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): January 11, 2012

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 8.01 Other Events.

On January 11, 2012, Synta Pharmaceuticals Corp. issued a press release announcing the closing of its previously announced public offering of 7,000,000 shares of common stock. A copy of the press release is filed as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated herein by reference.

ITEM 9.01 Financial Statements and Exhibits. (d) Exhibits.

| Exhibit Number | Description |
|-------------------|---------------------------------------|
| 99.1 | Press Release, dated January 11, 2012 |
| | 2 |

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: January 11, 2012

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

EXHIBIT INDEX

| Exhibit No. | Description |
|-------------|---------------------------------------|
| 99.1 | Press Release, dated January 11, 2012 |
| | 4 |

SYNTA

Synta Pharmaceuticals Corp. 45 Hartwell Avenue Lexington, MA 02421

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www.syntapharma.com

Synta Pharmaceuticals Closes Public Offering of Common Stock

LEXINGTON, MA — January 11, 2012 — Synta Pharmaceuticals Corp. (NASDAQ: SNTA) announced today the closing of its underwritten public offering of 7,000,000 shares of common stock at a public offering price of \$4.40 per share. Net proceeds to Synta are approximately \$28.6 million, after deducting the underwriting discounts and commissions and estimated offering expenses payable by Synta. Synta has granted the underwriters a thirty (30) day option to purchase up to 1,050,000 additional shares to cover over-allotments, if any.

Jefferies & Company, Inc. acted as the sole book-running manager for the offering, and Canaccord Genuity Inc. and Roth Capital Partners, LLC acted as comanagers for the offering.

The securities described above were offered by Synta pursuant to a shelf registration statement that was previously filed with and declared effective by the Securities and Exchange Commission (SEC). This press release does not constitute an offer to sell or a solicitation of an offer to buy the securities in this offering, nor shall there be any sale of these securities in any state or other jurisdiction in which such offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities laws of any such state or other jurisdiction. A final prospectus supplement related to the offering was filed with the SEC and is available on the SEC's website located at www.sec.gov. Copies of the final prospectus supplement and the accompanying prospectus relating to this offering may be obtained from Equity Syndicate Prospectus Department, Jefferies & Company, Inc., 520 Madison Avenue, 12th Floor, New York, NY, 10022, by telephone at 877-547-6340, or by email at Prospectus_Department@Jefferies.com.

About Synta Pharmaceuticals

Synta Pharmaceuticals Corp. is a biopharmaceutical company focused on discovering, developing, and commercializing small molecule drugs to extend and enhance the lives of patients with severe medical conditions, including cancer and chronic inflammatory diseases. Synta has a unique chemical compound library, an integrated discovery engine, and a diverse pipeline of clinical- and preclinical-stage drug candidates with distinct mechanisms of action and novel chemical structures. All Synta drug candidates were invented by Synta scientists using our compound library and discovery capabilities.

Safe Harbor Statement

This media release contains forward-looking statements about Synta Pharmaceuticals Corp., including statements relating to the net proceeds from the offering. Such statements are based on assumptions and subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such forward-looking statements, including those described in "Risk Factors" of our Form 10-K for the year ended December 31, 2010 as filed with the Securities and Exchange Commission. Synta undertakes no obligation to publicly

update forward-looking statements, whether because of new information, future events or otherwise, except as required by law.

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