
UNITED STATES SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

**POST-EFFECTIVE AMENDMENT NO. 1
TO**

FORM S-3

**REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

SYNTA PHARMACEUTICALS CORP.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

04-3508648

(I.R.S. Employer
Identification No.)

**45 Hartwell Avenue
Lexington, MA 02421
(781) 274-8200**

(Address, including zip code, and telephone number, including area
code, of registrant's principal executive offices)

**Keith S. Ehrlich
Vice President, Finance and Administration
and Chief Financial Officer
Synta Pharmaceuticals Corp.
45 Hartwell Avenue
Lexington, Massachusetts 02421
(781) 274-8200**

(Name, address, including zip code, and telephone number, including area
code, of agent for service)

Copies to:

**Jonathan L. Kravetz, Esq.
Brian P. Keane, Esq.**
Mintz, Levin, Cohn, Ferris,
Glovsky and Popeo, P.C.
One Financial Center
Boston, MA 02111
(617) 542-6000

Wendy E. Rieder, Esq.
Synta Pharmaceuticals Corp.
45 Hartwell Avenue
Lexington, MA 02421
(781) 274-8200

Approximate date of commencement of proposed sale to the public: Not applicable

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box: ☐

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box: ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. ☐

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of “large accelerated filer,” “accelerated filer” and “smaller reporting company” in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☐

Accelerated filer ☒

Non-accelerated filer ☐

Smaller reporting company ☐

(Do not check if a smaller reporting company)

DEREGISTRATION OF UNSOLD SECURITIES

This Post-Effective Amendment No. 1 to Form S-3 relates to the Registration Statement on Form S-3 (333-176022) filed with the Securities and Exchange Commission (the "Commission") on August 4, 2011 and declared effective by the Commission on August 19, 2011 (the "Registration Statement") by Synta Pharmaceuticals Corp., a Delaware corporation (the "Company"). The Registration Statement registered the sale of up to \$150,000,000 of securities of the Company. All offerings pursuant to the Registration Statement have been terminated. In accordance with undertakings made by the Company in the Registration Statement to remove from registration, by means of a post-effective amendment, any of the securities which remain unsold at the termination of the offering, the Company hereby removes from registration the securities registered but unsold under the Registration Statement.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Post-Effective No. 1 to this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Lexington, Massachusetts, on May 8, 2014.

SYNTA PHARMACEUTICALS CORP.

By /s/ KEITH R. GOLLUST

Keith R. Gollust

Executive Chairman

Pursuant to the requirements of the Securities Act of 1933, this Post-Effective Amendment No.1 to this registration statement has been signed by the following persons in the capacities and on the date indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ KEITH R. GOLLUST</u> Keith R. Gollust	Executive Chairman (principal executive officer)	May 8, 2014
<u>/s/ KEITH S. EHRLICH</u> Keith S. Ehrlich	Vice President, Finance and Administration, Chief Financial Officer (principal financial and accounting officer)	May 8, 2014
<u>Paul A. Friedman, M.D.</u>	Director	May 8, 2014
<u>*</u> Bruce Kovner	Director	May 8, 2014
<u>*</u> Donald W. Kufe, M.D.	Director	May 8, 2014
<u>*</u> William S. Reardon, C.P.A.	Director	May 8, 2014
<u>*</u> Robert N. Wilson	Director	May 8, 2014
<u>* /s/ KEITH S. EHRLICH</u> Keith S. Ehrlich Attorney-in -Fact		
