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): **August 27, 2007**

Protalix BioTherapeutics, Inc.

(Exact name of registrant as specified in its charter)

Florida	
(State or other jurisdiction of incorporation)	
000-27836	**65-0643773**
(Commission File Number)	(IRS Employer Identification No.)
2 Snunit Street **Science Park** **POB 455** **Carmiel, Israel**	**20100**
(Address of principal executive offices)	(Zip Code)

+972-4-988-9488
(Registrant's telephone number, including area code)

(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 (see General Instruction A.2. below):

☐ 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 August 27, 2007, Protalix BioTherapeutics, Inc. (the "Company") issued a press release announcing that it had treated the first patient in its phase III clinical trial of the Company's lead product candidate, prGCD, a proprietary plant cell expressed recombinant form of human Glucocerebrosidase (GCD) for the treatment of Gaucher disease. The press release is attached hereto as Exhibit 99.1.

Item 9.01. Financial Statements and Exhibits

(d) Exhibits

99.1 Press release dated August 27, 2007.

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.

PROTALIX BIOTHERAPEUTICS, INC.

Date: August 27, 2007

By: /s/ David Aviezer
Name: David Aviezer, Ph.D.
Title: President and Chief Executive Officer

Exhibit 99.1

Protalix BioTherapeutics Treats First Patient in
Phase III Clinical Trial of prGCD

First patient treated in trial of prGCD treatment of Gaucher Disease

Carmiel, Israel – August 27, 2007 - Protalix BioTherapeutics, Inc. (AMEX: PLX), today announced that it has treated the first patient in its phase III clinical trial of the Company's lead product candidate, prGCD, a proprietary plant cell expressed recombinant form of human Glucocerebrosidase (GCD) for the treatment of Gaucher disease, a lysosomal storage disorder in humans.

The phase III clinical trial will take place in centers in the United States, Israel and other locations worldwide. Professor Ari Zimran, Director of the Gaucher Clinic at Shaare Zedek Medical Center in Jerusalem, Israel, will serve as principal investigator for the trial. The trial design consists of 30 male and female patients with Gaucher disease in a randomized, double-blind, dose ranging study, with two parallel groups.

Dr. David Aviezer, President and CEO of Protalix, stated, "Enrolling our first patients in this phase III clinical trial represents a significant milestone as we work toward our goal of commercializing prGCD, our proprietary treatment for Gaucher disease. After extensive research from the committed members of our team, we believe that we have developed a treatment that will not only be effective, but also safe and cost efficient when compared to current treatment options. We look forward to monitoring the progress of our trial and the potential benefits for our participating patients."

Professor Ari Zimran added, "With the treatment of the first patient in the phase III clinical trial, we are one step closer to providing another treatment option for those who suffer from Gaucher disease. Progress to date has been very encouraging, and we expect to continue to see the benefits and advantages of prGCD in this phase III clinical trial."

About Protalix BioTherapeutics, Inc.

Protalix is a clinical stage biopharmaceutical company. Its goal is to become a fully integrated biopharmaceutical company focused on focused on the development and commercialization of proprietary recombinant therapeutic proteins to be expressed through its proprietary plant cell based expression system. Protalix's ProCellEx™ presents a proprietary method for the expression of recombinant proteins that Protalix believes is safe and scalable and will allow for the cost-effective, industrial-scale production of recombinant therapeutic proteins. Protalix has reached an agreement with the United States Food and Drug Administration, through its Special Protocol Assessment (SPA) process, on the final design of the pivotal phase III clinical trial in the United States of Protalix's lead product candidate, prGCD, for enzyme replacement therapy of Gaucher disease, a lysosomal storage disorder in humans. Protalix is also advancing additional recombinant biopharmaceutical drug development programs.

Safe Harbor Statement:

To the extent that statements in this press release are not strictly historical, all such statements are forward-looking, and are made pursuant to the safe-harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are subject to known and unknown risks and uncertainties that may cause actual future experience and results to differ materially from the statements made. These statements are based on our current beliefs and expectations as to such future outcomes. Drug discovery and development involve a high degree of risk. Factors that might cause such a material

difference include, among others, uncertainties related to the ability to attract and retain partners for our technologies and products under development, the identification of lead compounds, the successful preclinical development of our products, the completion of clinical trials, the review process of the FDA, foreign regulatory bodies and other governmental regulation, and other factors described in our filings with the Securities and Exchange Commission. The statements are valid only as of the date hereof and we disclaim any obligation to update this information.

For additional information, contact Protalix BioTherapeutics at:
investors@protalix.com

AMEX IR Alliance for Protalix BioTherapeutics
Lee Roth / David Burke
212-896-1209 / 1258
lroth@kcsa.com / dburke@kcsa.com