FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

| | OMB APPROVAL | | | | | | | | | |
|---|--------------|----------|--|--|--|--|--|--|--|--|
| | OMB Number: | 3235-028 | | | | | | | | |
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| Check this box if no longer subject to |
|--|
| Section 16. Form 4 or Form 5 |
| obligations may continue. See |
| Instruction 1(b). |

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| OIVID APPROVAL | | | | | | | | | | |
|---------------------|-----------|--|--|--|--|--|--|--|--|--|
| OMB Number: | 3235-0287 | | | | | | | | | |
| Estimated average b | urden | | | | | | | | | |
| hours per response: | 0.5 | | | | | | | | | |

| Name and Address of Reporting Person* Cook Francesca M | | | | | | 2. Issuer Name and Ticker or Trading Symbol PHARMATHENE, INC [PIP] | | | | | | | | | | all app | p of Reportir blicable) ctor er (give title | ng Persor | 10% C | |
|---|---|--|--|---------|------------------------------|--|---------|---|------------------------------------|--------------------------|---------------------|--|---------------|--------|--|---|--|-----------|----------------------------------|---|
| (Last) (First) (Middle) C/O PHARMATHENE, INC. ONE PARK PLACE, SUITE 450 | | | | | | 3. Date of Earliest Transaction (Month/Day/Year) 01/21/2010 | | | | | | | | | | belov | N) ` | GVMN' | below) VMNT Affairs | |
| (Street) ANNAPOLIS MD 21401 (City) (State) (Zip) | | | | | 4. If | 4. If Amendment, Date of Original Filed (Month/Day/Year) | | | | | | | | | Individual or Joint/Group Filing (Check Applicable Line) Form filed by One Reporting Person Form filed by More than One Reporting Person | | | | | |
| | | Tabl | e I - Noi | า-Deriv | ative | Sec | curitie | s Acc | quired, | Dis | posed o | f, o | r Ben | eficia | ally | Owne | ed | | | |
| 1. Title of Security (Instr. 3) 2. Transa Date (Month/D | | | | | | Exe Day/Year) if ar | | A. Deemed xecution Date, any Month/Day/Year) | | Transaction Dis | | Securities Acquired (A sposed Of (D) (Instr. 3, | | | 4 and S | | Securities Beneficially | | rship irect direct . 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) |
| | | | | | | | | | Code | v | Amount | | (A) or (D) | Price | | Transaction(s) (Instr. 3 and 4) | | | | , |
| Common Stock, \$0.0001 par value per share 01/2 | | | | | 1/2010 | | | | F ⁽¹⁾ | | 2,574 | 4 D | | \$1. | .73 4 | | 3,264 | Г |) | |
| | | Та | ıble II - I | | | | | | | | sed of, onvertib | | | | y Ov | vned | | | | |
| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deem Execution if any (Month/Da | Date, | Date, Transacti Code (Ins | | | | 6. Date E Expiratio (Month/D | Ame Sec Und Der | Am | str. 3 | | | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction (Instr. 4) | Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) | | | |
| | | | | | Code | | | | | Expiration Date | of Title Share | | | | | | | | | |

Explanation of Responses:

1. Shares withheld at vesting of restricted stock for purposes of meeting the Reporting Person's tax obligations. The closing price of the issuer's common stock on the NYSE Amex on 1/21/2010 was \$1.73.

/s/ Roland S. Chase, attorney in 01/29/2010 **fact**

** Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

- * If the form is filed by more than one reporting person, see Instruction 4 (b)(v).
- ** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.