Company and the investor that are customary for transactions of this type. The Securities Purchase Agreement is attached as Exhibit 10.1 to this Current Report on Form 8-K, and is incorporated herein by reference.

The Warrants are exercisable beginning six months after their initial issuance at an exercise price of \$1.63 per share until the six-year anniversary of the initial exercise date. The exercise price and number of shares issuable upon exercise are subject to adjustment in the event of stock splits or dividends, business combinations, sale of assets or other similar transactions. A copy of the form of Warrant is attached as Exhibit 10.2 to this Current Report on Form 8-K, and is incorporated herein by reference.

The Company has also engaged Noble Financial Group, Inc. (“Noble”) to serve as its non-exclusive financial advisor in connection with the offer and sale of the Shares and Warrants. Pursuant to the Placement Agency Agreement, the Placement Agent will receive an aggregate fee of 7.0% of the gross proceeds from the offering, less a financial advisory fee of \$20,475 payable by the Company to Noble. The aggregate amount of placement fees payable to the Placement Agent is estimated to be \$273,000, before deduction of the financial advisory fee payable to Noble. In addition, the Company will reimburse the Placement Agent for expenses incurred in connection with the transaction (including reasonable attorney’s fees and expenses) up to \$45,000.

The description of the offering provided herein is qualified in its entirety by reference to the Placement Agency Agreement, the Securities Purchase Agreement and the form of Warrant. The Company has filed with the Securities and Exchange Commission (the “Commission”) the Placement Agency Agreement, the Securities Purchase Agreement and the form of Warrant to provide investors and the Company’s stockholders with information regarding their respective terms and in accordance with applicable rules and regulations of the Commission. Each of the two agreements contains representations and warranties that the parties made to, and solely for the benefit of, the other in the context of all of the terms and conditions of that agreement and in the context of the specific relationship between the parties. The provisions of the Placement Agency Agreement and the Securities Purchase Agreement, including the representations and warranties contained therein, are not for the benefit of any party other than the parties to such agreements and are not intended as documents for investors and the public to obtain factual information about the current state of affairs of the parties to those documents and agreements. Rather, investors and the public should look to other disclosures contained in the Company’s filings with the Commission.

The Shares are being issued pursuant to a prospectus supplement dated July 20, 2010, filed with the Commission pursuant to Rule 424(b) under the Securities Act, as part of a shelf takedown from the Company’s registration statement on Form S-3 (File No. 333-156997), including a related prospectus, which was declared effective by the Securities and Exchange Commission on February 12, 2009.

On July 20, 2010, the Company issued a press release announcing the execution of the Placement Agency Agreement and the Securities Purchase Agreement and the general terms of the securities being offered. The text of the press release is included as Exhibit 99.1 to this Form 8-K and is incorporated herein by reference.

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## Item 8.01 Other Events

At March 31, 2010, accounts receivables and other receivables (including unbilled receivables) totaled approximately \$16.9 million primarily due to delays in billing for services related to the SparVax™ second generation anthrax vaccine program and the normal payment cycles of the Company's U.S. Government customers. Although the Company has recently expedited the billing of its second generation anthrax vaccine program, a significant portion of these recently submitted invoices are still undergoing the review and approval process prior to being paid. In addition, the bid protest filed by a third party with the U.S. Government Accountability Office (GAO) in March 2010, challenging the decision by the U.S. Department of Health and Human Services (HHS) to enter into the modification to the Company's research and development contract with BARDA for the development of SparVax™ and resulting "stop-work" order, caused delays in the Company's work under that modification. The bid protest was ultimately denied, and the related stop work-order canceled in June 2010. Nevertheless, the protest, along with the accumulated billing and collection delays, have reduced revenues and the Company's available cash and cash equivalents. The combination of these two developments has reduced the Company's operating cash flows which has resulted in a need for additional financing to fund working capital needs.

Further, BARDA has expressed concerns regarding the Company's performance from April 1, 2009 (the date when the contract was transferred from NIAID to BARDA) through April 30, 2010 under the Company's existing contract for the development of SparVax™. The Company has been working closely with the agency to resolve the issues and believes that it has made significant progress in that regard. If, however, the Company is unable to perform adequately under this contract, it may be at increased risk that BARDA will curtail its activities under, or terminate, that contract.

## Item 9.01 Financial Statements and Exhibits

(d) The following exhibits are filed herewith:

<b>No.</b>	<b>Description</b>
1.1	Placement Agency Agreement dated as of July 20, 2010 by and among the Company and Roth Capital Partners, LLC
10.1	Form of Securities Purchase Agreement dated as of July 20, 2010 between the Company and the Investor
10.2	Form of Warrant
99.1	Press Release dated July 20, 2010

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**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

**PHARMATHENE, INC.**  
(Registrant)

Date: July 20, 2010

By: /s/ Charles A. Reinhart III

Charles A. Reinhart III

Senior Vice President and Chief Financial Officer

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**CONFIDENTIAL**

Roth Capital Partners, LLC  
24 Corporate Plaza  
Newport Beach, CA 92660

Ladies and Gentlemen:

This letter (the "Agreement") constitutes the agreement between Roth Capital Partners, LLC (in such capacity, "Roth" or the "Placement Agent") and PharmAthene, Inc. (the "Company") that Roth shall serve, on a "best efforts" basis, as the exclusive placement agent for the Company in connection with the proposed public offering placement (the "Placement") of registered securities of the Company, consisting of shares (the "Shares") of the Company's common stock, par value \$0.0001 per share (the "Common Stock") and warrants (the "Warrants") to purchase shares of the Company's Common Stock. The terms of such Placement and the Securities shall be mutually agreed upon by the Company and the purchasers (each a "Purchaser" and, collectively, the "Purchasers"), and nothing herein constitutes an agreement of the parties that Roth would have the power or authority to bind the Company or any Purchaser or an obligation for the Company to issue any Securities or complete the Placement. The shares of Common Stock issuable upon exercise of the Warrants are hereinafter referred to as the "Warrant Shares" and the Shares, the Warrants and the Warrant Shares are hereinafter referred to as the "Securities." The sale of the Securities shall be made pursuant to securities purchase agreement in the form included as Exhibit A hereto (the "Purchase Agreement"), on the terms described on Exhibit B hereto. The Warrants shall be in substantially the form of Exhibit A to the Purchase Agreement. The Securities are more fully described in the Prospectus Supplement (as defined below). This Agreement and the documents executed and delivered by the Company and the Purchasers in connection with the Placement shall be collectively referred to herein as the "Transaction Documents." The date of the closing of the Placement shall be referred to herein as the "Closing Date." The Company expressly acknowledges and agrees that Roth's obligations hereunder are on a commercially reasonable best efforts basis only and that the execution of this Agreement neither constitutes a commitment by Roth to purchase the Securities nor ensures the successful placement of the Securities or any portion thereof.

**SECTION 1. COMPENSATION AND OTHER FEES.**

As compensation for the services provided by Roth hereunder, the Company agrees as follows:

(A) As compensation for services rendered, on the Closing Date the Company shall (i) pay to the Placement Agent by wire transfer of immediately available funds to an account or accounts designated by the Placement Agent, a cash fee (the "Placement Agent's Fee") equal to seven percent (7.0%) of the gross proceeds received by the Company from the sale of the Shares and Warrants on such Closing Date, less a financial advisory fee of \$20,475 payable by the Company to Noble Financial Group, Inc.

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(B) The Company, whether or not the transactions contemplated hereunder are consummated or this Agreement is terminated, will pay or reimburse if paid by the Placement Agent all actual out-of-pocket costs and expenses incident to the performance of the obligations of the Company under this Agreement and in connection with the transactions contemplated hereby, including but not limited to costs and expenses of or relating to (i) the preparation, printing, filing, delivery and shipping of the Registration Statement and the Prospectus Supplement, and any amendment or supplement to any of the foregoing and the printing and furnishing of copies of each thereof to the Placement Agent and dealers (including costs of mailing and shipment), (ii) the registration, issue, sale and delivery of the Securities including any stock or transfer taxes and stamp or similar duties payable upon the sale, issuance or delivery of the Securities and the printing, delivery, and shipping of the certificates representing the Securities, (iii) the fees and expenses of any transfer agent or registrar for the Shares and Warrant Shares, (iv) the filing fees required to be paid by the Placement Agent or the Company with the Financial Industry Regulatory Authority (“FINRA”) (including all COBRADesk fees), (v) fees, disbursements and other charges of counsel to the Company (vi) listing fees, if any, for the listing or quotation of the Shares and Warrant Shares on the NYSE Amex, (vii) fees and disbursements of the Company’s auditor, and (viii) reasonable fees and disbursements of counsel to the Placement Agent. Notwithstanding the foregoing, the expenses of the Placement Agent (other than the filing fees set forth in clause (iv) above), including attorneys fees and expenses, which the Company shall be obligated to reimburse hereunder shall not exceed (x) \$15,000 for all expenses other than attorneys fees and expenses and (y) \$30,000 for the Placement Agent’s attorneys fees and expenses. In no event shall the total compensation payable to the Placement Agent and any other FINRA member or independent broker-dealer (including any financial advisor) in connection with the sale of the Securities (including any expense reimbursement) exceed 8% of the gross proceeds received by the Company from the sale of the Securities.

## SECTION 2. REGISTRATION STATEMENT.

The Company represents and warrants to, and agrees with, the Placement Agent as follows:

(A) The Company has filed with the Securities and Exchange Commission (the “Commission”) a registration statement on Form S-3 (Registration File No. 333-156997) under the Securities Act of 1933, as amended (the “Securities Act”), which became effective on February 12, 2009, for the registration under the Securities Act of the Shares and Warrants. At the time of such filing, the Company met the requirements of Form S-3 under the Securities Act. Such registration statement meets the requirements set forth in Rule 415(a)(1)(x) under the Securities Act and complies with said rule. The Company will file with the Commission, pursuant to Rule 424(b) under the Securities Act, and the rules and regulations (the “Rules and Regulations”) of the Commission promulgated under this Act, a supplement to the form of prospectus included in such registration statement relating to the placement of the Shares and Warrants and the plan of distribution thereof and has advised the Placement Agent of all further information (financial and other) with respect to the Company required to be set forth therein. Such registration statement, including the exhibits thereto, as amended at the date of this Agreement, is hereinafter called the “Registration Statement”; such prospectus in the form in which it appears in the Registration Statement is hereinafter called the “Base Prospectus”; and the supplemented form of prospectus, in the form in which it will be filed with the Commission pursuant to Rule 424(b) (including the Base Prospectus as so supplemented), is hereinafter called the “Prospectus Supplement.” Any reference in this Agreement to the Registration Statement, the Base Prospectus or the Prospectus Supplement shall be deemed to refer to and include the documents incorporated by reference therein (the “Incorporated Documents”) pursuant to Item 12 of Form S-3 which were filed under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), on or before the date of this Agreement or the issue date of the Base Prospectus or the Prospectus Supplement, as the case may be; and any reference in this Agreement to the terms “amend,” “amendment” or “supplement,” with respect to the Registration Statement, the Base Prospectus or the Prospectus Supplement, shall be deemed to refer to and include the filing of any document under the Exchange Act after the date of this Agreement or the issue date of the Base Prospectus or the Prospectus Supplement, as the case may be, deemed to be incorporated therein by reference. All references in this Agreement to financial statements and schedules and other information that is “contained,” “included,” “described,” “referenced,” “set forth” or “stated” in the Registration Statement, the Base Prospectus or the Prospectus Supplement (and all other references of like import) shall be deemed to mean and include all such financial statements and schedules and other information that is, or is deemed to be, incorporated by reference in the Registration Statement, the Base Prospectus or the Prospectus Supplement, as the case may be. No stop order suspending the effectiveness of the Registration Statement or the use of the Base Prospectus has been issued, and no proceeding for any such purpose is pending or has been initiated or, to the Company’s knowledge, is threatened by the Commission. For purposes of this Agreement, “Time of Sale Prospectus” means the preliminary prospectus supplement used in connection with the Placement, including any documents incorporated by reference therein.

(B) The Registration Statement (and any further documents to be filed in connection therewith by the Company with the Commission) contains all exhibits and schedules as required by the Securities Act. The Registration Statement, at the time it became effective, complied in all material respects with the Securities Act and the applicable Rules and Regulations and did not—and, as amended or supplemented, if applicable, will not, as of the effective date of such amendment or supplement, contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; *provided, however*, that this representation and warranty shall not apply to any written statements or omissions made in reliance upon information furnished to the Company by Roth expressly for use therein. The Base Prospectus, the Time of Sale Prospectus, if any, and the Prospectus Supplement, each as of its respective date, comply in all material respects with the Securities Act and the applicable Rules and Regulations. Each of the Base Prospectus, the Time of Sale Prospectus, if any, and the Prospectus Supplement, as amended or supplemented, did not and will not contain as of the date thereof any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading; *provided, however*, that this representation and warranty shall not apply to any statements or omissions made in reliance upon written information furnished to the Company by Roth expressly for use therein. The Incorporated Documents, when they were filed with the Commission, conformed in all material respects to the requirements of the Exchange Act and the applicable Rules and Regulations, and none of such documents, when filed with the Commission, contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein (with respect to Incorporated Documents incorporated by reference in the Base Prospectus or Prospectus Supplement), in light of the circumstances under which they were made, not misleading; and any further documents so filed and incorporated by reference in the Base Prospectus, the Time of Sale Prospectus, if any, or Prospectus Supplement, when such documents are filed with the Commission, will conform in all material respects to the requirements of the Exchange Act and the applicable Rules and Regulations, as applicable, and will not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading; *provided, however*, that this representation and warranty shall not apply to any statements or omissions made in reliance upon written information furnished to the Company by Roth expressly for use therein. No post-effective amendment to the Registration Statement reflecting any facts or events arising after the date thereof but prior to the date hereof that represent, individually or in the aggregate, a fundamental change in the information set forth therein is required to be filed with the Commission. There are no documents required to be filed with the Commission in connection with the Placement that (x) have not been filed as required pursuant to the Securities Act or (y) will not be filed within the requisite time period. There are no contracts or other documents required to be described in the Base Prospectus, the Time of Sale Prospectus, if any, or Prospectus Supplement, or to be filed as exhibits or schedules to the Registration Statement, that have not been described or filed as required.

(C) The Company has delivered, or will as promptly as practicable deliver, to the Placement Agent complete conformed copies of the Registration Statement and of each consent and certificate of experts, as applicable, filed as a part thereof, and conformed copies of the Registration Statement (without exhibits), the Base Prospectus, the Time of Sale Prospectus and the Prospectus Supplement, as amended or supplemented, in such quantities and at such places as the Placement Agent reasonably requests. Neither the Company nor any of its directors and officers has distributed, and none of them will distribute, prior to the Closing Date, any offering material in connection with the offering and sale of the Shares and Warrants other than the Base Prospectus, the Time of Sale Prospectus, the Prospectus Supplement, the Registration Statement, copies of the documents incorporated by reference therein and any other materials permitted by the Securities Act.

SECTION 3. REPRESENTATIONS AND WARRANTIES.

Except as set forth under the corresponding section of the Disclosure Schedules, which shall be deemed a part hereof, the Company hereby makes the representations and warranties set forth below to the Placement Agent.

(A) Organization and Qualification. All of the direct and indirect subsidiaries (individually, a “Subsidiary”) of the Company are set forth on Schedule 3(A). The Company owns, directly or indirectly, all of the capital stock or other equity interests of each Subsidiary free and clear of any “Liens” (which, for purposes of this Agreement, shall mean a lien, charge, security interest, encumbrance, right of first refusal, preemptive right or other restriction), and all the issued and outstanding shares of capital stock of each Subsidiary are validly issued and are fully paid, non-assessable and free of preemptive and similar rights to subscribe for or purchase securities. Each of the Company and each Subsidiary is an entity duly incorporated or otherwise organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization (as applicable), with the requisite power and authority to own and use its properties and assets and to carry on its business as currently conducted. Neither the Company nor any Subsidiary is in violation or default of any of the provisions of its respective certificate or articles of incorporation, bylaws or other organizational or charter documents. Each of the Company and the Subsidiaries is duly qualified to conduct business and is in good standing as a foreign corporation or other entity in each jurisdiction in which the nature of the business conducted or property owned by it makes such qualification necessary, except where the failure to be so qualified or in good standing, as the case may be, could not have or reasonably be expected to result in (i) a material adverse effect on the legality, validity or enforceability of any Transaction Document, (ii) a material adverse effect on the results of operations, assets, business or condition (financial or otherwise) of the Company and the Subsidiaries, taken as a whole, or (iii) a material adverse effect on the Company’s ability to perform, in any material respect and on a timely basis, its obligations under any Transaction Document (any of clauses (i), (ii) or (iii), a “Material Adverse Effect”, and no “Proceeding” (which, for purposes of this Agreement, shall mean any action, claim, suit, investigation or proceeding (including, without limitation, an investigation or partial proceeding, such as a deposition), whether commenced or, to the Company’s knowledge, threatened) has been instituted in any such jurisdiction revoking, limiting or curtailing, or seeking to revoke, limit or curtail, such power and authority or qualification.

(B) Authorization; Enforcement. The Company has the requisite corporate power and authority to enter into and to consummate the transactions contemplated by each of the Transaction Documents and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of each of the Transaction Documents by the Company and the consummation by it of the transactions contemplated thereby have been duly authorized by all necessary action on the part of the Company, and no further action is required by the Company, the Company’s board of directors (the “Board of Directors”) or the Company’s stockholders in connection therewith other than in connection with the Required Approvals (as defined in subsection 3(D) below). Each Transaction Document has been (or upon delivery will have been) duly executed by the Company and, when delivered in accordance with the terms hereof and thereof, will constitute the valid and binding obligation of the Company enforceable against the Company in accordance with its terms except (i) as limited by applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors’ rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.



(C) **No Conflicts.** The execution, delivery and performance of the Transaction Documents by the Company, the issuance and sale of the Shares and Warrants and the consummation by the Company of the other transactions contemplated hereby and thereby do not and will not (i) conflict with or violate any provision of the Company's or any Subsidiary's certificate or articles of incorporation, bylaws or other organizational or charter documents, or (ii) result in the creation of any Lien upon any of the properties or assets of the Company or any Subsidiary, or give to others any rights of termination, amendment, acceleration or cancellation (with or without notice, lapse of time or both) of, or conflict with, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, any agreement, credit facility, debt or other instrument (evidencing a Company or Subsidiary debt or otherwise) or other understanding to which the Company or any Subsidiary is a party or by which any property or asset of the Company or any Subsidiary is bound or affected, or (iii) subject to the Required Approvals, conflict with or result in a violation of any law, rule, regulation, order, judgment, injunction, decree or other restriction of any court or governmental authority to which the Company or a Subsidiary is subject (including federal and state securities laws and regulations), or by which any property or asset of the Company or a Subsidiary is bound or affected, except, in the case of each of clauses (ii) and (iii), such as could not have or reasonably be expected to result in a Material Adverse Effect.

(D) **Filings, Consents and Approvals.** The Company is not required to obtain any consent, waiver, authorization or order of, give any notice to, or make any filing or registration with, any court or other federal, state, local or other governmental authority or other individual, corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind, including, without limitation, any Trading Market (as defined below) (collectively, "Persons") in connection with the execution, delivery and performance by the Company of the Transaction Documents, other than such filings as are required to be made under applicable federal and state securities laws (collectively, the "Required Approvals").

(E) **Issuance of the Securities; Registration.** The Shares and Warrants are duly authorized and, when issued and paid for in accordance with the applicable Transaction Documents (i) the Shares will be duly and validly issued, fully paid and nonassessable, free and clear of all Liens imposed by the Company and (ii) the Warrants will be duly and validly issued, free and clear of all Liens imposed by the Company. The Warrant Shares, when issued in accordance with the terms of the Warrants, will be validly issued, fully paid and nonassessable, free and clear of all Liens imposed by the Company. The Company has reserved from its duly authorized capital stock the maximum number of shares of Common Stock issuable pursuant to the Transaction Documents. The issuance by the Company of the Securities has been registered under the Securities Act and all of the Securities, when issued in accordance with the Transaction Documents and the plan of distribution described in the Registration Statement, Base Prospectus and Time of Sale Prospectus, will be freely transferable and tradable by the Purchasers without restriction (other than any restrictions arising solely from an act or omission of a Purchaser). The Registration Statement is effective and available for the issuance of the Securities thereunder, and the Company has not received any notice that the Commission has issued or intends to issue a stop order with respect to the Registration Statement or that the Commission otherwise has suspended or withdrawn the effectiveness of the Registration Statement, either temporarily or permanently, or intends or has threatened in writing to do so. The "Plan of Distribution" section under the Registration Statement, as amended or supplemented by a post-effective amendment thereto or by the Base Prospectus and Time of Sale Prospectus, permits the issuance and sale of the Securities as contemplated hereunder. Upon issuance of the Securities on the terms set forth in the Purchase Agreement, the Purchasers will have good and marketable title to such Securities and the Shares will be listed and authorized for trading on the "Trading Market" (which, for purposes of this Agreement, shall mean the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the Nasdaq Capital Market, the NYSE Amex, the New York Stock Exchange, the Nasdaq National Market or the OTC Bulletin Board).

(F) **Capitalization.** The capitalization of the Company is as set forth on Schedule 3(F). The Company has not issued any capital stock since its most recently filed periodic report under the Exchange Act, other than pursuant to the exercise of stock options under the Company's stock option plans, the issuance of shares of Common Stock to employees pursuant to the Company's employee stock purchase plan and pursuant to the conversion or exercise of securities exercisable, exchangeable or convertible into Common Stock ("Common Stock Equivalents"). No Person has any right of first refusal, preemptive right, right of participation or any similar right to participate in the transactions contemplated by the Transaction Documents. Except as described in the Company's SEC Reports, there are no outstanding options, warrants, scrip rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities, rights or obligations convertible into or exercisable or exchangeable for, or giving any Person any right to subscribe for or acquire, any shares of Common Stock, or contracts, commitments, understandings or arrangements by which the Company or any Subsidiary is or may become bound to issue additional shares of Common Stock or Common Stock Equivalents, other than as a result of the purchase and sale of the Shares and Warrants. The issuance and sale of the Shares and Warrants will not obligate the Company to issue shares of Common Stock or other securities to any Person (other than the Purchasers) and will not result in a right of any holder of Company securities to adjust the exercise, conversion, exchange or reset price under such securities. All of the outstanding shares of capital stock of the Company are validly issued, fully paid and nonassessable. No further approval or authorization of any stockholder, the Board of Directors or others is required for the issuance and sale of the Securities. There are no stockholders agreements, voting agreements or other similar agreements with respect to the Company's capital stock to which the Company is a party or, to the knowledge of the Company, between or among any of the Company's stockholders that are not described in the SEC Reports.

(G) **SEC Reports; Financial Statements.** The Company has complied in all material respects with requirements to file all reports, schedules, forms, statements and other documents required to be filed by it under the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, for the two years preceding the date hereof (or such shorter period as the Company was required by law to file such material) (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, being collectively referred to herein as the "SEC Reports") on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Reports prior to the expiration of any such extension. As of their respective dates, the SEC Reports complied in all material respects with the requirements of the Exchange Act and the rules and regulations of the Commission promulgated thereunder, and none of the SEC Reports, when filed, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The financial statements of the Company included in the SEC Reports comply in all material respects with applicable accounting requirements and the rules and regulations of the Commission with respect thereto as in effect at the time of filing. Such financial statements have been prepared in accordance with United States generally accepted accounting principles applied on a consistent basis during the periods involved ("GAAP"), except as may be otherwise specified in such financial statements or the notes thereto and except to the extent that unaudited financial statements may not contain all footnotes required by GAAP, and such statements fairly present in all material respects the financial position of the Company and its consolidated subsidiaries as of and for the dates thereof and the results of operations and cash flows for the periods then ended, subject, in the case of unaudited statements, to normal, immaterial, year-end audit adjustments.

(H) **Material Changes; Undisclosed Events, Liabilities or Developments.** Since the date of the latest audited financial statements included the SEC Reports, except as specifically disclosed in a subsequent SEC Report filed prior to the date hereof, (i) there has been no event, occurrence or development that has had, or that could reasonably be expected to result in, a Material Adverse Effect, (ii) the Company has not incurred any liabilities (contingent or otherwise) other than (A) trade payables and accrued expenses incurred in the ordinary course of business consistent with past practice and (B) liabilities not required to be reflected in the Company's financial statements pursuant to GAAP or required to be disclosed in filings made with the Commission, (iii) the Company has not altered its method of accounting, (iv) the Company has not declared or made any dividend or distribution of cash or other property to its stockholders or purchased, redeemed or made any agreements to purchase or redeem any shares of its capital stock and (v) the Company has not issued any equity securities to any officer, director or "Affiliate" (defined as any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 144 under the Securities Act), except pursuant to existing Company stock option plans. As of the date hereof, the Company does not have pending before the Commission any request for confidential treatment of information. Except for the issuance of the Securities contemplated by this Agreement or as set forth on Schedule 3(H), no event, liability or development has occurred or exists, with respect to the Company or its Subsidiaries or their respective business, properties, operations or financial condition, that would be required to be disclosed by the Company under applicable securities laws at the time this representation is made that has not been publicly disclosed at least one Trading Day (defined as a day on which the applicable Trading Market is open for trading) prior to the date on which this representation is made.

(I) Litigation. There is no action, suit, inquiry, notice of violation, Proceeding or investigation pending or, to the knowledge of the Company, threatened against or affecting the Company, any Subsidiary or any of their respective properties before or by any court, arbitrator, governmental or administrative agency or regulatory authority (federal, state, county, local or foreign) (collectively, an “Action”) (i) adversely affects or challenges the legality, validity or enforceability of any of the Transaction Documents or the Securities or (ii) could, if there were an unfavorable decision, reasonably be expected to result in a Material Adverse Effect. Neither the Company nor any Subsidiary, nor any director or officer thereof, is or has been the subject of any Action involving a claim of violation of or liability under federal or state securities laws or a claim of breach of fiduciary duty. There has not been, and, to the knowledge of the Company, there is not pending or contemplated, any investigation by the Commission involving the Company or any current or former director or officer of the Company. No executive officer, to the knowledge of the Company, is, or is now expected to be, in violation of any material term of any employment contract, confidentiality, disclosure or proprietary information agreement or non-competition agreement, or any other contract or agreement or any restrictive covenant, and the continued employment of each such executive officer does not subject the Company or any of its Subsidiaries to any material liability with respect to any of the foregoing matters. The Company and its Subsidiaries are in compliance with all U.S. federal, state, local and foreign laws and regulations relating to employment and employment practices, terms and conditions of employment and wages and hours, except where the failure to be in compliance could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(J) Labor Relations. None of the Company’s or its Subsidiaries’ employees is a member of a union that relates to such employee’s relationship with the Company, neither the Company nor any of its Subsidiaries is a party to a collective bargaining agreement, and the Company and its Subsidiaries believe that their relationships with their employees are good. No material labor dispute exists or, to the knowledge of the Company, is imminent with respect to any of the employees of the Company that could reasonably be expected to result in a Material Adverse Effect.

(K) Compliance. Neither the Company nor any Subsidiary (i) is in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by the Company or any Subsidiary under), nor has the Company or any Subsidiary received notice of a claim that it is in default under or that it is in violation of, any indenture, loan or credit agreement or any other agreement or instrument to which it is a party or by which it or any of its properties is bound (whether or not such default or violation has been waived), (ii) is in violation of any order of any court, arbitrator or governmental body or (iii) is or has been in violation of any statute, rule or regulation of any governmental authority, including, without limitation, all foreign, federal, state and local laws applicable to its business and all such laws that affect the environment, except in each case as could not reasonably be expected to have a Material Adverse Effect.

(L) Regulatory Permits. The Company and the Subsidiaries possess all certificates, authorizations and permits issued by the appropriate federal, state, local or foreign regulatory authorities necessary to conduct their respective businesses as described in the SEC Reports, except where the failure to possess such permits could not reasonably be expected to result in a Material Adverse Effect (“Material Permits”), and neither the Company nor any Subsidiary has received any notice of proceedings relating to the revocation or modification of any Material Permit.

(M) Title to Assets. The Company and the Subsidiaries have good and marketable title in fee simple to all real property owned by them that is material to the business of the Company and the Subsidiaries and good and marketable title to all personal property owned by them that is material to the business of the Company and the Subsidiaries, in each case free and clear of all Liens, except for Liens as do not materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company and the Subsidiaries and Liens for the payment of federal, state or other taxes, the payment of which is neither delinquent nor subject to penalties. Any real property and facilities held under lease by the Company and the Subsidiaries are held by them under valid, subsisting and enforceable leases of which the Company and the Subsidiaries are in compliance with such exceptions as are not material and do not materially interfere with the use made and proposed to be made of such property and building by the Company and the Subsidiaries.

(N) Patents and Trademarks. Except as set forth in the SEC Reports, to its knowledge the Company and the Subsidiaries have, or have rights to use, all patents, patent applications, trademarks, trademark applications, service marks, trade names, trade secrets, inventions, copyrights, licenses and other similar intellectual property rights necessary or material for use in connection with their respective businesses as described in the SEC Reports and which the failure to so have could reasonably be expected to have a Material Adverse Effect (collectively, the “Intellectual Property Rights”). Neither the Company nor any Subsidiary has received a notice (written or otherwise) from a third party that the Intellectual Property Rights used by the Company or any Subsidiary violates or infringes upon the rights of such third party. The Company also has no knowledge of existing infringement by another Person of any of the Intellectual Property Rights of the Company or its Subsidiaries. The Company and its Subsidiaries have taken reasonable security measures to protect the secrecy and confidentiality of their confidential information, except where the failure to do so could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(O) Insurance. The Company and the Subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as are prudent and customary in the businesses in which the Company and the Subsidiaries are engaged, including, but not limited to, directors and officers insurance coverage at least equal to the aggregate subscription amount under the Transaction Documents. To the knowledge of the Company, such insurance contracts and policies are accurate and complete. Neither the Company nor any Subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business without a significant increase in cost.

(P) Transactions with Affiliates and Employees. Except as set forth in the SEC Reports, none of the officers, directors or, to the knowledge of the Company, employees of the Company is presently a party to any transaction with the Company or any Subsidiary (other than for services as employees, officers and directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, or otherwise requiring payments to or from any officer, director or such employee or, to the knowledge of the Company, any entity in which any officer, director, or any such employee has a substantial interest or is an officer, director, trustee or partner, other than (i) for payment of salary or consulting fees for services rendered, (ii) reimbursement for expenses incurred on behalf of the Company and (iii) for other employee benefits, including stock option agreements under any stock option plan of the Company.

(Q) Sarbanes-Oxley. The Company is in material compliance with all provisions of the Sarbanes-Oxley Act of 2002 that are applicable to it as of the date hereof and the Closing Date.

(R) Certain Fees. Except as otherwise provided in this Agreement, no brokerage or finder's fees or commissions are or will be payable by the Company to any broker, financial advisor or consultant, finder, placement agent, investment banker, bank or other Person with respect to the transactions contemplated by the Transaction Documents. The Purchasers shall have no obligation with respect to any fees or with respect to any claims made by or on behalf of other Persons for fees of a type contemplated in this section that may be due in connection with the transactions contemplated by the Transaction Documents.

(S) Trading Market Rules. The issuance and sale of the Shares and Warrants hereunder does not contravene the rules and regulations of the Trading Market.

(T) Investment Company. The Company is not, is not an Affiliate of and, immediately after receipt of payment for the Shares and Warrants, will not be, or be an Affiliate of, an "investment company" within the meaning of the Investment Company Act of 1940, as amended.

(U) Registration Rights. No Person has any right to cause the Company to effect the registration under the Securities Act of any securities of the Company as a result of the transactions contemplated by this Agreement.

(V) Listing and Maintenance Requirements. The Company's Common Stock is registered pursuant to Section 12(b) or 12(g) of the Exchange Act, and the Company has taken no action designed to, or that to its knowledge is likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act, nor has the Company received any notification that the Commission is contemplating terminating such registration. The Company has not, in the twelve (12) months preceding the date hereof, received notice from any Trading Market on which the Common Stock is or has been listed or quoted to the effect that the Company is not in compliance with the listing or maintenance requirements of such Trading Market. The Company is in compliance with all such listing and maintenance requirements. The issuance and listing of the Shares on the NYSE Amex requires no further approval of the Company's shareholders.

(W) Application of Takeover Protections. The Company and the Board of Directors will take all action the Board of Directors determines appropriate, if any, in order to render inapplicable any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Company's Certificate of Incorporation (or similar charter documents) or the laws of its state of incorporation that could reasonably be expected to become applicable to the Purchasers as a result of the Purchasers and the Company fulfilling their obligations or exercising their rights under the Transaction Documents, including, without limitation, as a result of the Company's issuance of the Shares and Warrants and the Purchasers' ownership of the Shares and Warrants.

(X) Tax Status. Except for matters that would not, individually or in the aggregate, have or reasonably be expected to result in a Material Adverse Effect, the Company and each Subsidiary has filed all necessary federal, state and foreign income and franchise tax returns and has paid or accrued all taxes shown as due thereon, and the Company has no knowledge of a tax deficiency that has been asserted or threatened against the Company or any Subsidiary.

(Y) Foreign Corrupt Practices. Neither the Company nor, to the knowledge of the Company, any agent or other person acting on behalf of the Company has (i) directly or indirectly, used any funds for unlawful contributions, gifts, entertainment or other unlawful expenses related to foreign or domestic political activity, (ii) made any unlawful payment to foreign or domestic government officials or employees or to any foreign or domestic political parties or campaigns from corporate funds, (iii) failed to disclose fully any contribution made by the Company (or made by any person acting on its behalf of which the Company is aware) that is in violation of law or (iv) violated in any material respect any provision of the Foreign Corrupt Practices Act of 1977, as amended.

(Z) Accountants. The Company's independent registered public accounting firm is identified on Schedule 3(Z) of the Disclosure Schedule and such firm is a registered public accounting firm as required by the Securities Act.

(AA) Regulation M Compliance. The Company has not, and to its knowledge no one acting on its behalf has, (i) taken, directly or indirectly, any action designed to cause or to result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of any of the Securities, (ii) sold, bid for, purchased, or, paid any compensation for soliciting purchases of, any of the Securities (other than for the placement agent's placement of the Securities) or (iii) paid or agreed to pay to any person any compensation for soliciting another to purchase any other securities of the Company.

(BB) FINRA Affiliations. There are no affiliations with any FINRA member firm among the Company's officers, directors or, to the Company's knowledge, any five percent (5%) or greater stockholder of the Company, except as set forth in the Base Prospectus.

SECTION 4. INDEMNIFICATION. The Company agrees to the indemnification and other agreements set forth in the Indemnification Provisions (the "Indemnification") attached hereto as Addendum A, the provisions of which are incorporated herein by reference and shall survive the termination or expiration of this Agreement.

SECTION 5. ENGAGEMENT TERM. Roth's engagement hereunder will be for the period of forty-five (45) days. Notwithstanding anything to the contrary contained herein, the provisions concerning confidentiality, indemnification, contribution and the Company's obligations to pay fees actually earned and reimburse actual expenses incurred and payable contained herein and the Company's obligations contained in the Indemnification Provisions will survive any expiration or termination of this Agreement. Roth agrees not to use any confidential information concerning the Company provided to them by the Company for any purposes other than those contemplated under this Agreement.

SECTION 6. ROTH INFORMATION. The Company agrees that any information or advice rendered by Roth in connection with this engagement is for the confidential use of the Company only in their evaluation of the Placement and that, except as otherwise required by law, the Company will not disclose or otherwise refer to such advice or information in any manner without Roth's prior written consent. Notwithstanding the foregoing, to the extent required, the Company may file this Agreement and any Transaction Document with the Commission in any filing made by the Company pursuant to the Securities Act, the Exchange Act or the rules and regulations thereunder, and may refer to Roth's engagement hereunder and the terms of this Agreement in any such filing (including any exhibit thereto).

SECTION 7. NO FIDUCIARY RELATIONSHIP. This Agreement does not create, and shall not be construed as creating rights enforceable by any person or entity not a party hereto, except those entitled hereto by virtue of the Indemnification Provisions hereof. The Company acknowledges and agrees that Roth is not and shall not be construed as a fiduciary of the Company and shall have no duties or liabilities to the equity holders or the creditors of the Company or any other person by virtue of this Agreement or the retention of Roth hereunder, all of which duties and liabilities are hereby expressly waived.

**SECTION 8. CLOSING.** The obligations of the Placement Agent, and the closing of the sale of the Shares and Warrants hereunder are subject to the accuracy, when made and on the Closing Date, of the representations and warranties on the part of the Company and its Subsidiaries contained herein, to the accuracy of the statements of the Company and its Subsidiaries made in any certificates pursuant to the provisions hereof, to the performance by the Company and its Subsidiaries of their obligations hereunder, and to each of the following additional terms and conditions:

(A) No stop order suspending the effectiveness of the Registration Statement shall have been issued and no proceedings for that purpose shall have been initiated or threatened by the Commission, and any request for additional information on the part of the Commission (to be included in the Registration Statement, the Base Prospectus or the Prospectus Supplement or otherwise) shall have been complied with to the reasonable satisfaction of the Placement Agent.

(B) The Placement Agent shall not have discovered and disclosed to the Company on or prior to the Closing Date that the Registration Statement, the Base Prospectus or the Prospectus Supplement or any amendment or supplement thereto contains an untrue statement of a fact which is material or omits to state any fact which is material and is required to be stated therein or is necessary to make the statements therein not misleading.

(C) All corporate proceedings and other legal matters incident to the authorization, form, execution, delivery and validity of each of this Agreement, the Securities, the Registration Statement, the Base Prospectus and the Prospectus Supplement and all other legal matters relating to this Agreement and the transactions contemplated hereby shall be reasonably satisfactory in all material respects to counsel for the Placement Agent, and the Company shall have furnished to such counsel all documents and information that they may reasonably request to enable them to pass upon such matters.

(D) The Placement Agent shall have received from outside counsel to the Company such counsel's written opinion, addressed to the Placement Agent and the Purchasers dated as of the Closing Date, in form and substance reasonably satisfactory to the Placement Agent and a customary "negative assurances" statement from such counsel.

(E) (i) Neither the Company nor any of its Subsidiaries shall have sustained, since the date of the latest audited financial statements included or incorporated by reference in the Base Prospectus, any loss or interference with its business from fire, explosion, flood, terrorist act or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth in or contemplated by the Base Prospectus, and (ii) since such date there shall not have been any change in the capital stock or long-term debt of the Company or any of its Subsidiaries or any change, or any development involving a prospective change, in or affecting the business, general affairs, management, financial position, stockholders' equity or results of operations of the Company and its Subsidiaries, otherwise than as set forth in or contemplated by the Base Prospectus, the effect of which, in any such case described in clause (i) or (ii), is, in the judgment of the Placement Agent, so material and adverse as to make it impracticable or inadvisable to proceed with the sale or delivery of the Shares and Warrants on the terms and in the manner contemplated by the Base Prospectus, the Time of Sale Prospectus and the Prospectus Supplement.

(F) The Common Stock is registered under the Exchange Act, and, as of the Closing Date, the Shares shall be listed and admitted and authorized for trading on the NYSE Amex, and satisfactory evidence of such actions shall have been provided to the Placement Agent. The Company shall have taken no action designed to terminate, or likely to have the effect of terminating, the registration of the Common Stock under the Exchange Act or delist or suspend, or likely to have the effect of delisting or suspending, from trading the Common Stock from the NYSE Amex, nor has the Company received any information suggesting that the Commission or the NYSE Amex is contemplating terminating such registration or listing.

(G) Subsequent to the execution and delivery of this Agreement, there shall not have occurred any of the following: (i) trading in securities generally on the New York Stock Exchange, the Nasdaq National Market or the NYSE Amex or in the over-the-counter market, or trading in any securities of the Company on any exchange or in the over-the-counter market, shall have been suspended or minimum or maximum prices or maximum ranges for prices shall have been established on any such exchange or such market by the Commission, by such exchange or by any other regulatory body or governmental authority having jurisdiction, (ii) a banking moratorium shall have been declared by federal or state authorities or a material disruption has occurred in commercial banking or securities settlement or clearance services in the United States, (iii) the United States shall have become engaged in hostilities in which it is not currently engaged or the subject of an act of terrorism, there shall have been an escalation in hostilities involving the United States, or there shall have been a declaration of a national emergency or war by the United States or (iv) there shall have occurred any other calamity or crisis or any change in general economic, political or financial conditions in the United States or elsewhere, if the effect of any such event in clause (iii) or (iv) makes it, in the reasonable judgment of the Placement Agent, impracticable or inadvisable to proceed with the sale or delivery of the Shares and Warrants on the terms and in the manner contemplated by the Base Prospectus, the Time of Sale Prospectus and the Prospectus Supplement.

(H) No action shall have been taken, and no statute, rule, regulation or order shall have been enacted, adopted or issued by any governmental agency or body, that would, as of the Closing Date, prevent the issuance or sale of the Shares and Warrants or materially and adversely affect or potentially materially and adversely affect the business or operations of the Company; and no injunction, restraining order or order of any other nature by any federal or state court of competent jurisdiction shall have been issued as of the Closing Date that would prevent the issuance or sale of the Shares and Warrants or materially and adversely affect or potentially materially and adversely affect the business or operations of the Company.

(I) The Company shall have prepared and filed with the Commission a Current Report on Form 8-K with respect to the Placement, including as an exhibit thereto this Agreement.

(J) The Company shall have entered into subscription agreements with each of the Purchasers and such agreements shall be in full force and effect and shall contain representations and warranties of the Company as agreed between the Company and the Purchasers.

(K) FINRA shall have raised no objection to the fairness and reasonableness of the terms and arrangements of this Agreement. In addition, the Company shall, if requested by the Placement Agent, make or authorize Placement Agent's counsel to make, on the Company's behalf, an Issuer Filing with FINRA pursuant to FINRA Rule 5110 with respect to the Registration Statement and pay all filing fees required in connection therewith.

(L) Prior to the Closing Date, the Company shall have furnished to the Placement Agent such further information, certificates and documents as the Placement Agent may reasonably request.

All opinions, letters, evidence and certificates mentioned above or elsewhere in this Agreement shall be deemed to be in compliance with the provisions hereof only if they are in form and substance reasonably satisfactory to counsel for the Placement Agent.



**SECTION 9. GOVERNING LAW.** This Agreement will be governed by, and construed in accordance with, the laws of the State of New York applicable to agreements made and to be performed entirely in such State. This Agreement may not be assigned by either party without the prior written consent of the other party. This Agreement shall be binding upon and inure to the benefit of the parties hereto, and their respective successors and permitted assigns. **Any right to trial by jury with respect to any dispute arising under this Agreement or any transaction or conduct in connection herewith is waived.** Any dispute arising under this Agreement may be brought into the courts of the State of New York or into the Federal Court located in New York, New York, and, by execution and delivery of this Agreement, the Company hereby accepts for itself and in respect of its property, generally and unconditionally, the jurisdiction of aforesaid courts. Each party hereto hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by delivering a copy thereof via overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. If either party shall commence an action or proceeding to enforce any provisions of a Transaction Document, then the prevailing party in such action or proceeding shall be reimbursed by the other party for its attorneys fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

**SECTION 10. ENTIRE AGREEMENT/MISC.** This Agreement (including the attached Indemnification Provisions) embodies the entire agreement and understanding between the parties hereto, and supersedes all prior agreements and understandings, relating to the subject matter hereof. If any provision of this Agreement is determined to be invalid or unenforceable in any respect, such determination will not affect such provision in any other respect or any other provision of this Agreement, which will remain in full force and effect. This Agreement may not be amended or otherwise modified or waived except by an instrument in writing signed by both Roth and the Company. The representations, warranties, agreements and covenants contained herein shall survive the closing of the Placement and delivery and/or exercise of the Shares and Warrants, as applicable. This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to the other party, it being understood that both parties need not sign the same counterpart. In the event that any signature is delivered by facsimile transmission or a .pdf format file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or .pdf signature page were an original thereof.

**SECTION 11. NOTICES.** Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed given and effective on the earliest of (a) the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number specified on the signature pages attached hereto prior to 6:30 p.m. (New York City time) on a business day, (b) the next business day after the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number on the signature pages attached hereto on a day that is not a business day or later than 6:30 p.m. (New York City time) on any business day, (c) the business day following the date of mailing, if sent by U.S. nationally recognized overnight courier service, or (d) upon actual receipt by the party to whom such notice is required to be given. The address for such notices and communications shall be as set forth on the signature pages hereto.

Please confirm that the foregoing correctly sets forth our agreement by signing and returning to Roth the enclosed copy of this Agreement.

Very truly yours,

**PHARMATHENE, INC.**

By: /s/ Charles A. Reinhart III

Name: Charles A. Reinhart III

Title: Sr. Vice President & CFO

Address for notice:

One Park Place  
Suite 450  
Annapolis, MD 21401  
Fax (410) 269-2601  
Attention: General Counsel

With a copy to:

Sonnenschein Nath & Rosenthal LLP  
1221 Avenue of the Americas  
New York, NY 10020  
Fax (212) 768-6800  
Attention: Jeffrey A. Baumel

Accepted and Agreed to as of  
the date first written above:

**ROTH CAPITAL PARTNERS, LLC**

By: /s/ Michael Margolis, R. Ph.

Name: Michael Margolis, R. Ph.

Title: Managing Director

Address for notice:

Roth Capital Partners, LLC

24 Corporate Plaza

Newport Beach, CA 92660

Fax: 949-720-7227

Attention: Aaron Gurewitz

with a copy to:

Lowenstein Sandler PC

1251 Avenue of the Americas

New York, New York 10020

Fax: 973-597-2400

Attention: John D. Hogoboom

## ADDENDUM A

### INDEMNIFICATION PROVISIONS

In connection with the engagement of Roth Capital Partners, LLC ("Roth"), by PharmAthene, Inc. (the "Company"), pursuant to a letter agreement dated July 20, 2010, between the Company and Roth, as it may be amended from time to time in writing (the "Agreement"), the Company hereby agrees as follows:

1. To the extent permitted by law, the Company will indemnify Roth and its affiliates, stockholders, directors, officers, employees and controlling persons (within the meaning of Section 15 of the Securities Act of 1933, as amended, or Section 20 of the Securities Exchange Act of 1934, as amended) (each an "indemnified party") against all losses, claims, damages, expenses and liabilities, as the same are incurred (including the reasonable fees and expenses of counsel), relating to or arising out of its activities hereunder or pursuant to the Agreement, except to the extent that any losses, claims, damages, expenses or liabilities (or actions in respect thereof) are found in a final judgment (not subject to appeal) by a court of law to have resulted primarily and directly from Roth's willful misconduct or gross negligence in performing the services described herein.
  2. Promptly after receipt by an indemnified party of notice of any claim or the commencement of any action or proceeding with respect to which the Indemnified party is entitled to indemnity hereunder, the indemnified party will notify the Company in writing of such claim or of the commencement of such action or proceeding, and the Company will assume the defense of such action or proceeding and will employ counsel reasonably satisfactory to the indemnified party and will pay the fees and expenses of such counsel. Notwithstanding the preceding sentence, the indemnified party will be entitled to employ counsel separate from counsel for the Company and from any other party in such action if counsel for the indemnified party reasonably determines that it would be inappropriate under the applicable rules of professional responsibility for the same counsel to represent both the Company and such indemnified party. In such event, the reasonable fees and disbursements of no more than one such separate counsel will be paid by the Company. The Company will have the exclusive right to settle the claim or proceeding; *provided* that the Company will not settle any such claim, action or proceeding without the prior written consent of the indemnified party, which consent will not be unreasonably withheld.
  3. The Company agrees to notify Roth promptly of the assertion against it or any other person of any claim or the commencement of any action or proceeding relating to a transaction contemplated by the Agreement.
  4. If for any reason the foregoing indemnity is unavailable to an indemnified party or insufficient to hold the indemnified party harmless, then the Company shall contribute to the amount paid or payable by such indemnified party as a result of such losses, claims, damages or liabilities in such proportion as is appropriate to reflect not only the relative benefits received by the Company, on the one hand, and the indemnified party, on the other, but also the relative fault of the Company, on the one hand, and the indemnified party, on the other, that resulted in such losses, claims, damages or liabilities, as well as any relevant equitable considerations. The amounts paid or payable by a party in respect of losses, claims, damages and liabilities referred to above shall be deemed to include any legal or other fees and expenses incurred in defending any litigation, proceeding or other action or claim. Notwithstanding the provisions hereof, Roth's share of the liability hereunder shall not be in excess of the amount of fees actually received, or to be received, by Roth under the Agreement (excluding any amounts received as reimbursement of expenses incurred by Roth).
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5. These Indemnification Provisions shall remain in full force and effect whether or not the transaction contemplated by the Agreement is completed, shall survive the termination of the Agreement and shall be in addition to any liability that the Company might otherwise have to any indemnified party under the Agreement or otherwise.

**PHARMATHENE, INC.**

By: /s/ Charles A. Reinhart III  
Name: Charles A. Reinhart III  
Title: Sr. Vice President & CFO

Accepted and Agreed to as of  
the date first written above:

**ROTH CAPITAL PARTNERS, LLC**

By: /s/ Michael Margolis, R. Ph.  
Name: Michael Margolis, R. Ph.  
Title: Managing Director

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Exhibit A

**Form of Securities Purchase Agreement**

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**Exhibit B**

**Pricing Information**

Number of Shares to be Sold: 2,785,714

Number of Warrants to be Sold: 1,323,214

Offering Price: \$1.40

Exercise Price of Warrants: \$1.63

Aggregate Placement Agency Fee: \$273,000<sup>1</sup>

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<sup>1</sup> Before payment by the Company of a financial advisory fee in the amount of \$20,475 to Noble Financial Group, Inc.

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Exhibit C

**Form of Warrant**

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## SECURITIES PURCHASE AGREEMENT

This Securities Purchase Agreement (this "Agreement") is dated as of July 20, 2010, between PharmAthene, Inc., a Delaware corporation (the "Company"), and the purchaser identified on the signature page hereto (including its successors and assigns, the "Purchaser").

WHEREAS, subject to the terms and conditions set forth in this Agreement and pursuant to an effective registration statement under the Securities Act of 1933, as amended (the "Securities Act"), the Company desires to issue and sell to the Purchaser, and the Purchaser desires to purchase from the Company, securities of the Company as more fully described in this Agreement.

NOW, THEREFORE, IN CONSIDERATION of the mutual covenants contained in this Agreement, and for other good and valuable consideration the receipt and adequacy of which are hereby acknowledged, the Company and the Purchaser agree as follows:

### ARTICLE I. DEFINITIONS

1.1 Definitions. In addition to the terms defined elsewhere in this Agreement, for all purposes of this Agreement, the following terms have the meanings set forth in this Section 1.1:

"Action" shall have the meaning ascribed to such term in Section 3.1(j).

"Affiliate" means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person as such terms are used in and construed under Rule 405 under the Securities Act.

"Board of Directors" means the board of directors of the Company.

"Business Day" means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

"Closing" means the closing of the purchase and sale of the Shares and Warrants pursuant to Section 2.1.

"Closing Date" means the Trading Day on which all of the Transaction Documents have been executed and delivered by the applicable parties thereto, and all conditions precedent to (i) the Purchaser's obligations to pay the Subscription Amount and (ii) the Company's obligations to deliver the Shares and Warrants, in each case, have been satisfied or waived.

"Commission" means the United States Securities and Exchange Commission.

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“Common Stock” means the common stock of the Company, par value \$0.0001 per share, and any other class of securities into which such securities may hereafter be reclassified or changed.

“Common Stock Equivalents” means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, preferred stock, rights, options, warrants or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock; provided, however, that “Common Stock Equivalents” shall not include any indebtedness which is convertible into or exchangeable for Common Stock.

“Company Counsel” means Sonnenschein Nath & Rosenthal, LLP.

“Evaluation Date” shall have the meaning ascribed to such term in Section 3.1(r).

“Exchange Act” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

“Exempt Issuance” means the issuance of (a) shares of Common Stock or options to employees, officers or directors of (or, commencing 45 days after the Closing Date, consultants to) the Company pursuant to any stock or option plan duly adopted for such purpose, by a majority of the non-employee members of the Board of Directors or a majority of the members of a committee of non-employee directors established for such purpose, including, but not limited to, the Company’s 2007 Long-Term Incentive Compensation Plan (b) securities upon the exercise or exchange of or conversion of any Securities issued hereunder and/or other securities issued and outstanding on the date of this Agreement that are exercisable or exchangeable for or convertible into shares of Common Stock, provided that such securities have not been amended since the date of this Agreement to increase the number of such securities or to decrease the exercise price, exchange price or conversion price of such securities, and (c) securities issued pursuant to acquisitions or strategic transactions approved by a majority of the disinterested directors of the Company, provided that any such issuance shall only be to a Person (or to the equityholders of a Person) which is, itself or through its subsidiaries, an operating company or an asset in a business synergistic with the business of the Company and shall provide to the Company additional benefits in addition to the investment of funds, but shall not include a transaction in which the Company is issuing securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities.

“LS” means Lowenstein Sandler PC with offices located at 1251 Avenue of the Americas, New York, New York 10020.

“GAAP” shall have the meaning ascribed to such term in Section 3.1(h).

“Indebtedness” shall have the meaning ascribed to such term in Section 3.1(z).

“Intellectual Property Rights” shall have the meaning ascribed to such term in Section 3.1(o).

“Liens” means a lien, charge, security interest, encumbrance, right of first refusal, preemptive right or other restriction.

“Material Adverse Effect” shall have the meaning assigned to such term in Section 3.1(b).

“Material Permits” shall have the meaning ascribed to such term in Section 3.1(m).

“Per Share Purchase Price” equals \$1.40, subject to adjustment for reverse and forward stock splits, stock dividends, stock combinations and other similar transactions of the Common Stock that occur after the date of this Agreement.

“Person” means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind, including without limitation, any Trading Market.

“Proceeding” means an action, claim, suit, investigation or proceeding (including, without limitation, an informal investigation or partial proceeding, such as a deposition), whether commenced or threatened.

“Prospectus” means the prospectus filed with the Registration Statement.

“Prospectus Supplement” means any preliminary prospectus supplement relating to the offer and sale of the Shares, Warrants (and upon exercise of any Warrant, the Warrant Shares), any free writing prospectus complying with Rule 433 under the Securities Act that is filed with the Commission and the final supplement to the Prospectus complying with Rule 424(b) of the Securities Act that is filed with the Commission and delivered by the Company to the Purchaser at the Closing.

“Purchaser Party” shall have the meaning ascribed to such term in Section 4.7.

“Registration Statement” means the effective registration statement with Commission file No. 333-156997 which registers the sale of the Shares, the Warrants and the Warrant Shares to the Purchaser.

“Required Approvals” shall have the meaning ascribed to such term in Section 3.1(e).

“Rule 144” means Rule 144 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

“Rule 424” means Rule 424 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same purpose and effect as such Rule.

“SEC Reports” shall have the meaning ascribed to such term in Section 3.1(h).

“Securities” means the Shares, the Warrants and the Warrant Shares.

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“Shares” means the shares of Common Stock issued or issuable to the Purchaser pursuant to this Agreement.

“Short Sales” means all “short sales” as defined in Rule 200 of Regulation SHO under the Exchange Act (but shall not be deemed to include the location and/or reservation of borrowable shares of Common Stock).

“Subscription Amount” means the aggregate amount to be paid for Shares and Warrants purchased hereunder as specified below the Purchaser’s name on the signature page of this Agreement and next to the heading “Subscription Amount,” in United States dollars and in immediately available funds.

“Time of Sale Prospectus” means the Prospectus together with any Prospectus Supplement that is filed with the Commission, and any document incorporated by reference into the Prospectus and any Prospectus Supplement, used in connection with the sale of the Shares and Warrants.

“Trading Day” means a day on which the principal Trading Market is open for trading.

“Trading Market” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE Amex, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, the New York Stock Exchange or the OTC Bulletin Board (or any successors to any of the foregoing).

“Transaction Documents” means this Agreement, the Warrants and any other documents or agreements executed in connection with the transactions contemplated hereunder.

“Transfer Agent” means Continental Stock Transfer & Trust Company, the current transfer agent of the Company, with a mailing address of 17 Battery Place, New York, NY 10004, and any successor transfer agent of the Company.

“Warrants” means, collectively, the Common Stock purchase warrants delivered to the Purchaser at the Closing in accordance with Section 2.2(a) hereof, which Warrants shall be exercisable beginning six (6) months after the Closing Date and have a term of exercise equal to six and one-half (6-1/2) years, in the form of Exhibit A attached hereto.

“Warrant Shares” means the shares of Common Stock issuable upon exercise of the Warrants.

**ARTICLE II.**  
**PURCHASE AND SALE**

2.1 Closing. Upon the terms and subject to the conditions set forth herein, the Company agrees to sell, and the Purchaser agrees to purchase, on the Closing Date, 2,785,714 Shares and 1,323,214 Warrants. The Purchaser shall deliver to the Company, via wire transfer or a certified check, immediately available funds equal to the Purchaser’s Subscription Amount as set forth on the signature page hereto executed by the Purchaser and the Company shall deliver to the Purchaser its respective Shares and a Warrant as determined pursuant to Section 2.2(a), and the Company and the Purchaser shall deliver the other items set forth in Section 2.2 deliverable at the Closing. Upon satisfaction of the covenants and conditions set forth in Sections 2.2 and 2.3, the Closing shall occur at the offices of LS or such other location as the parties shall mutually agree.

2.2 Deliveries.

(a) On or prior to the Closing Date, the Company shall deliver or cause to be delivered to the Purchaser the following:

- (i) a legal opinion of Company Counsel, substantially in the form agreed to by the parties;
- (ii) this Agreement duly executed and delivered by the parties hereto;
- (iii) a copy of the irrevocable instructions to the Company’s transfer agent, duly executed and delivered by the Company, instructing the transfer agent to deliver via the Depository Trust Company Deposit Withdrawal Agent Commission System (“DWAC”) Shares equal to the Purchaser’s Subscription Amount divided by the Per Share Purchase Price, registered in the name of the Purchaser;
- (iv) a Warrant, duly executed by the Company, registered in the name of the Purchaser to purchase up to a number of shares of Common Stock equal to 47.5% of the number of Shares purchased by the Purchaser, with an exercise price equal to \$1.63, subject to adjustment therein (such Warrant certificate may be delivered within three Trading Days of the Closing Date); and
- (v) the final Prospectus Supplement (which may be delivered in accordance with Rule 172 under the Securities Act) if required under the Securities Act.

(b) On or prior to the Closing Date, the Purchaser shall deliver or cause to be delivered to the Company the following:

(i) the Purchaser's Subscription Amount by wire transfer to the account as specified in writing by the Company; and

2.3 Closing Conditions.

(a) The obligations of the Company hereunder in connection with the Closing are subject to the following conditions being met:

(i) all obligations, covenants and agreements of the Purchaser required to be performed at or prior to the Closing Date shall have been performed; and

(ii) the delivery by the Purchaser of the items set forth in Section 2.2(b) of this Agreement.

(b) The respective obligations of the Purchaser hereunder in connection with the Closing are subject to the following conditions being met:

(i) all obligations, covenants and agreements of the Company required to be performed at or prior to the Closing Date shall have been performed; and

(ii) the delivery by the Company of the items set forth in Section 2.2(a) of this Agreement.

**ARTICLE III.**  
**REPRESENTATIONS AND WARRANTIES**

3.1 Representations and Warranties of the Company. Except as set forth in the Registration Statement, the Prospectus, the Prospectus Supplements or any documents incorporated by reference therein, which such filings, writings and documents shall qualify such representations and warranties to the extent of the disclosures contained therein, the Company hereby makes the following representations and warranties to the Purchaser:

(a) Subsidiaries. The Company owns, directly or indirectly, all of the capital stock or other equity interests of each of its direct and indirect subsidiaries free and clear of any Liens, and all of the issued and outstanding shares of capital stock of each such subsidiary are validly issued and are fully paid, non-assessable and free of preemptive and similar rights to subscribe for or purchase securities, except as set forth on Schedule 3.1(a) hereto. If the Company has no subsidiaries, all other references to subsidiaries in the Transaction Documents shall be disregarded.

(b) Organization and Qualification. The Company and each of its subsidiaries is an entity duly incorporated or otherwise organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization, with the requisite power and authority to own and use its properties and assets and to carry on its business as currently conducted. Neither the Company nor any subsidiary is in violation nor default of any of the provisions of its respective certificate or articles of incorporation, bylaws or other organizational or charter documents. Each of the Company and the Subsidiaries is duly qualified to conduct business and is in good standing as a foreign corporation or other entity in each jurisdiction in which the nature of the business conducted or property owned by it makes such qualification necessary, except where the failure to be so qualified or in good standing, as the case may be, could not have or reasonably be expected to result in: (i) a material adverse effect on the legality, validity or enforceability of any Transaction Document, (ii) a material adverse effect on the results of operations, assets, business, prospects or condition (financial or otherwise) of the Company and the Subsidiaries, taken as a whole, or (iii) a material adverse effect on the Company's ability to perform in any material respect on a timely basis its obligations under any Transaction Document (any of (i), (ii) or (iii), a "Material Adverse Effect") and no Proceeding has been instituted in any such jurisdiction revoking, limiting or curtailing or seeking to revoke, limit or curtail such power and authority or qualification.

(c) Authorization; Enforcement. The Company has the requisite corporate power and authority to enter into and to consummate the transactions contemplated by each of the Transaction Documents and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of each of the Transaction Documents by the Company and the consummation by it of the transactions contemplated hereby and thereby have been duly authorized by all necessary action on the part of the Company and no further action is required by the Company, the Board of Directors or the Company's stockholders in connection therewith other than in connection with the Required Approvals. Each Transaction Document to which it is a party has been (or upon delivery will have been) duly executed by the Company and, when delivered in accordance with its terms hereof and thereof, will constitute the valid and binding obligation of the Company enforceable against the Company in accordance with its terms, except (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.

(d) No Conflicts. The execution, delivery and performance by the Company of the Transaction Documents, the issuance and sale of the Shares and Warrants and the consummation by it of the transactions contemplated hereby and thereby to which it is a party do not and will not (i) conflict with or violate any provision of the Company's or any subsidiary's certificate or articles of incorporation, bylaws or other organizational or charter documents, or (ii) result in the creation of any Lien upon any of the properties or assets of the Company or any subsidiary, or give to others any rights of termination, amendment, acceleration or cancellation (with or without notice, lapse of time or both) of or conflict with, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, any agreement, credit facility, debt or other instrument (evidencing a Company or subsidiary debt or otherwise) or other understanding to which the Company or any subsidiary is a party or by which any property or asset of the Company or any subsidiary is bound or affected, or (iii) subject to the Required Approvals, conflict with or result in a violation of any law, rule, regulation, order, judgment, injunction, decree or other restriction of any Trading Market, court or governmental authority to which the Company or a subsidiary is subject (including federal and state securities laws and regulations and the regulations of any Trading Market), or by which any property or asset of the Company or a subsidiary is bound or affected; except in the case of each of clauses (ii) and (iii), such as could not have or reasonably be expected to result in a Material Adverse Effect.

(e) Filings, Consents and Approvals. The Company is not required to obtain any consent, waiver, authorization or order of, give any notice to, or make any filing or registration with, any court or other federal, state, local or other governmental authority or other Person in connection with the execution, delivery and performance by the Company of the Transaction Documents, other than: (i) the filings required pursuant to Section 4.3 of this Agreement, (ii) the filing with the Commission of the Prospectus Supplement, (iii) application(s) to each applicable Trading Market for the listing of the Shares for trading thereon in the time and manner required thereby and (iv) such filings as are required to be made under applicable state securities laws (collectively, the “Required Approvals”).

(f) Issuance of the Securities; Registration. The Shares and Warrants are duly authorized and, when issued and paid for in accordance with the applicable Transaction Documents (i) the Shares will be duly and validly issued, fully paid and nonassessable, free and clear of all Liens imposed by the Company and (ii) the Warrants will be duly and validly issued, free and clear of all Liens imposed by the Company. The Warrant Shares, when issued in accordance with the terms of the Warrants, will be validly issued, fully paid and nonassessable, free and clear of all Liens imposed by the Company. The Company has reserved from its duly authorized capital stock the maximum number of shares of Common Stock issuable pursuant to this Agreement and the Warrants. The Company has prepared and filed the Registration Statement in conformity with the requirements of the Securities Act, which became effective on February 12, 2009 (the “Effective Date”), including the Prospectus, and such amendments and supplements thereto as may have been required to the date of this Agreement. The Registration Statement is effective under the Securities Act and no stop order preventing or suspending the effectiveness of the Registration Statement or suspending or preventing the use of the Prospectus has been issued by the Commission and no proceedings for that purpose have been instituted or, to the knowledge of the Company, are threatened by the Commission. The Company, if required by the rules and regulations of the Commission, proposes to file the final Prospectus Supplement, with the Commission pursuant to Rule 424(b). At the time the Registration Statement and any amendments thereto became effective, at the date of this Agreement and at the Closing Date, the Registration Statement and any amendments thereto conformed and will conform in all material respects to the requirements of the Securities Act and did not and will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon information furnished to the Company by the Purchaser; and the Prospectus and any amendments or supplements thereto, at time the Prospectus or any amendment or supplement thereto was issued and at the Closing Date, conformed and will conform in all material respects to the requirements of the Securities Act and did not and will not contain an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon information furnished to the Company by the Purchaser.



(g) Capitalization. The Company has not issued any capital stock since its most recently filed periodic report under the Exchange Act, other than pursuant to the exercise of stock options under the Company's stock option plans, the issuance of shares of Common Stock to employees pursuant to the Company's employee stock purchase plans and pursuant to the conversion and/or exercise of Common Stock Equivalents outstanding as of the date of the most recently filed periodic report under the Exchange Act. No Person has any right of first refusal, preemptive right, right of participation, or any similar right to participate in the transactions contemplated by the Transaction Documents. Except as described in the Company's SEC Reports, there are no outstanding options, warrants, scrip rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities, rights or obligations convertible into or exercisable or exchangeable for, or giving any Person any right to subscribe for or acquire, any shares of Common Stock, or contracts, commitments, understandings or arrangements by which the Company or any subsidiary is or may become bound to issue additional shares of Common Stock or Common Stock Equivalents, other than as a result of the purchase and sale of the Shares and Warrants. The issuance and sale of the Shares and Warrants, and the issuance of Warrant Shares upon exercise of the Warrants, will not obligate the Company to issue shares of Common Stock or other securities to any Person (other than the Purchaser) and will not result in a right of any holder of Company securities to adjust the exercise, conversion, exchange or reset price under any of such securities. All of the outstanding shares of capital stock of the Company are validly issued, fully paid and nonassessable. No further approval or authorization of any stockholder, the Board of Directors or others is required for the issuance and sale of the Securities. There are no stockholders agreements, voting agreements or other similar agreements with respect to the Company's capital stock to which the Company is a party or, to the knowledge of the Company, between or among any of the Company's stockholders that are not described in the SEC Reports.

(h) SEC Reports; Financial Statements. The Company has filed all reports, schedules, forms, statements and other documents required to be filed by the Company under the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, for the two years preceding the date hereof (or such shorter period as the Company was required by law or regulation to file such material) (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, together with the Prospectus and any Prospectus Supplement, being collectively referred to herein as the “SEC Reports”) on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Reports prior to the expiration of any such extension. As of their respective dates, the SEC Reports complied in all material respects with the requirements of the Exchange Act, as applicable, and none of the SEC Reports, when filed, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon information furnished to the Company by the Purchaser. The financial statements of the Company included in the SEC Reports comply in all material respects with applicable accounting requirements and the rules and regulations of the Commission with respect thereto as in effect at the time of filing. Such financial statements have been prepared in accordance with United States generally accepted accounting principles applied on a consistent basis during the periods involved (“GAAP”), except as may be otherwise specified in such financial statements or the notes thereto and except to the extent that unaudited financial statements may not contain all footnotes required by GAAP, and such statements fairly present in all material respects the financial position of the Company and its consolidated Subsidiaries as of and for the dates thereof and the results of operations and cash flows for the periods then ended, subject, in the case of unaudited statements, to normal, immaterial, year-end audit adjustments.

(i) Material Changes; Undisclosed Events, Liabilities or Developments. Since the date of the latest audited financial statements included within the SEC Reports, except as specifically disclosed in a subsequent SEC Report filed prior to the date hereof, (i) there has been no event, occurrence or development that has had or that could reasonably be expected to result in a Material Adverse Effect, (ii) the Company has not incurred any liabilities (contingent or otherwise) other than (A) trade payables and accrued expenses incurred in the ordinary course of business consistent with past practice and (B) liabilities not required to be reflected in the Company’s financial statements pursuant to GAAP or disclosed in filings made with the Commission, (iii) the Company has not altered its method of accounting, (iv) the Company has not declared or made any dividend or distribution of cash or other property to its stockholders or purchased, redeemed or made any agreements to purchase or redeem any shares of its capital stock and (v) the Company has not issued any equity securities to any officer, director or Affiliate, except pursuant to existing Company stock option plans. The Company does not have pending before the Commission any request for confidential treatment of information. Except for the issuance of the Shares and Warrants contemplated by this Agreement, no event, liability, fact, circumstance, occurrence or development has occurred or exists or is reasonably expected to occur or exist with respect to the Company or its Subsidiaries or their respective business, prospects, properties, operations, assets or financial condition that would be required to be disclosed by the Company under applicable securities laws at the time this representation is made or deemed made that has not been publicly disclosed at least 1 Trading Day prior to the date that this representation is made.

(j) Litigation. There is no action, suit, inquiry, notice of violation, proceeding or investigation pending or, to the knowledge of the Company, threatened against or affecting the Company, any subsidiary or any of their respective properties before or by any court, arbitrator, governmental or administrative agency or regulatory authority (federal, state, county, local or foreign) (collectively, an “Action”) which (i) adversely affects or challenges the legality, validity or enforceability of any of the Transaction Documents or the Securities or (ii) could, if there were an unfavorable decision, have or reasonably be expected to result in a Material Adverse Effect. Neither the Company nor any subsidiary, nor any director or officer thereof, is or has been the subject of any Action involving a claim of violation of or liability under federal or state securities laws or a claim of breach of fiduciary duty. There has not been, and to the knowledge of the Company, there is not pending or contemplated, any investigation by the Commission involving the Company or any current or former director or officer of the Company.

(k) Labor Relations. No material labor dispute exists or, to the knowledge of the Company, is imminent with respect to any of the employees of the Company that could reasonably be expected to result in a Material Adverse Effect. None of the Company’s or its Subsidiaries’ employees is a member of a union that relates to such employee’s relationship with the Company or such subsidiary, and neither the Company nor any of its Subsidiaries is a party to a collective bargaining agreement, and the Company and its Subsidiaries believe that their relationships with their employees are good. No executive officer, to the knowledge of the Company, is, or is now expected to be, in violation of any material term of any employment contract, confidentiality, disclosure or proprietary information agreement or non-competition agreement, or any other contract or agreement or any restrictive covenant in favor of any third party, and the continued employment of each such executive officer does not subject the Company or any of its Subsidiaries to any liability with respect to any of the foregoing matters. The Company and its Subsidiaries are in compliance with all U.S. federal, state, local and foreign laws and regulations relating to employment and employment practices, terms and conditions of employment and wages and hours, except where the failure to be in compliance could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(l) Compliance. Neither the Company nor any subsidiary: (i) is in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by the Company or any subsidiary under), nor has the Company or any subsidiary received notice of a claim that it is in default under or that it is in violation of, any indenture, loan or credit agreement or any other agreement or instrument to which it is a party or by which it or any of its properties is bound (whether or not such default or violation has been waived), (ii) is in violation of any judgment, decree or order of any court, arbitrator or governmental body or (iii) is or has been in violation of any statute, rule, ordinance or regulation of any governmental authority, including without limitation all foreign, federal, state and local laws applicable to its business and all such laws that affect the environment, except in each case as could not reasonably be expected to result in a Material Adverse Effect.

(m) Regulatory Permits. The Company and the Subsidiaries possess all certificates, authorizations and permits issued by the appropriate federal, state, local or foreign regulatory authorities necessary to conduct their respective businesses as described in the SEC Reports, except where the failure to possess such permits could not reasonably be expected to result in a Material Adverse Effect (“Material Permits”), and neither the Company nor any subsidiary has received any notice of proceedings relating to the revocation or modification of any Material Permit.

(n) Title to Assets. The Company and the Subsidiaries have good and marketable title in fee simple to all real property owned by them and good and marketable title to all personal property owned by them that is material to the business of the Company and the Subsidiaries, in each case free and clear of all Liens, except for Liens as do not materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company and the Subsidiaries and Liens for the payment of federal, state or other taxes, the payment of which is neither delinquent nor subject to penalties. Any real property and facilities held under lease by the Company and the Subsidiaries are held by them under valid, subsisting and enforceable leases with which the Company and the Subsidiaries are in compliance with such exceptions as are not material and do not materially interfere with the use made and proposed to be made of such property and facilities by the Company and its Subsidiaries.

(o) Patents and Trademarks. Except as set forth on Schedule 3.1(o) hereto, the Company and the Subsidiaries have, or have rights to use, all patents, patent applications, trademarks, trademark applications, service marks, trade names, trade secrets, inventions, copyrights, licenses and other intellectual property rights and similar rights necessary or material for use in connection with their respective businesses as described in the SEC Reports and which the failure to so have could reasonably be expected to have a Material Adverse Effect (collectively, the “Intellectual Property Rights”). Neither the Company nor any subsidiary has received a notice (written or otherwise) that any of the Intellectual Property Rights used by the Company or any subsidiary violates or infringes upon the rights of any Person. To the knowledge of the Company, all such Intellectual Property Rights are enforceable and there is no existing infringement by another Person of any of the Intellectual Property Rights. The Company and its Subsidiaries have taken reasonable security measures to protect the secrecy, confidentiality and value of all of their intellectual properties, except where the failure to do so could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(p) Insurance. The Company and the Subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as are prudent and customary in the businesses in which the Company and the Subsidiaries are engaged, including, but not limited to, directors and officers insurance coverage at least equal to the aggregate Subscription Amount. Neither the Company nor any subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business without a significant increase in cost.

(q) Transactions With Affiliates and Employees. Except as set forth in the SEC Reports, none of the officers or directors of the Company and, to the knowledge of the Company, none of the employees of the Company is presently a party to any transaction with the Company or any subsidiary (other than for services as employees, officers and directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, or otherwise requiring payments to or from any officer, director or such employee or, to the knowledge of the Company, any entity in which any officer, director, or any such employee has a substantial interest or is an officer, director, trustee or partner, in each case in excess of \$120,000 other than for (i) payment of salary or consulting fees for services rendered, (ii) reimbursement for expenses incurred on behalf of the Company and (iii) other employee benefits, including stock option agreements under any stock option plan of the Company.

(r) Sarbanes-Oxley. The Company is in material compliance with all provisions of the Sarbanes-Oxley Act of 2002 that are applicable to it as of the Closing Date.

(s) Certain Fees. Except as set forth in the Prospectus Supplement, no brokerage or finder's fees or commissions are or will be payable by the Company to any broker, financial advisor or consultant, finder, placement agent, investment banker, bank or other Person with respect to the transactions contemplated by the Transaction Documents. The Purchaser shall have no obligation with respect to any fees or with respect to any claims made by or on behalf of other Persons for fees of a type contemplated in this Section that may be due in connection with the transactions contemplated by the Transaction Documents.

(t) Investment Company. The Company is not, and is not an Affiliate of, and immediately after receipt of payment for the Shares and Warrants, will not be or be an Affiliate of, an "investment company" within the meaning of the Investment Company Act of 1940, as amended.

(u) Registration Rights. No Person has any right to cause the Company to effect the registration under the Securities Act of any securities of the Company as a result of the transactions contemplated by this Agreement.

(v) Listing and Maintenance Requirements. The Common Stock is registered pursuant to Section 12(b) or 12(g) of the Exchange Act, and the Company has taken no action designed to, or that to its knowledge is likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act nor has the Company received any notification that the Commission is contemplating terminating such registration. The Company has not, in the 12 months preceding the date hereof, received notice from any Trading Market on which the Common Stock is or has been listed or quoted to the effect that the Company is not in compliance with the listing or maintenance requirements of such Trading Market. The Company is in compliance with all such listing and maintenance requirements.

(w) Application of Takeover Protections. The Company and the Board of Directors have taken all necessary action, if any, in order to render inapplicable any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Company's certificate of incorporation (or similar charter documents) or the laws of its state of incorporation that is or could become applicable to the Purchaser as a result of the Purchaser and the Company fulfilling their obligations or exercising their rights under the Transaction Documents, including without limitation as a result of the Company's issuance of the Shares and Warrants and the Purchaser's ownership of the Shares and Warrants.

(x) Disclosure. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents, the Company confirms that neither it nor any other Person acting on its behalf has provided the Purchaser or its agents or counsel with any information that it believes constitutes or might constitute material, non-public information which is not otherwise disclosed in the Prospectus Supplement. The Company understands and confirms that the Purchaser will rely on the foregoing representation in effecting transactions in securities of the Company. The Company acknowledges and agrees that the Purchaser does not make or has not made any representations or warranties with respect to the transactions contemplated hereby other than those specifically set forth in Section 3.2 hereof.

(y) Tax Status. Except for matters that would not, individually or in the aggregate, have or reasonably be expected to result in a Material Adverse Effect, the Company and each subsidiary has filed all necessary federal, state and foreign income and franchise tax returns and has paid or accrued all taxes shown as due thereon, and the Company has no knowledge of a tax deficiency which has been asserted or threatened against the Company or any subsidiary.

(z) Foreign Corrupt Practices. Neither the Company, nor to the knowledge of the Company, any agent or other person acting on behalf of the Company, has (i) directly or indirectly, used any funds for unlawful contributions, gifts, entertainment or other unlawful expenses related to foreign or domestic political activity, (ii) made any unlawful payment to foreign or domestic government officials or employees or to any foreign or domestic political parties or campaigns from corporate funds, (iii) failed to disclose fully any contribution made by the Company (or made by any person acting on its behalf of which the Company is aware) which is in violation of law, or (iv) violated in any material respect any provision of the Foreign Corrupt Practices Act of 1977, as amended.

(aa) Accountants. The Company's independent registered public accounting firm is identified in the Prospectus and such accounting firm is a registered public accounting firm as required by the Exchange Act.

(bb) Acknowledgment Regarding Purchaser's Purchase of Securities. The Company acknowledges and agrees that the Purchaser is acting solely in the capacity of an arm's length purchaser with respect to the Transaction Documents and the transactions contemplated thereby. The Company further acknowledges that the Purchaser is not acting as a financial advisor or fiduciary of the Company (or in any similar capacity) with respect to the Transaction Documents and the transactions contemplated thereby and any advice given by the Purchaser or any of its respective representatives or agents in connection with the Transaction Documents and the transactions contemplated thereby is merely incidental to the Purchaser's purchase of the Securities. The Company further represents to the Purchaser that the Company's decision to enter into this Agreement and the other Transaction Documents has been based solely on the independent evaluation of the transactions contemplated hereby by the Company and its representatives.

(cc) Acknowledgement Regarding Purchaser's Trading Activity. Anything in this Agreement or elsewhere herein to the contrary notwithstanding (except for Sections 3.2(e) and 4.12 hereof), it is understood and acknowledged by the Company that: (i) the Purchaser has not been asked by the Company to agree, nor has the Purchaser agreed, to desist from purchasing or selling, long and/or short, securities of the Company, or "derivative" securities based on securities issued by the Company or to hold the Securities for any specified term; (ii) past or future open market or other transactions by the Purchaser, specifically including, without limitation, Short Sales or "derivative" transactions, before or after the closing of this or future private placement transactions, may negatively impact the market price of the Company's publicly-traded securities; (iii) the Purchaser, and counter-parties in "derivative" transactions to which the Purchaser is a party, directly or indirectly, presently may have a "short" position in the Common Stock, and (iv) the Purchaser shall not be deemed to have any affiliation with or control over any arm's length counter-party in any "derivative" transaction. The Company further understands and acknowledges that (y) the Purchaser may engage in hedging activities at various times during the period that the Securities are outstanding, including, without limitation, during the periods that the value of the Warrant Shares deliverable with respect to Securities are being determined, and (z) such hedging activities (if any) could reduce the value of the existing stockholders' equity interests in the Company at and after the time that the hedging activities are being conducted. The Company acknowledges that such aforementioned hedging activities do not constitute a breach of any of the Transaction Documents.

(dd) Regulation M Compliance. The Company has not, and to its knowledge no one acting on its behalf has, (i) taken, directly or indirectly, any action designed to cause or to result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of any of the Securities, (ii) sold, bid for, purchased, or, paid any compensation for soliciting purchases of, any of the Securities, or (iii) paid or agreed to pay to any Person any compensation for soliciting another to purchase any other securities of the Company, other than, in the case of clauses (ii) and (iii), compensation paid to the Company's placement agent in connection with the placement of the Securities.

3.2 Representations and Warranties of the Purchaser. The Purchaser hereby represents and warrants as of the date hereof and as of the Closing Date to the Company as follows (unless as of a specific date therein):

(a) **Organization; Authority.** The Purchaser is either an individual or an entity duly organized, validly existing and in good standing under the laws of the jurisdiction of its organization with full right, corporate or partnership power and authority to enter into and to consummate the transactions contemplated by this Agreement and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of this Agreement and performance by the Purchaser of the transactions contemplated by this Agreement have been duly authorized by all necessary corporate, partnership, limited liability company or similar action, as applicable, on the part of the Purchaser. Each Transaction Document to which it is a party has been duly executed by the Purchaser, and when delivered by the Purchaser in accordance with the terms hereof, will constitute the valid and legally binding obligation of the Purchaser, enforceable against it in accordance with its terms, except: (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.

(b) **Certain Transactions and Confidentiality.** Other than consummating the transactions contemplated hereunder, the Purchaser has not, nor has any Person acting on behalf of or pursuant to any understanding with the Purchaser, directly or indirectly executed any purchases or sales, including Short Sales, of the securities of the Company during the period commencing as of the time that the Purchaser first became aware of by (written or oral) communication the specific transaction involving the offer and sale of such Securities and ending immediately prior to the execution hereof. Notwithstanding the foregoing, in the case the Purchaser is a multi-managed investment vehicle whereby separate portfolio managers manage separate portions of the Purchaser's assets and the portfolio managers have no direct knowledge of the investment decisions made by the portfolio managers managing other portions of the Purchaser's assets, the representation set forth above shall only apply with respect to the portion of assets managed by the portfolio manager that made the investment decision to purchase the Securities covered by this Agreement. Other than to other Persons party to this Agreement, the Purchaser has maintained the confidentiality of all disclosures made to it in connection with this transaction (including the existence and terms of this transaction). Notwithstanding the foregoing, for avoidance of doubt, nothing contained herein shall constitute a representation or warranty, or preclude any actions, with respect to the identification of the availability of, or securing of, available shares to borrow in order to effect Short Sales or similar transactions in the future.

The Company acknowledges and agrees that the representations contained in Section 3.2 shall not modify, amend or affect the Purchaser's right to rely on the Company's representations and warranties contained in this Agreement or any representations and warranties contained in any other Transaction Document or any other document or instrument executed and/or delivered in connection with this Agreement or the consummation of the transaction contemplated hereby.



**ARTICLE IV.**  
**OTHER AGREEMENTS OF THE PARTIES**

4.1 Warrant Shares. If all or any portion of a Warrant is exercised at a time when there is an effective registration statement to cover the issuance or resale of the Warrant Shares or if the Warrant is exercised via cashless exercise, the Warrant Shares issued pursuant to any such exercise shall be issued free of all legends. If at any time following the date hereof the Registration Statement (or any subsequent registration statement registering the sale or resale of the Warrant Shares) is not effective or is not otherwise available for the sale or resale of the Warrant Shares, the Company shall immediately notify the holders of the Warrants in writing that such registration statement is not then effective and thereafter shall promptly notify such holders when the registration statement is effective again and available for the sale or resale of the Warrant Shares (it being understood and agreed that the foregoing shall not limit the ability of the Company to issue, or the Purchaser to sell, any of the Warrant Shares in compliance with applicable federal and state securities laws). The Company shall use its best efforts to keep a registration statement (including the Registration Statement) registering the issuance or resale of the Warrant Shares effective during the term of the Warrants. Upon a cashless exercise of a Warrant, the holding period for purposes of Rule 144 shall tack back to the original date of issuance of such Warrant, if then permitted by Rule 144 or any successor rule, law, or policy.

4.2 Furnishing of Information. Until the earliest of the time that (i) the Purchaser no longer owns Securities, or (ii) the Warrants have expired, the Company covenants to timely file (or obtain extensions in respect thereof and file within the applicable grace period) all reports required to be filed by the Company after the date hereof pursuant to the Exchange Act even if the Company is not then subject to the reporting requirements of the Exchange Act. As long as the Purchaser owns Securities, if the Company is not required to file reports pursuant to the Exchange Act, it will prepare and furnish to the Purchaser and make publicly available in accordance with Rule 144(c) such information as is required for the Purchaser to sell the Securities, including without limitation, under Rule 144. The Company further covenants that it will take such further action as any holder of Securities may reasonably request, to the extent required from time to time to enable such Person to sell such Securities without registration under the Securities Act, including without limitation, within the requirements of the exemption provided by Rule 144.

4.3 Integration. The Company shall not sell, offer for sale or solicit offers to buy or otherwise negotiate in respect of any security (as defined in Section 2 of the Securities Act) that would be integrated with the offer or sale of the Securities for purposes of the rules and regulations of any Trading Market such that it would require shareholder approval prior to the closing of such other transaction unless shareholder approval is obtained before the closing of such subsequent transaction.

4.4 Securities Laws Disclosure; Publicity. The Company shall (i) by 8:30 a.m. (New York City time) on the Trading Day immediately following the date hereof, issue a press release disclosing the material terms of the transactions contemplated hereby, and (ii) within the time prescribed under the Exchange Act file a current report on Form 8-K disclosing the material terms of the transaction and including the Transaction Documents as exhibits thereto. From and after the issuance of such press release, the Company shall have publicly disclosed all material, non-public information delivered to the Purchaser by the Company or any of its subsidiaries, or any of their respective officers, directors, employees or agents in connection with the transactions contemplated by the Transaction Documents. The Company and the Purchaser shall consult with each other in issuing any other press releases with respect to the transactions contemplated hereby, and neither the Company nor the Purchaser shall issue any such press release nor otherwise make any such public statement without the prior consent of the Company, with respect to any press release of the Purchaser, or without the prior consent of the Purchaser, with respect to any press release of the Company, which consent shall not unreasonably be withheld or delayed, except if such disclosure is required by law, in which case the disclosing party shall promptly provide the other party with prior notice of such public statement or communication. Notwithstanding the foregoing, the Company shall not publicly disclose the name of the Purchaser, or include the name of the Purchaser in any filing with the Commission or any regulatory agency or Trading Market, without the prior written consent of the Purchaser, except (a) as required by federal securities law in connection with the filing of final Transaction Documents (including signature pages thereto) with the Commission and (b) to the extent such disclosure is required by law or Trading Market regulations, in which case the Company shall provide the Purchaser with prior notice of such disclosure permitted under this clause (b). On or prior to 8:30 am on the Business Day following the Closing Date, the Company shall file the Prospectus Supplement with the Commission in accordance with Rule 424 under the 1933 Act.

4.5 Shareholder Rights Plan. No claim will be made or enforced by the Company or, with the consent of the Company, any other Person, that the Purchaser is an “Acquiring Person” under any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or similar anti-takeover plan or arrangement in effect or hereafter adopted by the Company, or that the Purchaser could be deemed to trigger the provisions of any such plan or arrangement, by virtue of receiving Shares and Warrants under the Transaction Documents or under any other agreement between the Company and the Purchaser.

4.6 Non-Public Information. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents, the Company covenants and agrees that neither it, nor any other Person acting on its behalf will provide the Purchaser or its agents or counsel with any information that the Company believes constitutes material non-public information, unless prior thereto the Purchaser shall have executed a written agreement with the Company regarding the confidentiality and use of such information. The Company understands and confirms that the Purchaser shall be relying on the foregoing covenant in effecting transactions in securities of the Company.

4.7 Use of Proceeds. The Company shall use the net proceeds from the sale of the Securities as described in the Prospectus and Prospectus Supplements.

4.8 Indemnification of Purchaser. Subject to the provisions of this Section 4.8, the Company will indemnify and hold the Purchaser and its directors, officers, shareholders, members, partners, employees and agents (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding a lack of such title or any other title), each Person who controls the Purchaser (within the meaning of Section 15 of the Securities Act and Section 20 of the Exchange Act), and the directors, officers, shareholders, agents, members, partners or employees (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding a lack of such title or any other title) of such controlling persons (each, a “Purchaser Party”) harmless from any and all losses, liabilities, obligations, claims, contingencies, damages, costs and expenses, including all judgments, amounts paid in settlements, court costs and reasonable attorneys’ fees and costs of investigation that any such Purchaser Party may suffer or incur as a result of or relating to (a) any breach of any of the representations, warranties, covenants or agreements made by the Company in this Agreement or in the other Transaction Documents or (b) any action instituted against the Purchaser in any capacity, or any of them or their respective Affiliates, by any stockholder of the Company who is not an Affiliate of the Purchaser, with respect to any of the transactions contemplated by the Transaction Documents (unless such action is based upon a breach of the Purchaser’s representations, warranties or covenants under the Transaction Documents or any agreements or understandings the Purchaser may have with any such stockholder or any violations by the Purchaser of state or federal securities laws or any conduct by the Purchaser which constitutes fraud, gross negligence, willful misconduct or malfeasance). If any action shall be brought against any Purchaser Party in respect of which indemnity may be sought pursuant to this Agreement, such Purchaser Party shall promptly notify the Company in writing, and the Company shall have the right to assume the defense thereof with counsel of its own choosing reasonably acceptable to the Purchaser Party. Any Purchaser Party shall have the right to employ separate counsel in any such action and participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of such Purchaser Party except to the extent that (i) the employment thereof has been specifically authorized by the Company in writing, (ii) the Company has failed after a reasonable period of time to assume such defense and to employ counsel or (iii) in such action there is, in the reasonable opinion of counsel, a material conflict on any material issue between the position of the Company and the position of such Purchaser Party, in which case the Company shall be responsible for the reasonable fees and expenses of no more than one such separate counsel. The Company will not be liable to any Purchaser Party under this Agreement (y) for any settlement by a Purchaser Party effected without the Company’s prior written consent, which shall not be unreasonably withheld or delayed; or (z) to the extent, but only to the extent that a loss, claim, damage or liability is attributable to any Purchaser Party’s breach of any of the representations, warranties, covenants or agreements made by such Purchaser Party in this Agreement or in the other Transaction Documents.

4.9 Reservation of Common Stock. As of the date hereof, the Company has reserved and the Company shall continue to reserve and keep available at all times, free of preemptive rights, a sufficient number of shares of Common Stock for the purpose of enabling the Company to issue Shares pursuant to this Agreement and Warrant Shares pursuant to any exercise of the Warrants.

4.10 Listing of Common Stock. The Company hereby agrees to use best efforts to maintain the listing or quotation of the Common Stock on the Trading Market on which it is currently listed, and concurrently with the Closing, the Company shall apply to list or quote all of the Shares and the Warrant Shares on such Trading Market and promptly secure the listing of all of the Shares and the Warrant Shares on such Trading Market. The Company further agrees, if the Company applies to have the Common Stock traded on any other Trading Market, it will then include in such application all of the Shares and Warrant Shares, and will take such other action as is necessary to cause all of the Shares and the Warrant Shares to be listed or quoted on such other Trading Market as promptly as possible. The Company will then take all action reasonably necessary to continue the listing and trading of its Common Stock on a Trading Market and will comply in all respects with the Company’s reporting, filing and other obligations under the bylaws or rules of the Trading Market.

4.11 Lock-Up; Subsequent Equity Sales.

(a) From the date hereof until 45 days after the Closing Date, neither the Company nor any Subsidiary shall issue, enter into any agreement to issue or announce the issuance or proposed issuance of any shares of Common Stock or Common Stock Equivalents at an effective price per share less than \$1.40.

(b) For a period of one year from the date hereof (the "Participation Period"), the Investor shall have the right to participate in any subsequent offering (a "Subsequent Financing") of Common Stock or Common Stock Equivalents, other than an Exempt Issuance, as provided herein. At least twelve hours prior to the execution of definitive documentation for a Subsequent Financing, the Company shall deliver to the Investor a written notice of its intention to effect a Subsequent Financing ("Pre-Notice"), which Pre-Notice shall ask the Investor if it wants to review the details of such financing (such additional notice, a "Subsequent Financing Notice"). Upon the written request of the Investor, and only upon a request by the Investor, for a Subsequent Financing Notice, the Company shall promptly, but no later two hours after the receipt of such request, deliver a Subsequent Financing Notice to the Investor. Such request shall be delivered to the Company by the Investor not more than four hours after its receipt of the Pre-Notice. The Subsequent Financing Notice shall describe in reasonable detail the proposed terms of such Subsequent Financing, including a description of the material terms of any Common Stock Equivalents to be offered, and the expected amount of gross proceeds of such Subsequent Financing (the "Subsequent Financing Gross Proceeds"). The Investor shall notify the Company in writing within four hours after its receipt of the Subsequent Financing Notice of its willingness to participate in the Subsequent Financing on the terms described in the Subsequent Financing Notice, subject to completion of mutually acceptable documentation. If the Investor fails to timely respond to a Pre-Notice or Subsequent Financing Notice, the Investor shall have no right to participate in the Subsequent Financing. In the event that the Investor timely notifies the Company that it wishes to participate in the Subsequent Financing, the Investor shall have the right to participate in the Subsequent Financing in an amount not to exceed 20% of the Subsequent Financing Gross Proceeds. The Company shall have the right to sell any amount of the Subsequent Financing not purchased by the Investor to such investors as it may determine in its sole discretion; provided, however, that any such sales shall be on terms no more favorable to the investors than those described in the Subsequent Financing Notice. Notwithstanding the delivery of any Pre-Notice or Subsequent Financing Notice, the Company shall have the right to terminate or delay the Subsequent Financing as it may determine in its sole discretion. The Investor acknowledges and agrees that, upon its receipt of a Subsequent Financing Notice, the Investor shall be deemed to be in receipt of material non-public information regarding the Company and agrees to hold such information in confidence and not to disclose such information to any other person and not to effect any transactions in the Common Stock until the earlier of (i) the public announcement of the Subsequent Financing or (ii) the receipt of written notice from the Company that it has abandoned the Subsequent Financing (which notice shall be given promptly following a determination by the Company not to proceed with a Subsequent Financing).

(c) From the date hereof until three (3) years from the Closing Date, the Company shall be prohibited from effecting or entering into an agreement to effect any issuance by the Company or any of its Subsidiaries of Common Stock or Common Stock Equivalents for cash consideration (or a combination of units hereof) involving a Variable Rate Transaction. “Variable Rate Transaction” means a transaction in which the Company (i) issues or sells any debt or equity securities that are convertible into, exchangeable or exercisable for, or include the right to receive additional shares of Common Stock either (A) at a conversion price, exercise price or exchange rate or other price that is based upon and/or varies with the trading prices of or quotations for the shares of Common Stock at any time after the initial issuance of such debt or equity securities, or (B) with a conversion, exercise or exchange price that is subject to being reset at some future date after the initial issuance of such debt or equity security or upon the occurrence of specified or contingent events directly or indirectly related to the business of the Company or the market for the Common Stock (but not including any routine anti-dilution protections in any warrant or convertible security) or (ii) enters into any agreement, including, but not limited to, an equity line of credit, whereby the Company may sell securities at a future determined price. The Purchaser shall be entitled to obtain injunctive relief against the Company to preclude any such issuance, which remedy shall be in addition to any right to collect damages.

(d) Notwithstanding the foregoing, Section 4.11(a) shall not apply in respect of an Exempt Issuance and no Variable Rate Transaction shall be an Exempt Issuance.

4.12 Certain Transactions and Confidentiality. The Purchaser covenants that neither it nor any Affiliate acting on its behalf or pursuant to any understanding with it will execute any purchases or sales, including Short Sales of any of the Company’s securities during the period commencing with the execution of this Agreement and ending at such time that the transactions contemplated by this Agreement are first publicly announced pursuant to the initial press release as described in Section 4.3. The Purchaser covenants that until such time as the transactions contemplated by this Agreement are publicly disclosed by the Company pursuant to the initial press release as described in Section 4.3, the Purchaser will maintain the confidentiality of the existence and terms of this transaction and the information included in the Disclosure Schedules. Notwithstanding the foregoing, and notwithstanding anything contained in this Agreement to the contrary, the Company expressly acknowledges and agrees that (i) the Purchaser makes no representation, warranty or covenant hereby that it will not engage in effecting transactions in any securities of the Company after the time that the transactions contemplated by this Agreement are first publicly announced pursuant to the initial press release as described in Section 4.3, (ii) the Purchaser shall not be restricted or prohibited from effecting any transactions in any securities of the Company in accordance with applicable securities laws from and after the time that the transactions contemplated by this Agreement are first publicly announced pursuant to the initial press release as described in Section 4.3 and (iii) the Purchaser shall have no duty of confidentiality to the Company or its Subsidiaries after the issuance of the initial press release as described in Section 4.3. Notwithstanding the foregoing, in the case the Purchaser is a multi-managed investment vehicle whereby separate portfolio managers manage separate portions of the Purchaser’s assets and the portfolio managers have no direct knowledge of the investment decisions made by the portfolio managers managing other portions of the Purchaser’s assets, the covenant set forth above shall only apply with respect to the portion of assets managed by the portfolio manager that made the investment decision to purchase the Securities covered by this Agreement.

**ARTICLE V.**  
**MISCELLANEOUS**

5.1 Termination. This Agreement may be terminated by the Purchaser, as to the Purchaser's obligations hereunder, by written notice to the other parties, if the Closing has not been consummated on or before July 23, 2010; provided, however, that no such termination will affect the right of any party to sue for any breach by the other party (or parties).

5.2 Fees and Expenses. Except as expressly set forth in the Transaction Documents to the contrary, each party shall pay the fees and expenses of its advisers, counsel, accountants and other experts, if any, and all other expenses incurred by such party incident to the negotiation, preparation, execution, delivery and performance of this Agreement. The Company shall pay all Transfer Agent fees, stamp taxes and other taxes and duties levied in connection with the delivery of any Securities to the Purchaser.

5.3 Entire Agreement. The Transaction Documents, together with the exhibits and schedules thereto, the Prospectus and the Prospectus Supplement, contain the entire understanding of the parties with respect to the subject matter hereof and supersede all prior agreements and understandings, oral or written, with respect to such matters, which the parties acknowledge have been merged into such documents, exhibits and schedules.

5.4 Notices. Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed given and effective on the earliest of: (a) the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number set forth on the signature pages attached hereto prior to 5:30 p.m. (New York City time) on a Trading Day, (b) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number set forth on the signature pages attached hereto on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (c) the second (2<sup>nd</sup>) Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service or (d) upon actual receipt by the party to whom such notice is required to be given. The address for such notices and communications shall be as set forth on the signature pages attached hereto.

5.5 Amendments; Waivers. No provision of this Agreement may be waived, modified, supplemented or amended except in a written instrument signed, in the case of an amendment, by the Company and the Purchaser or, in the case of a waiver, by the party against whom enforcement of any such waived provision is sought. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of any party to exercise any right hereunder in any manner impair the exercise of any such right.

5.6 Headings. The headings herein are for convenience only, do not constitute a part of this Agreement and shall not be deemed to limit or affect any of the provisions hereof.

5.7 Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their successors and permitted assigns. The Company may not assign this Agreement or any rights or obligations hereunder without the prior written consent of the Purchaser (other than by merger). The Purchaser may assign any or all of its rights under this Agreement to any Person to whom the Purchaser assigns or transfers any Securities, in which event such assignee shall be deemed to be the Purchaser hereunder with respect to such assigned rights.

5.8 No Third-Party Beneficiaries. This Agreement is intended for the benefit of the parties hereto and their respective successors and permitted assigns and is not for the benefit of, nor may any provision hereof be enforced by, any other Person, except as otherwise set forth in Section 4.7.

5.9 Governing Law. All questions concerning the construction, validity, enforcement and interpretation of the Transaction Documents shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Agreement and any other Transaction Documents (whether brought against a party hereto or its respective affiliates, directors, officers, shareholders, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If either party shall commence an action or proceeding to enforce any provisions of the Transaction Documents, then, in addition to the obligations of the Company under Section 4.7, the prevailing party in such action or proceeding shall be reimbursed by the other party for its reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

5.10 Survival. The representations and warranties contained herein shall survive the Closing and the delivery of the Shares and Warrants.

5.11 Execution. This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to the other party, it being understood that both parties need not sign the same counterpart. In the event that any signature is delivered by facsimile transmission or by e-mail delivery of a “.pdf” format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or “.pdf” signature page were an original thereof.

5.12 Severability. If any term, provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction to be invalid, illegal, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions set forth herein shall remain in full force and effect and shall in no way be affected, impaired or invalidated, and the parties hereto shall use their commercially reasonable efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such term, provision, covenant or restriction. It is hereby stipulated and declared to be the intention of the parties that they would have executed the remaining terms, provisions, covenants and restrictions without including any of such that may be hereafter declared invalid, illegal, void or unenforceable.

5.13 Rescission and Withdrawal Right. Notwithstanding anything to the contrary contained in (and without limiting any similar provisions of) any of the other Transaction Documents, whenever the Purchaser exercises a right, election, demand or option under a Transaction Document and the Company does not timely perform its related obligations within the periods therein provided, then the Purchaser may rescind or withdraw, in its sole discretion from time to time upon written notice to the Company, any relevant notice, demand or election in whole or in part without prejudice to its future actions and rights.

5.14 Replacement of Securities. If any certificate or instrument evidencing any Securities is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation thereof (in the case of mutilation), or in lieu of and substitution therefor, a new certificate or instrument, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction. The applicant for a new certificate or instrument under such circumstances shall also pay any reasonable third-party costs (including customary indemnity) associated with the issuance of such replacement Securities.

5.15 Remedies. In addition to being entitled to exercise all rights provided herein or granted by law, including recovery of damages, each of the Purchaser and the Company will be entitled to specific performance under the Transaction Documents. The parties agree that monetary damages may not be adequate compensation for any loss incurred by reason of any breach of obligations contained in the Transaction Documents and hereby agree to waive and not to assert in any action for specific performance of any such obligation the defense that a remedy at law would be adequate.

5.16 Payment Set Aside. To the extent that the Company makes a payment or payments to the Purchaser pursuant to any Transaction Document or the Purchaser enforces or exercises its rights thereunder, and such payment or payments or the proceeds of such enforcement or exercise or any part thereof are subsequently invalidated, declared to be fraudulent or preferential, set aside, recovered from, disgorged by or are required to be refunded, repaid or otherwise restored to the Company, a trustee, receiver or any other person under any law (including, without limitation, any bankruptcy law, state or federal law, common law or equitable cause of action), then to the extent of any such restoration the obligation or part thereof originally intended to be satisfied shall be revived and continued in full force and effect as if such payment had not been made or such enforcement or setoff had not occurred.



5.17 **Liquidated Damages.** The Company's obligations to pay any partial liquidated damages or other amounts owing under the Transaction Documents is a continuing obligation of the Company and shall not terminate until all unpaid partial liquidated damages and other amounts have been paid notwithstanding the fact that the instrument or security pursuant to which such partial liquidated damages or other amounts are due and payable shall have been canceled.

5.18 **Saturdays, Sundays, Holidays, etc.** If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then such action may be taken or such right may be exercised on the next succeeding Business Day.

5.19 **Construction.** The parties agree that each of them and/or their respective counsel has reviewed and had an opportunity to revise the Transaction Documents and, therefore, the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of the Transaction Documents or any amendments hereto. In addition, each and every reference to share prices and shares of Common Stock in any Transaction Document shall be subject to adjustment for reverse and forward stock splits, stock dividends, stock combinations and other similar transactions of the Common Stock that occur after the date of this Agreement.

5.20 **WAIVER OF JURY TRIAL. IN ANY ACTION, SUIT, OR PROCEEDING IN ANY JURISDICTION BROUGHT BY ANY PARTY AGAINST ANY OTHER PARTY, THE PARTIES EACH KNOWINGLY AND INTENTIONALLY, TO THE GREATEST EXTENT PERMITTED BY APPLICABLE LAW, HEREBY ABSOLUTELY, UNCONDITIONALLY, IRREVOCABLY AND EXPRESSLY WAIVES FOREVER TRIAL BY JURY.**

*(Signature Pages Follow)*

IN WITNESS WHEREOF, the parties hereto have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

**PHARMATHENE, INC.**

Address for Notice:

By: /s/ Charles A. Reinhart III  
Name: Charles A. Reinhart III  
Title: Sr. Vice President & CFO

One Park Place  
Suite 450  
Annapolis, MD 21401  
Fax (410) 269-2601  
Attention: General Counsel

With a copy to (which shall not constitute notice):

Sonnenschein Nath & Rosenthal LLP  
1221 Avenue of the Americas  
New York, New York 10020  
Attention: Jeffrey A. Baumel

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK  
SIGNATURE PAGE FOR PURCHASER FOLLOWS]

[PURCHASER SIGNATURE PAGES TO PIP SECURITIES PURCHASE AGREEMENT]

IN WITNESS WHEREOF, the undersigned have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

Name of Purchaser: \_\_\_\_\_

*Signature of Authorized Signatory of Purchaser:* \_\_\_\_\_

Name of Authorized Signatory: \_\_\_\_\_

Title of Authorized Signatory: \_\_\_\_\_

Email Address of Authorized Signatory: \_\_\_\_\_

Facsimile Number of Authorized Signatory: \_\_\_\_\_

Address for Notice of Purchaser:

Address for Delivery of Securities for Purchaser (if not same as address for notice):

Subscription Amount: \$3,899,999.60

Shares: 2,785,714

Warrants: 1,323,214

EIN Number: \_\_\_\_\_

[SIGNATURE PAGES CONTINUE]

## COMMON STOCK PURCHASE WARRANT

PHARMATHENE, INC.

Warrant Shares: [\_\_\_\_\_]

Initial Exercise Date: January [\_\_\_\_], 2011

Issue Date: July [\_\_\_\_], 2010

THIS COMMON STOCK PURCHASE WARRANT (the "Warrant") certifies that, for value received, \_\_\_\_\_ (the "Holder") is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the six-month anniversary of the Issue Date (the "Initial Exercise Date") and on or prior to the close of business on the six-year anniversary of the Initial Exercise Date (the "Termination Date") but not thereafter, to subscribe for and purchase from PharmAthene, Inc., a Delaware corporation (the "Company"), up to \_\_\_\_\_ shares (the "Warrant Shares") of Common Stock. The purchase price of one share of Common Stock under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b).

Section 1. Definitions. Capitalized terms used and not otherwise defined herein shall have the meanings set forth in that certain Securities Purchase Agreement (the "Purchase Agreement"), dated July 20, 2010 (the "Subscription Date"), among the Company and the purchasers signatory thereto.

Section 2. Exercise.

a) Exercise of Warrant. Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before the Termination Date by delivery to the Company (or such other office or agency of the Company as it may designate by notice in writing to the registered Holder at the address of the Holder appearing on the books of the Company) of a duly executed facsimile copy of the Notice of Exercise Form annexed hereto; and, within three (3) Trading Days of the date said Notice of Exercise is delivered to the Company, the Company shall have received payment of the aggregate Exercise Price of the shares thereby purchased by wire transfer or cashier's check drawn on a United States bank or, if available, pursuant to the cashless exercise procedure specified in Section 2(c) below. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within three (3) Trading Days of the date the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise Form within 1 Business Day of receipt of such notice. **The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.**

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b) Exercise Price. The exercise price per share of the Common Stock under this Warrant shall be \$1.63, subject to adjustment hereunder (the "Exercise Price").

c) Cashless Exercise. If at the time of exercise hereof there is no effective registration statement registering, or the prospectus contained therein is not available for the issuance of the Warrant Shares to the Holder and all of the Warrant Shares are not then registered for resale by Holder into the market at market prices from time to time on an effective registration statement for use on a continuous basis (or the prospectus contained therein is not available for use), then this Warrant may also be exercised, in whole or in part, at such time by means of a "cashless exercise" in which the Holder shall be entitled to receive a certificate for the number of Warrant Shares equal to the quotient obtained by dividing [(A-B) (X)] by (A), where:

(A) = the VWAP on the Trading Day immediately preceding the date on which Holder elects to exercise this Warrant by means of a "cashless exercise," as set forth in the applicable Notice of Exercise;

(B) = the Exercise Price of this Warrant, as adjusted hereunder; and

(X) = the number of Warrant Shares that would be issuable upon exercise of this Warrant in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

"VWAP" means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if the OTC Bulletin Board is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the OTC Bulletin Board, (c) if the Common Stock is not then listed or quoted for trading on the OTC Bulletin Board and if prices for the Common Stock are then reported in the "Pink Sheets" published by Pink OTC Markets, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Holders of a majority in interest of the Securities then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

d) Mechanics of Exercise.

i. Delivery of Certificates Upon Exercise. Certificates for shares purchased hereunder shall be transmitted by the Transfer Agent to the Holder by crediting the account of the Holder's prime broker with the Depository Trust Company through its Deposit Withdrawal Agent Commission ("DWAC") system if the Company is then a participant in such system and either (A) there is an effective Registration Statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by Holder or (B) this Warrant is being exercised via cashless exercise, and otherwise by physical delivery to the address specified by the Holder in the Notice of Exercise by the date that is three (3) Trading Days after the latest of (A) the delivery to the Company of the Notice of Exercise Form, (B) surrender of this Warrant (if required) and (C) payment of the aggregate Exercise Price as set forth above (including by cashless exercise, if permitted) (such date, the "Warrant Share Delivery Date"). This Warrant shall be deemed to have been exercised on the first date on which all of the foregoing have been delivered to the Company. The Warrant Shares shall be deemed to have been issued, and Holder or any other person so designated to be named therein shall be deemed to have become a holder of record of such shares for all purposes, as of the date the Warrant has been exercised, with payment to the Company of the Exercise Price (or by cashless exercise, if permitted) and all taxes required to be paid by the Holder, if any, pursuant to Section 2(d)(vi) prior to the issuance of such shares, having been paid. If the Company fails for any reason to deliver to the Holder certificates evidencing the Warrant Shares subject to a Notice of Exercise by the Warrant Share Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares subject to such exercise (based on the VWAP of the Common Stock on the date of the applicable Notice of Exercise), \$10 per Trading Day (increasing to \$20 per Trading Day on the fifth Trading Day after such liquidated damages begin to accrue) for each Trading Day after such Warrant Share Delivery Date until such certificates are delivered or Holder rescinds such exercise.

ii. Delivery of New Warrants Upon Exercise. If this Warrant shall have been exercised in part, the Company shall, at the request of a Holder and upon surrender of this Warrant certificate, at the time of delivery of the certificate or certificates representing Warrant Shares, deliver to Holder a new Warrant evidencing the rights of Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

iii. Rescission Rights. If the Company fails to cause the Transfer Agent to transmit to the Holder a certificate or the certificates representing the Warrant Shares pursuant to Section 2(d)(i) by the Warrant Share Delivery Date, then, the Holder will have the right to rescind such exercise.

iv. Compensation for Buy-In on Failure to Timely Deliver Certificates Upon Exercise. In addition to any other rights available to the Holder, if the Company fails to cause the Transfer Agent to transmit to the Holder a certificate or the certificates representing the Warrant Shares pursuant to an exercise on or before the Warrant Share Delivery Date, and if after such date the Holder is required by its broker to purchase (in an open market transaction or otherwise) or the Holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a "Buy-In"), then the Company shall, within three (3) Trading Days after the Holder's request and in the Holder's discretion, either (i) pay cash to the Holder in an amount equal to the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased (the "Buy-In Price"), at which point the Company's obligation to deliver such certificate (and to issue such Warrant Shares or credit such Holder's balance account with DTC) shall terminate, or (ii) promptly honor its obligation to deliver to the Holder a certificate or certificates representing such Warrant Shares or credit such Holder's balance account with DTC and pay cash to the Holder in an amount equal to the excess (if any) of the Buy-In Price over the product of (A) such number of shares of Common Stock, times (B) the VWAP on the date of exercise.

v. No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the next whole share.

vi. Charges, Taxes and Expenses. Issuance of certificates for Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such certificate, all of which taxes and expenses shall be paid by the Company, and such certificates shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that in the event certificates for Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto.

vii. Closing of Books. The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

e) Holder's Exercise Limitations. The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Notice of Exercise, the Holder (together with the Holder's Affiliates, and any other Persons acting as a group together with the Holder or any of the Holder's Affiliates), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the Holder and its Affiliates shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the remaining, nonexercised portion of this Warrant beneficially owned by the Holder or any of its Affiliates and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company (including, without limitation, any other Common Stock Equivalents) subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Affiliates. Except as set forth in the preceding sentence, for purposes of this Section 2(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 2(e) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates) and of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the submission of a Notice of Exercise shall be deemed to be the Holder's determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 2(e), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company's most recent periodic or annual report filed with the Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Company shall within two Trading Days confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its Affiliates since the date as of which such number of outstanding shares of Common Stock was reported. The "Beneficial Ownership Limitation" shall be 4.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of this Warrant. The Holder, upon not less than 61 days' prior notice to the Company, may increase or decrease the Beneficial Ownership Limitation provisions of this Section 2(e), provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon exercise of this Warrant held by the Holder and the provisions of this Section 2(e) shall continue to apply. Any such increase or decrease will not be effective until the 61<sup>st</sup> day after such notice is delivered to the Company. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 2(e) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Warrant.



Section 3.      Certain Adjustments.

a)      Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions on shares of its Common Stock or any other equity or equity equivalent securities payable in shares of Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of reverse stock split) outstanding shares of Common Stock into a smaller number of shares, or (iv) issues by reclassification of shares of the Common Stock any shares of capital stock of the Company, then in each case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding treasury shares, if any) outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

b) Intentionally Omitted.

c) Subsequent Rights Offerings. If the Company, at any time while the Warrant is outstanding, shall issue rights, options or warrants to all holders of Common Stock (and not to the Holders) entitling them to subscribe for or purchase shares of Common Stock at a price per share less than the VWAP on the record date mentioned below, then, the Exercise Price shall be multiplied by a fraction, of which the denominator shall be the number of shares of the Common Stock outstanding on the date of issuance of such rights, options or warrants plus the number of additional shares of Common Stock offered for subscription or purchase, and of which the numerator shall be the number of shares of the Common Stock outstanding on the date of issuance of such rights, options or warrants plus the number of shares which the aggregate offering price of the total number of shares so offered (assuming receipt by the Company in full of all consideration payable upon exercise of such rights, options or warrants) would purchase at such VWAP. Such adjustment shall be made whenever such rights, options or warrants are issued, and shall become effective immediately after the record date for the determination of stockholders entitled to receive such rights, options or warrants.

d) Pro Rata Distributions. If the Company, at any time while this Warrant is outstanding, shall distribute to all holders of Common Stock (and not to the Holders) evidences of its indebtedness or assets (including cash and cash dividends) or rights or warrants to subscribe for or purchase any security other than the Common Stock (which shall be subject to Section 3(b)), then in each such case the Exercise Price shall be adjusted by multiplying the Exercise Price in effect immediately prior to the record date fixed for determination of stockholders entitled to receive such distribution by a fraction of which the denominator shall be the VWAP determined as of the record date mentioned above, and of which the numerator shall be such VWAP on such record date less the then per share fair market value at such record date of the portion of such assets or evidence of indebtedness so distributed applicable to one outstanding share of the Common Stock as determined by the Board of Directors in good faith. In either case the adjustments shall be described in a statement provided to the Holder of the portion of assets or evidences of indebtedness so distributed or such subscription rights applicable to one share of Common Stock. Such adjustment shall be made whenever any such distribution is made and shall become effective immediately after the record date mentioned above.

e) Fundamental Transaction. If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person whereby such other Person acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination) (each a “Fundamental Transaction”), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, at the option of the Holder (without regard to any limitation in Section 2(e) on the exercise of this Warrant), the number of shares of Common Stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the “Alternate Consideration”) receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such Fundamental Transaction (without regard to any limitation in Section 2(e) on the exercise of this Warrant). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. Notwithstanding anything to the contrary, in the event of a Fundamental Transaction other than one in which a Successor Entity (as defined below) that is a publicly traded corporation whose stock is quoted or listed for trading on an Eligible Market assumes this Warrant such that the Warrant shall be exercisable for the publicly traded Common Stock of such Successor Entity, the Company or any Successor Entity shall, at the Holder’s option, exercisable at any time concurrently with, or within 30 days after, the consummation of the Fundamental Transaction, purchase this Warrant from the Holder by paying to the Holder an amount of cash equal to the Black Scholes Value of the remaining unexercised portion of this Warrant on the date of the consummation of such Fundamental Transaction. As used herein (w) “Black Scholes Value” means the value of this Warrant based on the Black and Scholes Option Pricing Model obtained from the “OV” function on Bloomberg, L.P. (“Bloomberg”) determined as of the day of consummation of the applicable Fundamental Transaction for pricing purposes and reflecting (A) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the time between the date of the public announcement of the applicable Fundamental Transaction and the Termination Date, (B) an expected volatility equal to the greater of 100% and the 100 day volatility obtained from the HVT function on Bloomberg as of the Trading Day immediately following the public announcement of the applicable Fundamental Transaction, (C) the underlying price per share used in such calculation shall be the sum of the price per share being offered in cash, if any, plus the value of any non-cash consideration, if any, being offered in such Fundamental Transaction and (D) a remaining option time equal to the time between the date of the public announcement of the applicable Fundamental Transaction and the Termination Date, (x) “Successor Entity” means the Person (as defined in the Purchase Agreement) (or, if so elected by the Holder, the Parent Entity (as defined below)) formed by, resulting from or surviving any Fundamental Transaction or the Person (or, if so elected by the Holder, the Parent Entity) with which such Fundamental Transaction shall have been entered into, (y) “Eligible Market” means the NYSE Amex, The NASDAQ Capital Market, The NASDAQ Global Market, The NASDAQ Global Select Market, the New York Stock Exchange or the OTC Bulletin Board (or any successors to any of the foregoing) and (z) “Parent Entity” of a Person means an entity that, directly or indirectly, controls the applicable Person and whose common stock or equivalent equity security is quoted or listed on an Eligible Market, or, if there is more than one such Person or Parent Entity, the Person or Parent Entity with the largest public market capitalization as of the date of consummation of the Fundamental Transaction. The terms of any agreement pursuant to which a Fundamental Transaction is effected shall include terms requiring any such successor or surviving entity to comply with the provisions of this Section 3(e) and insuring that this Warrant (or any such replacement security) will be similarly adjusted upon any subsequent transaction analogous to a Fundamental Transaction.

f) Calculations. All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding treasury shares, if any) issued and outstanding.

g) Notice to Holder.

i. Adjustment to Exercise Price. Whenever the Exercise Price is adjusted pursuant to any provision of this Section 3, the Company shall promptly mail to the Holder a notice setting forth the Exercise Price after such adjustment and setting forth a brief statement of the facts requiring such adjustment.

ii. Notice to Allow Exercise by Holder. After the Initial Exercise Date, if (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Company is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be mailed to the Holder at its last address as it shall appear upon the Warrant Register of the Company, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; provided that the failure to mail such notice or any defect therein or in the mailing thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any of the Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to exercise this Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

Section 4. Transfer of Warrant.

a) Transferability. Subject to compliance with any applicable securities laws, this Warrant and all rights hereunder (including, without limitation, any registration rights) are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees, as applicable, and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. The Warrant, if properly assigned in accordance herewith, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.

b) New Warrants. This Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section 4(a), as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the initial issuance date set forth on the first page of this Warrant and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto.

c) Warrant Register. The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the "Warrant Register"), in the name of the record Holder hereof from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

d) Representation by the Holder. The Holder, by the acceptance hereof, represents and warrants that it is acquiring this Warrant and, upon any exercise hereof, will acquire the Warrant Shares issuable upon such exercise, for its own account and not with a view to or for distributing or reselling such Warrant Shares or any part thereof in violation of the Securities Act or any applicable state securities law, except pursuant to sales registered or exempted under the Securities Act.

Section 5. Miscellaneous.

a) No Rights as Stockholder Until Exercise. This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(d)(i).

b) Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon surrender and cancellation of such Warrant or stock certificate, if mutilated, the Company will make and deliver a new Warrant or stock certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate.

c) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then, such action may be taken or such right may be exercised on the next succeeding Business Day.

d) Authorized Shares.

The Company covenants that, during the period the Warrant is outstanding, it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of executing stock certificates to execute and issue the necessary certificates for the Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the Common Stock may be listed. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and payment for such Warrant Shares in accordance herewith, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its certificate of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (i) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (ii) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant and (iii) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof, as may be, necessary to enable the Company to perform its obligations under this Warrant.

Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

e) Jurisdiction. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be determined in accordance with the provisions of the Purchase Agreement.

f) Restrictions. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered, and the Holder does not utilize cashless exercise, will have restrictions upon resale imposed by state and federal securities laws.

g) Nonwaiver and Expenses. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice Holder's rights, powers or remedies. Without limiting any other provision of this Warrant or the Purchase Agreement, if the Company willfully and knowingly fails to comply with any provision of this Warrant, which results in any material damages to the Holder, the Company shall pay to Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

h) Notices. Any notice, request or other document required or permitted to be given or delivered to the Holder by the Company shall be delivered in accordance with the notice provisions of the Purchase Agreement.

i) Limitation of Liability. No provision hereof, in the absence of any affirmative action by Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of Holder, shall give rise to any liability of Holder for the purchase price of any Common Stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

j) Remedies. The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate.

k) Successors and Assigns. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

l) Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company and the Holder.

m) Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

n) Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

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*(Signature Pages Follow)*



IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the date first above indicated.

**PHARMATHENE, INC.**

By: \_\_\_\_\_

Name:

Title:

**NOTICE OF EXERCISE**

TO: PHARMATHENE, INC.

(1) The undersigned hereby elects to purchase \_\_\_\_\_ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

(2) Payment shall take the form of (check applicable box):

in lawful money of the United States; or

[if permitted] the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 2(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 2(c).

(3) Please issue a certificate or certificates representing said Warrant Shares in the name of the undersigned or in such other name as is specified below:

\_\_\_\_\_

The Warrant Shares shall be delivered to the following DWAC Account Number or by physical delivery of a certificate to:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

[SIGNATURE OF HOLDER]

Name of Investing Entity: \_\_\_\_\_

*Signature of Authorized Signatory of Investing Entity:* \_\_\_\_\_

Name of Authorized Signatory: \_\_\_\_\_

Title of Authorized Signatory: \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_

**ASSIGNMENT FORM**

(To assign the foregoing warrant, execute this form and supply required information. Do not use this form to exercise the warrant.)

FOR VALUE RECEIVED, [\_\_\_\_] all of or [\_\_\_\_\_] shares of the foregoing Warrant and all rights evidenced thereby are hereby assigned to

\_\_\_\_\_ whose address is  
\_\_\_\_\_  
\_\_\_\_\_.

Dated: \_\_\_\_\_, \_\_\_\_\_

Holder's Signature: \_\_\_\_\_  
Holder's Address: \_\_\_\_\_  
\_\_\_\_\_

Signature Guaranteed: \_\_\_\_\_

NOTE: The signature to this Assignment Form must correspond with the name as it appears on the face of the Warrant, without alteration or enlargement or any change whatsoever, and must be guaranteed by a bank or trust company. Officers of corporations and those acting in a fiduciary or other representative capacity should file proper evidence of authority to assign the foregoing Warrant.

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**Contact:**

Stacey Jurchison  
PharmAthene, Inc.  
Phone: 410-269-2610  
Stacey.Jurchison@PharmAthene.com

**PHARMATHENE ANNOUNCES \$3.9 MILLION REGISTERED DIRECT OFFERING**

**ANNAPOLIS, MD – July 20, 2010** – PharmAthene, Inc. (NYSE Amex: PIP), a biodefense company developing medical countermeasures against biological and chemical threats, announced today that it has entered into a purchase agreement to sell \$3.9 million of its common stock and warrants to an existing institutional investor in a registered public offering.

Under the terms of the purchase agreement, PharmAthene will sell an aggregate of 2,785,714 newly issued shares of its common stock at \$1.40 per share and warrants to purchase an aggregate of 1,323,214 shares of its common stock at an exercise price of \$1.63 per share, the closing price of PharmAthene's common stock on July 19, 2010. The warrants will be exercisable beginning on the six month anniversary of the closing date of the offering and will expire six years from the date they first become exercisable.

The offering is expected to close on or about July 23, 2010 subject to the satisfaction of customary closing conditions. The Company intends to use the net proceeds of the offering for general corporate purposes.

Roth Capital Partners, LLC served as sole placement agent for the offering. Noble Financial Capital Markets served as the Company's financial advisor in connection with the offering.

The securities described above are being offered by PharmAthene pursuant to a registration statement previously filed and declared effective by the Securities and Exchange Commission. This press release shall not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of these securities in any state or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction. The securities may be offered only by means of a prospectus, including a prospectus supplement, forming a part of the effective registration statement. Copies of the final prospectus supplement may be obtained, when available, at the Securities and Exchange Commission's website at <http://www.sec.gov>.

**About PharmAthene, Inc.**

PharmAthene was formed to meet the critical needs of the United States and its allies by developing and commercializing medical countermeasures against biological and chemical weapons. PharmAthene's lead product development programs include:

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- SparVax™ - a second generation recombinant protective antigen (rPA) anthrax vaccine
- Valortim® - a fully human monoclonal antibody for the prevention and treatment of anthrax infection
- Protexia® - a novel bioscavenger for the prevention and treatment of morbidity and mortality associated with exposure to chemical nerve agents

**Statement on Cautionary Factors**

Except for the historical information presented herein, matters discussed may constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 that are subject to certain risks and uncertainties that could cause actual results to differ materially from any future results, performance or achievements expressed or implied by such statements. Statements that are not historical facts, including statements preceded by, followed by, or that include the words "potential"; "believe"; "anticipate"; "intend"; "plan"; "expect"; "estimate"; "could"; "may"; "should"; "will"; "project"; "potential"; or similar statements are forward-looking statements. PharmAthene disclaims any intent or obligation to update these forward-looking statements other than as required by law. Risks and uncertainties include risk associated with the reliability of the results of the studies relating to human safety and possible adverse effects resulting from the administration of the Company's product candidates, unexpected funding delays and/or reductions or elimination of U.S. government funding for one or more of the Company's development programs, the award of government contracts to our competitors, unforeseen safety issues, challenges related to the development, scale-up, technology transfer, and/or process validation of manufacturing processes for our product candidates, unexpected determinations that these product candidates prove not to be effective and/or capable of being marketed as products, as well as risks detailed from time to time in PharmAthene's Forms 10-K and 10-Q under the caption "Risk Factors" and in its other reports filed with the U.S. Securities and Exchange Commission (the "SEC").

Copies of PharmAthene's public disclosure filings are available from its investor relations department and our website under the investor relations tab at [www.PharmAthene.com](http://www.PharmAthene.com).

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