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 12, 2009

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 2.05 Costs Associated with Exit or Disposal Activities.

On March 12, 2009, Synta Pharmaceuticals Corp. ("Synta" or the "Company") committed to a restructuring that consisted primarily of a workforce reduction of approximately 90 positions, to a total of approximately 130 positions to better align its workforce to its revised operating plans following the suspension of its SYMMETRY[SM] clinical trial. The Company estimates its costs in connection with the workforce reduction, comprised principally of severance, unused vacation payments, benefits continuation costs and outplacement services, will range from $1.4 to $1.5 million. As a result of terminating these employees, the Company estimates it may incur an impairment charge for certain research laboratory equipment, computer equipment, and furniture and fixtures due to the fact that these assets may no longer be utilized. The Company estimates it will incur additional costs in connection with the suspension of the SYMMETRY[SM] trial, including one-time contract termination costs and fees and other related costs. At this time the Company is unable to estimate the amount of impairment or contract termination costs as it is in the process of evaluating its facilities and equipment needs and is in contract termination negotiation with certain of its vendors.

Employees directly affected by the restructuring have received notification and will be provided with severance payments. The Company expects the restructuring to be substantially completed in the first quarter of 2009.

Item 8.01 Other Events.

On March 13, 2009, Synta issued a press release announcing the workforce reduction. A copy of the press release is filed as Exhibit 99.1 to this Current Report on Form 8-K and incorporated herein by reference.

Item 9.01 Financial Statements and Exhibits.

(d) The following exhibit is filed with this report:

Exhibit No.	Description
99.1	Press Release issued on March 13, 2009

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 18, 2009

/s/ Safi R. Bahcall

Safi R. Bahcall, Ph.D.
President and Chief Executive Officer

Exhibit 99.1

Synta Restructures Organization to Focus on New Priorities

Focus on advancing key programs to clinical proof of concept by 2010, without the need for additional capital

LEXINGTON, Mass.—(BUSINESS WIRE)—Mar. 13, 2009— Synta Pharmaceuticals Corp. (NASDAQ: SNTA), today announced a workforce reduction of approximately 90 positions, to a total of approximately 130 positions, allowing the Company to operate with current cash reserves for approximately two more years without the need for additional equity financing. Workforce reductions have been made across the organization while maintaining strength in core capabilities of discovery and development to support the goals of new partnerships and achieving clinical proof of concept by 2010, without the need for further capital.

"This restructuring is unfortunately a necessity in light of the results of our Phase 3 clinical trial of elesclomol in metastatic melanoma," said Safi Bahcall, Ph.D., President and CEO of Synta. "I would like to express my gratitude for the contributions and commitment of the many outstanding employees who are impacted by the restructuring announced today. These decisions are never easy, and my heartfelt sympathies go out to these employees and their families. However, we needed to act now to ensure that Synta has the resources, independent of external financial conditions, to continue to advance our most promising pipeline compounds and research programs. These programs have generated substantial interest among our scientific and medical collaborators, as well as potential pharmaceutical industry partners, and we share our collaborators' excitement for their future potential."

Synta has five programs in clinical or preclinical development and several others in the discovery stage, representing diverse mechanisms, chemical structures, and market opportunities. The programs in clinical or preclinical development are:

- STA 9090: a novel, synthetic Hsp90 inhibitor that is currently enrolling patients in two Phase 1 clinical trials in solid tumors, with Phase 2 trials in a number of indications planned for later this year;
- Elesclomol: a first-in-class oxidative stress inducer; clinical trials currently suspended. No decision has yet been made on whether to continue development of elesclomol in melanoma or other indications, pending further analysis of the results from the Phase 3 SYMMETRY(SM) trial in melanoma;
- Apilimod: an oral IL-12/IL-23 inhibitor currently enrolling patients in a Phase 2a clinical trial in rheumatoid arthritis;
- STA-9584: a vascular disrupting agent for the treatment of cancer, currently in preclinical development;

- CRACM channel inhibitors: novel small molecules targeting ion channels known as calcium release-activated calcium modulator (CRACM) channels, critical to immune cell function; for the treatment of inflammatory diseases.

Elesclomol is being developed under a joint development and commercialization agreement with GlaxoSmithKline. A total of $130 million in payments have been achieved by Synta under this agreement, and an additional $880 million in potential future milestones are achievable should the program continue. Under the collaboration agreement, GlaxoSmithKline pays the substantial majority of program costs.

The CRACM channel inhibitors are being developed under a strategic alliance with Roche that provides for reimbursement of all research, preclinical, and clinical costs incurred by Synta, as well as up to $490 million in development milestone payments, and up to $510 million in commercial milestone payments.

“One of our strategic decisions two years ago was to manage Synta so we could advance our next generation of programs to clinical proof of concept and/or partnerships regardless of the outcome of the Phase 3 SYMMETRY trial. This planning is consistent with the long-term approach we have always taken,” said Dr. Bahcall. “While we were disappointed by the negative results from the SYMMETRY trial, and are awaiting the results of additional analysis to determine the future direction for this compound and novel mechanism, we are fortunate to have exciting data from our other pipeline programs. We look forward to presenting some of these results at scientific and medical meetings, and in peer-reviewed publications, later this year.”

Additional details on status and objectives of key programs will be provided in the Company’s 10-K filing later this month.

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 status, timing and progress of our clinical and preclinical programs, and financial outlook for 2009 and beyond,

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, 2007 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.

Source: Synta Pharmaceuticals Corp.

Synta Pharmaceuticals Corp.
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