

[COMPANY LETTERHEAD]

June 10, 2005

VIA EDGAR

Securities and Exchange Commission
Division of Corporation Finance
Judiciary Plaza
450 Fifth Street, N.W.
Washington, D.C. 20549

Re: Synta Pharmaceuticals Corp.
Registration Statement on Form S-1 (Registration No. 333-122108)

Dear Ladies and Gentlemen:

Pursuant to Rule 477 promulgated under the Securities Act of 1933, as amended (the "Securities Act"), Synta Pharmaceuticals Corp. (the "Registrant") hereby respectfully requests that the Securities and Exchange Commission consent to the withdrawal of its Registration Statement on Form S-1 (Registration No. 333-122108), together with all exhibits and amendments thereto (the "Registration Statement"). The Registrant is requesting such withdrawal because of unfavorable market conditions that would adversely affect the offering of the shares of common stock, par value \$.0001 per share, covered by the Registration Statement. No securities were sold or will be sold under the Registration Statement.

The Registrant may undertake a subsequent private offering in reliance on Rule 155(c) under the Securities Act.

Please address any questions you may have to Brian Keane at Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., One Financial Center, Boston, Massachusetts 02111, telephone number (617) 348-3093, facsimile number (617) 542-2241.

Thank you for your assistance with this matter.

SYNTA PHARMACEUTICALS CORP.

By: /s/ SAFI R. BAHCALL

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

cc: *Securities and Exchange Commission*
Michael Reedich
Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
Jonathan L. Kravetz, Esq.
Brian P. Keane, Esq.
Ropes & Gray LLP
Patrick O'Brien, Esq.
Michael Beauvais, Esq.
