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): **September 12, 2013**

SYNTA PHARMACEUTICALS CORP.

(Exact name of registrant as specified in its charter)

Delaware	**001-33277**	**04-3508648**
(State or other jurisdiction of incorporation)	(Commission File Number)	(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 September 12, 2013, Synta Pharmaceuticals Corp. issued a press release announcing that the U.S. Food and Drug Administration granted Fast Track designation to the investigation of ganetespib, Synta's lead Hsp90 inhibitor drug candidate, to improve overall survival when administered in combination with docetaxel for the treatment of patients with metastatic non-small cell lung adenocarcinoma who have progressed following one prior chemotherapy regimen. 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 September 12, 2013

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: September 15, 2013

/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 September 12, 2013

Exhibit 99.1

Synta Pharmaceuticals Corp.
45 Hartwell Avenue
Lexington, MA 02421

tel: 781 541 7213
fax: 781 274 1270

www.syntapharma.com

Synta Announces Fast Track Designation Granted for Ganetespib in Non-Small Cell Lung Adenocarcinoma

LEXINGTON, MA — September 12, 2013 — Synta Pharmaceuticals Corp. (NASDAQ: SNTA) announced today that the U.S. Food and Drug Administration (FDA) has granted Fast Track designation to the investigation of ganetespib, the Company's lead Hsp90 inhibitor drug candidate, to improve overall survival when administered in combination with docetaxel for the treatment of patients with metastatic non-small cell lung adenocarcinoma who have progressed following one prior chemotherapy regimen. FDA's Fast Track Drug Development Program is designed to facilitate the clinical development and expedite the review of drugs that are intended to treat serious medical conditions and that demonstrate the potential to fill unmet medical needs.

"We are very pleased that FDA has granted this important designation to the ganetespib development program," said Safi Bahcall, President and CEO of Synta. "We look forward to continued progress and bringing ganetespib to cancer patients as quickly as possible."

Ganetespib is currently being evaluated as a treatment of non-small cell lung adenocarcinoma in the GALAXY program, consisting of the GALAXY-1 Phase 2b/3 all-comer trial and the GALAXY-2 Phase 3 trial enriched for patients most likely to benefit from ganetespib treatment.

About Ganetespib

Ganetespib, an investigational drug candidate, is a selective inhibitor of heat shock protein 90 (Hsp90), a molecular chaperone which controls the folding and activation of a number of client proteins that drive tumor development and progression. Many solid and hematologic tumors are dependent on Hsp90 client proteins including proteins involved in "oncogene addiction" (ALK, HER2, mutant BRAF and EGFR, androgen receptor, estrogen receptor, JAK2); proteins involved in resistance to chemotherapy and radiation therapy (ATR, BCL2, BRCA1/2, CDK1/4, CHK1, survivin, and WEE1); proteins involved in angiogenesis (HIF-1alpha, VEGFR, PDFGR, and VEGF); and proteins involved in metastasis (MET, RAF, AKT, MMPs, HIF-1alpha, and IGF-1R). In preclinical models, inhibition of Hsp90 by ganetespib results in the inactivation, destabilization, and eventual degradation of these cancer-promoting proteins. Ganetespib is being evaluated in trials in lung cancer, breast cancer, and other tumor types. The most common adverse event seen to date has been transient, mild or moderate diarrhea, which has been manageable with standard supportive care. Information on these trials can be found at www.clinicaltrials.gov. Ganetespib has received Fast Track designation from FDA for second-line treatment of non-small cell lung adenocarcinoma in combination with docetaxel.

About the GALAXY Program

The GALAXY (Ganetespib Assessment in Lung cAncer with docetaXel) program consists of two randomized trials comparing the combination of ganetespib and docetaxel versus docetaxel

alone in patients with Stage IIIB/IV NSCLC who have received one prior systemic therapy: a 300-patient Phase 2b/3 trial (GALAXY-1) to determine the patient population most likely to derive benefit from ganetespib, and a 500-patient confirmatory Phase 3 trial (GALAXY-2). More information about the GALAXY trials can be found at www.clinicaltrials.gov (NCT01348126 and NCT01798485).

About Lung Cancer

Lung cancer is the leading cause of cancer-related death in the world, accounting for nearly 1.4 million deaths in 2008, according to the World Health Organization. The five-year survival rate for this disease is approximately 16%; over half of people with lung cancer die within one year of being diagnosed. In the U.S., the American Cancer Society estimates that 228,000 cases of lung cancer will be diagnosed in 2013. Non-small cell adenocarcinoma comprises about 40% of all lung cancer.

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. For more information, please visit www.syntapharma.com

Safe Harbor Statement

This media release may contain forward-looking statements about Synta Pharmaceuticals Corp. Such forward-looking statements can be identified by the use of forward-looking terminology such as “will”, “would”, “should”, “expects”, “anticipates”, “intends”, “plans”, “believes”, “may”, “estimates”, “predicts”, “projects”, or similar expressions intended to identify forward-looking statements. Such statements, including statements relating to timing and expected developments in the ganetespib program, reflect our current views with respect to future events and 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, 2012 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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