

As filed with the Securities and Exchange Commission on September 24, 2007

Registration No. 333-144801

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

**AMENDMENT NO. 2 TO FORM S-3
REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933**

Protalix BioTherapeutics, Inc.

(Exact name of registrant as specified in its Charter)

Florida
(State or other jurisdiction
of incorporation or organization)

65-0643773
(I.R.S. Employer
Identification Number)

**2 Snunit Street
Science Park
POB 455
Carmiel, Israel 20100
972-4-988-9488**

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

**CT Corporation System
111 Eighth Avenue
New York, NY 10011
Tel: (212) 894-8400**

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

With a Copy to:

**James R. Tanenbaum, Esq.
Morrison & Foerster LLP
1290 Avenue of the Americas
New York, New York 10104
(212) 468-8000**

Approximate date of commencement of proposed sale to the public:

From time to time after the effective date of this Registration Statement.

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. ☐

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be registered(1)	Proposed maximum aggregate offering price per share(2)	Proposed maximum aggregate offering price(2)	Amount of registration fee(3)
Common stock, par value \$0.001 per share	3,726,708(4)	\$ 35	\$130,434,783	\$4,004
Common stock, par value \$0.001 per share	1,987,578(5)	\$ 35	\$ 69,565,217	\$ 2,136

(1) Pursuant to Rule 416 under the Securities Act of 1933, as amended, the shares being registered hereunder also include such indeterminate number of shares of common stock as may be issuable with respect to the shares being registered hereunder as a result of stock splits, stock dividends or similar transactions.

(2) Estimated solely for the purpose of determining the registration fee pursuant to Rule 457(c) under the Securities Act based upon the average of the high and low prices for the common stock of Protalix BioTherapeutics, Inc. on September 18, 2007, as reported by the American Stock Exchange.

(3) Previously paid.

(4) For sale by Protalix BioTherapeutics, Inc.

(5) For sale by selling securityholders.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment that specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until this Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

EXPLANATORY NOTE

This Amendment No. 2 to the Registration Statement on Form S-3 (the "Form S-3") of Protalix BioTherapeutics, Inc. is being filed solely for the purpose of amending Exhibit 23.2 which was filed with Amendment No. 1 to the Form S-3, filed on September 24, 2007. Other than the amendment of the exhibit, the remainder of the Form S-3,

as amended by Amendment No. 1, is unchanged. Accordingly, the prospectus that forms a part of Amendment No. 1 is not reproduced in this Amendment No. 2. This Amendment No. 2 speaks as of the original filing date of Amendment No. 1 and does not reflect events occurring after the filing date of Amendment No. 1, or modify or update the disclosures therein in any way other than as required to reflect the amendment set forth below.



Kesselman & Kesselman

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CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Amendment No. 1 to the Registration Statement on Form S-3 of our report dated March 30, 2007 relating to the financial statements which appears in Protalix BioTherapeutics, Inc.'s Annual Report on Form 10-K/A for the year ended December 31, 2006. We also consent to the references to us under the headings "Experts" in such Registration Statement.

/s/ Kesselman & Kesselman,

Tel Aviv, Israel
September 21, 2007
