
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 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): March 17, 2009

SYNTA PHARMACEUTICALS CORP.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-33277
(Commission File Number)

04-3508648
(IRS Employer
Identification No.)

**45 Hartwell Avenue
Lexington, MA 02421**
(Address of principal executive offices and zip code)

Registrant's telephone number, including area code: **(781) 274-8200**

(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 2.02 Results of Operations and Financial Condition.

On March 17, 2009, Synta Pharmaceuticals Corp. (the “Company”) filed a Notification of Late Filing on Form 12b-25 with respect to its Annual Report on Form 10-K for the year ended December 31, 2008 (the “Form 12b-25”) with the Securities and Exchange Commission. A copy of the Form 12b-25, which includes certain estimates regarding the Company’s results of operations and financial condition for the year ended December 31, 2008, is furnished as Exhibit 99.1 hereto and incorporated by reference herein.

The information in this Current Report on Form 8-K, including Exhibit 99.1, shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, except as shall be expressly set forth by specific reference in such filing.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

<u>Exhibit No.</u>	<u>Description</u>
99.1	Notification of Late Filing on Form 12b-25 filed on March 17, 2009 (incorporated by reference herein to the Form 12b-25 filed with the Securities and Exchange Commission on March 17, 2009 (File No. 001-33277).

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.

SYNTA PHARMACEUTICALS CORP.

Dated: March 19, 2009

/s/ Keith S. Ehrlich

Keith S. Ehrlich

Vice President, Finance and Administration, Chief Financial Officer