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 12, 2011**

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 January 12, 2011, Synta Pharmaceuticals Corp. issued a press release announcing that it has entered into a joint collaboration with the Multiple Myeloma Research Foundation (MMRF) for the clinical development of ganetespib (formerly STA-9090) in patients with multiple myeloma. 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 12, 2011.

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 14, 2011

/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 12, 2011.

Exhibit 99.1

Multiple Myeloma Research Foundation (MMRF) and Synta Pharmaceuticals Enter into Joint Collaboration to Accelerate Drug Development for Myeloma Patients

Study to evaluate activity and safety of potent Hsp90 inhibitor ganetespib (formerly STA-9090) as single agent and in combination with bortezomib

Norwalk, CT and Lexington, MA — January 12, 2011 - The Multiple Myeloma Research Foundation (MMRF) today announced that it has entered into a joint collaboration with Synta Pharmaceuticals (NASDAQ: SNTA) for the clinical development of ganetespib (formerly STA-9090) in patients with multiple myeloma.

In support of this partnership, the MMRF will provide funding of up to $1 million for a Phase 1 trial evaluating ganetespib as a single agent and in combination with the proteasome inhibitor bortezomib for the treatment of relapsed multiple myeloma. The trial will be conducted through the Multiple Myeloma Research Consortium (MMRC), which accelerates the development of novel and combination treatments for patients with multiple myeloma by promoting and facilitating collaborative research between industry and academia. Funding for this trial is made possible by the donor-supported MMRF Clinical Fund, which enables the MMRF to invest in the development of industry-owned compounds that have stalled in multiple myeloma development due to financial or market constraints, but have potential for treating this disease.

“There is a strong scientific and clinical rationale for studying Hsp90 inhibition in the treatment of multiple myeloma,” said Sagar Lonial, M.D., Winship Cancer Institute of Emory University and principal investigator on the Phase 1 trial. “Many of the proteins which are associated with multiple myeloma are known client proteins of Hsp90 and following treatment with bortezomib, Hsp90 related proteins are known to increase as a mechanism of resistance. We believe that ganetespib, both as a single agent and in combination with bortezomib, has the potential to become a useful addition to the armamentarium for the treatment of multiple myeloma patients.”

Ganetespib is a second generation Hsp90 inhibitor that is currently being studied in 11 Phase 2 trials and has demonstrated clinical activity as a monotherapy, as well as a favorable safety profile.

“Ganetespib is the most advanced and actively studied of the second generation Hsp90 inhibitors and we are very excited to accelerate its development in multiple myeloma,” said Kathy Giusti, Founder and CEO of the MMRF and MMRC, and a multiple myeloma patient. “Our continued investment in drug development, whether through our annual

Biotech Investment Awards or through our new Clinical Fund projects with biopharmas like Synta, signify the MMRF's continued commitment to share in the risk of drug development to ensure promising treatments are brought to patients as quickly as possible.

"The support of the MMRF and the MMRC allows us to accelerate the development of ganetespib in multiple myeloma," said Safi Bahcall, Ph.D., President and CEO, Synta Pharmaceuticals. "The MMRC is a unique resource that will help enlist the support of leading investigators in the field of multiple myeloma to conduct a multi-center trial. We look forward to working with these two organizations and Dr. Lonial to explore the potential role that ganetespib can play in treating patients with multiple myeloma."

Study Design

The Phase 1, open-label, multi-center trial is designed to study ganetespib, bortezomib and dexamethasone in patients with relapsed/refractory multiple myeloma. The trial is expected to be initiated in the second half of 2011.

About Multiple Myeloma

Multiple myeloma is a type of blood cancer that originates in plasma cells. It is the most common type of white blood cell cancer and the second most common blood cancer. In 2010, more than 20,000 adults in the United States were estimated to be diagnosed with multiple myeloma and nearly 11,000 people were predicted to die from the disease.

About Ganetespib (Formerly STA-9090)

Ganetespib (formerly STA-9090) is a potent, second-generation, small-molecule Hsp90 inhibitor, with a chemical structure unrelated to the first-generation, ansamycin family of Hsp90 inhibitors (e.g., 17-AAG or IPI-504). In preclinical studies, ganetespib has shown potency up to 100 times greater than the first-generation Hsp90 inhibitors as well as activity against a wider range of kinases. In *in vitro* and *in vivo* models, ganetespib has shown potent activity against a wide range of cancer types, including lung, prostate, colon, breast, gastric, pancreatic, gastrointestinal stromal tumors (GIST), melanoma, AML, chronic myeloid leukemia, Burkitt's lymphoma, diffuse large B-cell lymphoma, and multiple myeloma — as well as potent activity against cancers resistant to imatinib (Gleevec®), sunitinib (Sutent®), erlotinib (Tarceva®), and dasatinib (Sprycel®).

Ganetespib is currently being evaluated in clinical trials in non-small cell lung cancer, gastrointestinal stromal tumors, colon cancer, prostate cancer, breast cancer, gastric cancer, hepatic cancer, small cell lung cancer, ocular melanoma, pancreatic cancer, and certain types of leukemias. The most common adverse events observed to date have been fatigue and diarrhea, which were manageable and reversible. Information on clinical trials with ganetespib can be found at www.clinicaltrials.gov.

About Hsp90

Hsp90 is a chaperone protein required for the proper folding and activation of other cellular proteins, particularly kinases. Many of these "client proteins" of Hsp90 — such as AKT, BCR-ABL, BRAF, KIT, MET, EGFR, FLT3, HER2, PDGFRA, VEGFR — have been shown to be critical to cancer cell growth, proliferation, and survival and are the targets

of clinically validated cancer drugs. In preclinical studies, inhibiting Hsp90 causes the degradation of multiple client proteins and leads to cancer cell death. Because mutated kinases which no longer respond to treatment with kinase inhibitors remain dependent on Hsp90 for their activity, inhibiting Hsp90 offers the potential for treating cancers that have become resistant to targeted therapies such as kinase inhibitors.

About the Multiple Myeloma Research Consortium (MMRC)

The Multiple Myeloma Research Consortium (MMRC) is a 509(a)3 non-profit organization which integrates leading academic institutions to accelerate drug development in multiple myeloma. It is led from MMRC offices in Norwalk, Conn., and comprises 16 member institutions: University of California, San Francisco, City of Hope, Dana-Farber Cancer Institute, Emory University's Winship Cancer Institute, the Cancer Center at Hackensack University Medical Center, H. Lee Moffitt Cancer Center & Research Institute, Mayo Clinic, Ohio State University, Mount Sinai School of Medicine, University Health Network (Princess Margaret Hospital), University of Chicago, University of Michigan, Washington University, Baylor Charles A. Sammons Cancer Center, Sarah Cannon Research Institute and Virginia Cancer Specialists.

The MMRC was founded in 2004 by Kathy Giusti, a myeloma patient, and with the help of the scientific community. The MMRC is an affiliate organization of the Multiple Myeloma Research Foundation (MMRF), the world's leading funder of multiple myeloma research. The MMRC is widely recognized as an optimal research model to rapidly address critical challenges in drug development and to explore opportunities in the today's most promising research areas —genomics, compound validation, and clinical trials. The MMRC is the only consortium to join academic institutions through membership agreements, customized IT systems, and an integrated tissue bank. For more information, please visit: www.themmrc.org.

About the Multiple Myeloma Research Foundation (MMRF)

The Multiple Myeloma Research Foundation (MMRF) was established in 1998 as a 501(c)3 non-profit organization by twin sisters Karen Andrews and Kathy Giusti, soon after Kathy's diagnosis with multiple myeloma. The mission of the MMRF is to relentlessly pursue innovative means that accelerate the development of next-generation multiple myeloma treatments to extend the lives of patients and lead to a cure. As the world's number-one private funder of multiple myeloma research, the MMRF has raised over $150 million since its inception to fund nearly 120 laboratories worldwide, including 60 new compounds and approaches in clinical trials and pre-clinical studies and has facilitated 30 clinical trials through its affiliate organization, the Multiple Myeloma Research Consortium (MMRC). As exceptional stewards of its donor's investments, the MMRF consistently surpasses its peers in fiscal responsibility. For more information about the MMRF, please visit: www.themmrf.org.

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 the timing, developments and progress of our ganetespib (formerly STA-9090) clinical 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, 2009 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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