
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 22, 2008**

Protalix BioTherapeutics, Inc.

(Exact name of registrant as specified in its charter)

Florida
(State or other jurisdiction of incorporation)

000-27836
(Commission File Number)

65-0643773
(IRS Employer Identification No.)

2 Snunit Street
Science Park
POB 455
Carmiel, Israel
(Address of principal executive offices)

20100
(Zip Code)

(Former Name or Former Address, if Changed Since Last Report)

Registrant's telephone number, including area code: **+972-4-988-9488**

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))
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Item 8.01. Other Events

On January 22, 2008, the Company issued a press release announcing that it had achieved proof of concept results in an animal study conducted as part of its Acetylcholinesterase (AChE) Program. In addition, the Company announced that based on the positive preliminary results of the study, it has extended its agreement with Yissum Research and Development Company, the technology transfer arm of the Hebrew University of Jerusalem, Israel, to include a collaborative research program that will be conducted in the laboratory of Professor Hermona Soreq, a world leader in the field of Acetylcholinesterase research and Dean of the Faculty of Science at the Hebrew University. The Company's Acetylcholinesterase (AChE) Program is being conducted under the agreement the Company entered into with Yissum and the Boyce Thompson Institute, Inc., which is affiliated with Cornell University, the execution of which was announced by the Company on August 8, 2007.

A copy of the press release is attached 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**

99.1 Press release dated January 22, 2008

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: January 22, 2008

By: /s/ David Aviezer

Name: David Aviezer, Ph.D.

Title: President and Chief Executive Officer

**Protalix BioTherapeutics Extends Research Agreement with Yissum based on
Promising Acetylcholinesterase Program Results in Animal Study**

CARMIEL, Israel – January 22, 2008 – Protalix BioTherapeutics, Inc. (Amex: PLX), today announced that it has achieved proof of concept results in an animal study conducted as part of its Acetylcholinesterase (AChE) Program. The Acetylcholinesterase (AChE) Program is being conducted under the agreement the Company entered into with the Yissum Research and Development Company, the technology transfer arm of the Hebrew University of Jerusalem, Israel, and the Boyce Thompson Institute, Inc., which is affiliated with Cornell University, the execution of which was announced by the Company on August 8, 2007. In the animal study conducted by the Company, the plant cell expressed form of the Acetylcholinesterase protein demonstrated full protection from organophosphate poisoning, simulating the capacity of the plant cell expressed Acetylcholinesterase protein to treat nerve gas and pesticide poisoning. Based on these positive preliminary results, Protalix has extended its agreement with Yissum to include a collaborative research program that will be conducted in the laboratory of Professor Hermona Soreq, a world leader in the field of Acetylcholinesterase research and Dean of the Faculty of Science at the Hebrew University of Jerusalem.

Dr. David Aviezer, President and Chief Executive Officer of the Company said, “This is another important milestone in the development of what we believe will be an important therapeutic protein. It demonstrates not only the clinical potential of Acetylcholinesterase but also the capacity of our ProCellEx™ plant cell expression system to generate a broad spectrum of human recombinant therapeutic proteins.”

Nava Swersky Sofer, President and Chief Executive Officer of Yissum added, “We are pleased to see this significant scientific proof of concept and look forward to continuing the collaboration with Protalix toward commercializing the discoveries made by Professor Soreq and her team and bringing relief to patients around the world.”

About Protalix BioTherapeutics, Inc.

Protalix is a biopharmaceutical company. Its goal is to become a fully integrated biopharmaceutical company 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 is enrolling and treating patients in its pivotal phase III clinical trial in Israel, the United States and other locations for its lead product candidate, prGCD, for its enzyme replacement therapy for Gaucher disease, a lysosomal storage disorder in humans, and has reached an agreement with the United States Food and Drug Administration on the final design of the pivotal phase III clinical trial through the FDA’s Special Protocol Assessment (SPA) process. Protalix is also advancing additional recombinant biopharmaceutical drug development programs.

About Yissum

Yissum (www.yissum.co.il) - the technology transfer company of the Hebrew University of Jerusalem - was founded in 1964 to protect the University's intellectual property and commercialize it. Today, more than \$1 Billion in annual sales are generated by products based on Hebrew University technologies licensed out by Yissum. Ranked among the top technology transfer companies in the world, Yissum has registered 6,000 patents covering 1,600 inventions, licensed 450 technologies and spun out 60 companies.

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:

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Yissum

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