| FORM | 4 |
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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).

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

OMB APPROVAL

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Washington, D.C. 20549

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

| 1. Name and A Jacobson Eric | et) (First) (Middle) SYNTA PHARMACEUTICALS RP., 45 HARTWELL AVENUE eet) INGTON MA 02421 | oorting Person [*] | 2. Issuer Name and Ticker or Trading Symbol SYNTA PHARMACEUTICALS CORP [SNTA] | 5. Relationship of Reporting Person(s) to Issuer | | | | |
|---|---|---|---|---|--|--|--|--|
| (Last) (First) (Middle) C/O SYNTA PHARMACEUTICALS CORP., 45 HARTWELL AVENUE | | CALS | 3. Date of Earliest Transaction (Month/Day/Year) 02/09/2007 | (Check all applicable) Director 10% Owner X Officer (give title below) Sr. VP, Research and CMO | | | | |
| (Street) LEXINGTON (City) | MA 02424 | 4. If Amendment, Date of Original Filed (Month/Day/Year) | 6. Individual or Joint/Group Filing (Check Applicable Line) X Form filed by One Reporting Person Form filed by More than One Reporting Person | | | | | |

| | Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned | | | | | | | | | | | | |
|--------------------------------------|--|---|-------------------------------------|---|--|------------------|--------------|--|--|---|--|--|--|
| 1.Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transac Code (Instr. 8) | | 4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | | | 5. Amount of Securities Beneficially Owned | 6. Ownership Form: Direct (D) | 7. Nature of Indirect Beneficial Ownership | | | |
| | | | Code | v | Amount | (A) or (D) | Price | Following Reported Transaction(s) (Instr. 3 and 4) | or Indirect (I) (Instr. 4) | (Instr. 4) | | | |
| Common Stock | 02/09/2007 | | Р | | 300 (1) | A | \$ 10 | 25,300 | D | | | | |

| | Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) | | | | | | | | | | | | | | |
|---|--|--|---|------|--|-----|----------------------------|---------------------|--|-------|--|--|--|--|--|
| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | Code | 4. Transaction Code 5. Number of Derivative | | 6. Date Exercisable and | | 7. Title and Amount of Underlying Securities (Instr. 3 and 4) | | Derivative Security (Instr. 5) | 9. Number of Derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | 10. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) | |
| | | | | Code | v | (A) | (D) | Date Exercisable | Expiration Date | Title | Amount or Number of Shares | | | | |

Explanation of Responses:

1. These shares were purchased in connection with the Issuer's initial public offering under the Issuer's directed share program.

/s/ Ann Margaret Eames.
Attorney-in-Fact02/13/2007** Signature of Reporting
PersonDate

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.