

**FORM 4****UNITED STATES SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**OMB APPROVAL**

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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).

**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP**

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

|   |  |  |   |  |   |  |
|---|--|--|---|--|---|--|
| 1. Name and Address of Reporting Person*  |  |  | 2. Issuer Name and Ticker or Trading Symbol   |  | 5. Relationship of Reporting Person(s) to Issuer<br>(Check all applicable)  |  |
| <u>Kovner Bruce</u><br><br>(Last) (First) (Middle)<br><u>C/O CAXTON ASSOCIATES LP</u><br><u>500 PARK AVENUE</u><br><br>(Street)<br><u>NEW YORK NY 10022</u><br><br>(City) (State) (Zip) |  |  | <u>SYNTA PHARMACEUTICALS CORP [</u><br><u>SNTA ]</u><br><br>3. Date of Earliest Transaction (Month/Day/Year)<br><u>07/01/2010</u><br><br>4. If Amendment, Date of Original Filed (Month/Day/Year) |  | <input checked="" type="checkbox"/> Director <input checked="" type="checkbox"/> 10% Owner<br>Officer (give title below) Other (specify below)<br><br>6. Individual or Joint/Group Filing (Check Applicable Line)<br><input checked="" type="checkbox"/> Form filed by One Reporting Person<br>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. Transaction Code (Instr. 8) |   | 4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5) |            |                    | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|------------|--------------------|---|--|---|
|                                 |                                      |  | Code                           | V | Amount  | (A) or (D) | Price              |   |  |   |
| Common Stock                    | 07/01/2010                           |  | A                              |   | 15,444 <sup>(1)</sup>   | A          | \$0 <sup>(1)</sup> | 1,784,850   | D  |   |
| Common Stock                    |                                      |  |                                |   |   |            |                    | 7,761,716   | I  | By CxSynta LLC <sup>(2)</sup>                         |

**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) | 4. Transaction Code (Instr. 8) |   | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) |     | 6. Date Exercisable and Expiration Date (Month/Day/Year) |                 | 7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4) |                            | 8. Price of Derivative Security (Instr. 5) | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | 10. Ownership Form: 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 |  |  |   |  |
| Director Stock Option (Right to Buy)       | \$2.59   | 07/01/2010                           |  | A                              |   | 5,500  |     | (3)  | 07/01/2020      | Common Stock  | 5,500                      | \$0  | 5,500  | D   |  |

**Explanation of Responses:**

1. Represents a restricted stock grant subject to the Issuer's lapsing forfeiture right, which lapses as to 25% of the shares on each of September 30, 2010, December 31, 2010, March 31, 2011 and June 30, 2011, provided the Reporting Person continues to serve as a director of the Issuer on such date.
2. These shares are owned directly by CxSynta LLC and indirectly by the Reporting Person as Chairman of Caxton Corporation, the managing member of CxSynta LLC. The Reporting Person disclaims beneficial ownership of these shares except to the extent of his pecuniary interest therein, and the inclusion of these shares in this report shall not be deemed an admission of the beneficial ownership of all of the reported shares for purposes of Section 16 or for any other purpose.
3. The option vests as to 25% of the shares on each of September 30, 2010, December 31, 2010, March 31, 2011 and June 30, 2011, provided the Reporting Person continues to serve as a director of the Issuer on such date.

/s/ Scott B. Bernstein,  
Attorney-in-Fact

07/06/2010

\*\* 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.

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