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): July 1, 2011

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))

ITEM 1.01 Entry into a Material Definitive Agreement.

On September 30, 2010, as amended on November 9, 2010 and March 3, 2011, Synta Pharmaceuticals Corp. ("Synta") and its wholly owned subsidiary, Synta Securities Corp. ("Synta Securities"), as guarantor, entered into a Loan and Security Agreement (the "Loan Agreement") with General Electric Capital Corporation ("GECC"), in its capacity as agent for GECC and MidCap Funding III, LLC ("MidCap") as lenders, pursuant to which Synta borrowed an aggregate of \$15,000,000 (the "Loan") funded at the closing on September 30, 2010. The Loan is evidenced by promissory notes issued by Synta to GECC and MidCap. No additional advances are available under the Loan Agreement.

On July 1, 2011, Synta, Synta Securities, GECC and MidCap entered into a Third Amendment to the Loan Agreement (the "Amendment"), pursuant to which the terms of Synta's obligation to repay the principal on the Loan were amended such that (i) if the Interest Only Extension Conditions (as hereinafter defined) have not been satisfied, Synta will repay the principal on the Loan in 30 equal consecutive monthly installments commencing on February 1, 2012, and (ii) if the Interest Only Extension Conditions have been satisfied, Synta will repay the principal on the Loan in 27 approximately equal consecutive monthly installments commencing on May 1, 2012. The term "Interest Only Extension Conditions" means evidence reasonably satisfactory to GECC of Synta's receipt, on or before December 30, 2011, of \$30,000,000.00 in net cash proceeds from one or a combination of the following (i) a collaboration or partnership agreement consistent with Synta's existing business and (ii) the sale of additional securities of Synta, which net cash proceeds, in any case, are fully earned (subject to revenue recognition over time in accordance with U.S. GAAP) and non-refundable when received by Synta. Under the original terms of the Loan Agreement, Synta was obligated to repay the principal on the Loan in 27 approximately equal consecutive monthly installments

In addition, the Amendment (i) amends the Loan's maturity date from September 1, 2013 to July 1, 2014, (ii) amends the application of the prepayment premium payable under certain circumstances to prepayments on the Loan made in year one, year two and year three following July 1, 2011, the effective date of the Amendment, as opposed to September 30, 2010, the original closing date of the Loan, and (iii) increases the final payment fee that Synta is obligated to pay upon repayment of the Loan from \$450,000.00 to \$525,000.00.

Synta intends to file the Amendment as an exhibit to its Quarterly Report on Form 10-Q for the quarter ended June 30, 2011.

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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.

SYNTA PHARMACEUTICALS CORP.

Dated: July 7, 2011

/s/ Keith S. Ehrlich Keith S. Ehrlich Vice President, Finance and Administration Chief Financial Officer