

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

FORM 10-Q

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended March 31, 2009

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

001-33357
(Commission file number)

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 No.)

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

20100
(Zip Code)

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

Securities registered pursuant to Section 12(b) of the Act:

Title of each class
Common stock, par value \$0.001 per share

Name of each exchange on which registered
NYSE Amex

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

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)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

On May 1, 2009, approximately 76,023,127 shares of the Registrant's common stock, \$0.001 par value, were outstanding.

FORM 10-Q
TABLE OF CONTENTS

PART I — FINANCIAL INFORMATION

	<u>Page</u>
<u>Cautionary Statement Regarding Forward-Looking Statements</u>	ii
<u>Item 1. Financial Statements</u>	
<u>Condensed Consolidated Balance Sheets — As of March 31, 2009 (Unaudited) and December 31, 2008</u>	1
<u>Condensed Consolidated Statements of Operations (Unaudited) — For the Three Months Ended March 31, 2009 and 2008; and for the Period from December 27, 1993 through March 31, 2009</u>	2
<u>Condensed Consolidated Statement of Changes in Shareholders' Equity — As of March 31, 2009 (Unaudited) and December 31, 2008</u>	3
<u>Condensed Consolidated Statements of Cash Flows (Unaudited) — For the Three Months Ended March 31, 2009 (Unaudited) and 2008; and for the Period from December 27, 1993 through March 31, 2009</u>	4
<u>Notes to Condensed Consolidated Financial Statements</u>	6
<u>Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	9
<u>Item 3. Quantitative and Qualitative Disclosures About Market Risk</u>	12
<u>Item 4. Controls and Procedures</u>	13

PART II — OTHER INFORMATION

<u>Item 1. Legal Proceedings</u>	15
<u>Item 1A. Risk Factors</u>	15
<u>Item 2. Unregistered Sales of Equity Securities and Use of Proceeds</u>	15
<u>Item 3. Defaults Upon Senior Securities</u>	15
<u>Item 4. Submission of Matters to a Vote of Security Holders</u>	15
<u>Item 5. Other Information</u>	15
<u>Item 6. Exhibits</u>	16
<u>Signatures</u>	17

[EX-31.1](#)
[EX-31.2](#)
[EX-32.1](#)
[EX-32.2](#)

Table of Contents

Except where the context otherwise requires, the terms, “we,” “us,” “our” or “the Company,” refer to the business of Protalix BioTherapeutics, Inc. and its consolidated subsidiaries, and “Protalix” or “Protalix Ltd.” refers to the business of Protalix Ltd., our wholly-owned subsidiary and sole operating unit.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

The statements set forth under the captions “Business,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and “Risk Factors”, and other statements included elsewhere in this Quarterly Report on Form 10-Q, which are not historical, constitute “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, including statements regarding our expectations, beliefs, intentions or strategies for the future. When used in this report, the terms “anticipate,” “believe,” “estimate,” “expect” and “intend” and words or phrases of similar import, as they relate to our or our subsidiary or our management, are intended to identify forward-looking statements. We intend that all forward-looking statements be subject to the safe-harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are only predictions and reflect our views as of the date they are made with respect to future events and financial performance, and we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events, except as may be required under applicable law. Forward-looking statements are subject to many risks and uncertainties that could cause our actual results to differ materially from any future results expressed or implied by the forward-looking statements.

Examples of the risks and uncertainties include, but are not limited to, the following:

- the inherent risks and uncertainties in developing drug platforms and products of the type we are developing;
- delays in our preparation and filing of applications for regulatory approval;
- delays in the approval or potential rejection of any applications we file with the United States Food and Drug Administration, or the FDA, or other regulatory authorities;
- any lack of progress of our research and development (including the results of clinical trials we are conducting);
- obtaining on a timely basis sufficient patient enrollment in our clinical trials;
- the impact of development of competing therapies and/or technologies by other companies;
- our ability to obtain additional financing required to fund our research programs;
- the risk that we will not be able to develop a successful sales and marketing organization in a timely manner, if at all;
- our ability to establish and maintain strategic license, collaboration and distribution arrangements and to manage our relationships with collaborators, distributors and partners;
- potential product liability risks and risks of securing adequate levels of product liability and clinical trial insurance coverage;
- the availability of reimbursement to patients from health care payors for any of our drug products, if approved;
- the possibility of infringing a third party’s patents or other intellectual property rights;
- the uncertainty of obtaining patents covering our products and processes and in successfully enforcing our intellectual property rights against third parties; and
- the possible disruption of our operations due to terrorist activities and armed conflict, including as a result of the disruption of the operations of regulatory authorities, our subsidiary, our manufacturing facilities and our customers, suppliers, distributors, collaborative partners, licensees and clinical trial sites.

In addition, companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in advanced clinical trials, even after obtaining promising earlier trial results. These and other risks and uncertainties are detailed in Section 1A of our Annual Report on Form 10-K for the year ended December 31, 2008, and described from time to time in our future reports to be filed with the Securities and Exchange Commission. We undertake no obligation to update, and we do not have a policy of updating or revising, these forward-looking statements.

PART I — FINANCIAL INFORMATION

Item 1. Financial Statements

PROTALIX BIOTHERAPEUTICS, INC.
(a development stage company)
CONDENSED CONSOLIDATED BALANCE SHEETS
(U.S. dollars in thousands, except share data)

	<u>March 31, 2009</u> (Unaudited)	<u>December 31, 2008</u>
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	\$ 34,911	\$ 42,596
Accounts receivable	2,390	793
Total current assets	<u>37,301</u>	<u>43,389</u>
FUNDS IN RESPECT OF EMPLOYEE RIGHTS UPON RETIREMENT	554	581
PROPERTY AND EQUIPMENT, NET	8,383	6,841
Total assets	<u>\$ 46,238</u>	<u>\$ 50,811</u>
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable and accruals:		
Trade	\$ 1,707	\$ 2,235
Other	3,986	3,292
Total current liabilities	<u>5,693</u>	<u>5,527</u>
LIABILITY FOR EMPLOYEE RIGHTS UPON RETIREMENT	917	937
Total liabilities	<u>6,610</u>	<u>6,464</u>
SHAREHOLDERS' EQUITY	39,628	44,347
Total liabilities and shareholders' equity	<u>\$ 46,238</u>	<u>\$ 50,811</u>

The accompanying notes are an integral part of the condensed consolidated financial statements.

PROTALIX BIOTHERAPEUTICS, INC.
(a development stage company)
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(U.S. dollars in thousands, except share data)
(Unaudited)

	Three Months Ended		Period from December 27, 1993* through March 31, 2009
	March 31, 2009	March 31, 2008	March 31, 2009
REVENUES			\$ 830
COST OF REVENUES			206
GROSS PROFIT			624
RESEARCH AND DEVELOPMENT EXPENSES (1)	\$ 5,086	\$ 5,653	59,503
less — grants	(1,292)	(1,366)	(12,193)
	3,794	4,287	47,310
GENERAL AND ADMINISTRATIVE EXPENSES (2)	1,241	1,976	37,601
OPERATING LOSS	5,035	6,263	84,287
FINANCIAL EXPENSES (INCOME) — NET	148	(1,150)	(4,057)
NET LOSS BEFORE CHANGE IN ACCOUNTING PRINCIPLE	5,183	5,113	80,230
CUMULATIVE EFFECT OF CHANGE IN ACCOUNTING PRINCIPLE			(37)
NET LOSS FOR THE PERIOD	<u>\$ 5,183</u>	<u>\$ 5,113</u>	<u>\$ 80,193</u>
NET LOSS PER SHARE OF COMMON STOCK — BASIC AND DILUTED:	<u>\$ 0.07</u>	<u>\$ 0.07</u>	
WEIGHTED AVERAGE NUMBER OF SHARES OF COMMON STOCK USED IN COMPUTING LOSS PER SHARE:			
Basic and diluted	<u>75,947,708</u>	<u>75,811,866</u>	
(1) Includes share-based compensation	\$ 278	\$ 1,327	\$ 6,888
(2) Includes share-based compensation	184	847	23,029

* Incorporation date, see Note 1a.

The accompanying notes are an integral part of the condensed consolidated financial statements.

PROTALIX BIOTHERAPEUTICS, INC.
(a development stage company)
CONDENSED CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY
(U.S. dollars in thousands, except share data)

	<u>Common Stock (2)</u>	<u>Convertible Preferred Shares</u>	<u>Common Stock</u>	<u>Convertible Preferred Shares</u>	<u>Warrants</u>	<u>Additional paid-in capital</u>	<u>Deficit accumulated during development stage</u>	<u>Total</u>
	<u>Number of shares</u>		<u>Amount</u>					
Balance at December 27, 1993(1) Changes during the period from December 27, 1993 through December 31, 2008:								
Common Stock and convertible preferred A, B and C shares and warrants issued for cash (net of issuance costs of \$5,078)	38,856,127	398,227	\$ 39	\$ 1	\$ 1,382	\$ 73,836		\$ 75,258
Exercise of options granted to employees and non-employees (includes Net Exercise)	2,948,420	847	3			413		416
Conversion of convertible preferred shares into common stock	24,375,870	(399,074)	24	(1)		(23)		
Change in accounting principle						(37)	\$ 37	
Expiration of warrants					(34)	34		
Merger with a wholly-owned subsidiary of the Company (net of issuance cost of \$642)	583,280		1			240		241
Exercise of warrants	9,171,695		9		(1,348)	15,342		14,003
Restricted common stock issued for future services	2,667		*			8		8
Share-based compensation						29,468		29,468
Net loss for the period							(75,047)	(75,047)
Balance at December 31, 2008	75,938,059	—	76	—	—	119,281	(75,010)	44,347
Changes during the three month period ended March 31, 2009 (Unaudited):								
Share-based compensation						462		462
Exercise of options granted to employees (includes Net Exercise)	35,068		*			2		2
Net loss for the period							(5,183)	(5,183)
Balance at March 31, 2009 (Unaudited)	75,973,127	—	\$ 76	—	—	\$ 119,745	\$ (80,193)	\$ 39,628

(1) Incorporation date, see Note 1a.

(2) Common Stock, \$0.001 par value; Authorized — as of December 31, 2008 and March 31, 2009 - 150,000,000 shares.

* Represents an amount less than \$1.

The accompanying notes are an integral part of the condensed consolidated financial statements.

PROTALIX BIOTHERAPEUTICS, INC.
(a development stage company)
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(U.S. dollars in thousands, except share data)
(Unaudited)

	Three Months Ended		Period from
	March 31, 2009	March 31, 2008	December 27, 1993* through March 31, 2009
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net loss for the period	\$ (5,183)	\$ (5,113)	\$ (80,193)
Adjustments required to reconcile net loss to net cash used in operating activities:			—
Cumulative effect of change in accounting principle			(37)
Share based compensation	462	2,174	29,917
Financial expenses (income), net (mainly exchange differences)	235	(580)	(841)
Depreciation and impairment of fixed assets	455	262	3,695
Changes in accrued liability for employee rights upon retirement	69	182	1,006
Gain on amounts funded in respect of employee rights upon retirement	(7)	(41)	(72)
Gain on sale of fixed assets	(28)		(34)
Changes in operating assets and liabilities:			
Increase in accounts receivable	(1,642)	(658)	(2,151)
Increase (decrease) in accounts payable and accruals	(343)	(33)	4,039
Net cash used in operating activities	<u>\$ (5,982)</u>	<u>\$ (3,807)</u>	<u>\$ (44,671)</u>
CASH FLOWS FROM INVESTING ACTIVITIES:			
Purchase of property and equipment	\$ (1,305)	\$ (817)	\$ (10,498)
Investment grant received in respect of fixed assets			38
Investment in restricted cash deposit			(222)
Proceeds from sale of property and equipment	61		73
Amounts funded in respect of employee rights upon retirement, net	(20)	(39)	(536)
Net cash used in investing activities	<u>\$ (1,264)</u>	<u>\$ (856)</u>	<u>\$ (11,145)</u>
CASH FLOWS FROM FINANCING ACTIVITIES:			
Loan and convertible bridge loan received			\$ 2,145
Repayment of loan			(1,000)
Issuance of shares and warrants, net of issuance cost		\$ (20)	74,059
Exercise of options and warrants		\$ 3	14,419
Merger with a wholly-owned subsidiary of the Company, net of issuance cost			237
Net cash provided by (used in) financing activities		<u>\$ (17)</u>	<u>\$ 89,860</u>
EFFECT OF EXCHANGE RATE CHANGES ON CASH	\$ (439)	\$ 649	\$ 867
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(7,685)	(4,031)	34,911
BALANCE OF CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD	42,596	61,183	—
BALANCE OF CASH AND CASH EQUIVALENTS AT END OF PERIOD	<u>\$ 34,911</u>	<u>\$ 57,782</u>	<u>\$ 34,911</u>

The accompanying notes are an integral part of the condensed consolidated financial statements.

PROTALIX BIOTHERAPEUTICS, INC.
(a development stage company)
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(U.S. dollars in thousands)
(Unaudited)

(Continued) — 2

	<u>Three Months Ended</u>		<u>Period from</u>
	<u>March 31, 2009</u>	<u>March 31, 2008</u>	<u>December 27,</u>
			<u>1993*</u>
			<u>through</u>
			<u>March 31, 2009</u>
SUPPLEMENTARY DISCLOSURE OF CASH FLOW INFORMATION:			
Cash paid during the period for interest			\$ 80
SUPPLEMENTARY INFORMATION ON INVESTING AND FINANCING			
ACTIVITIES NOT INVOLVING CASH FLOWS:			
Conversion of convertible bridge loan into shares			\$ 1,145
Purchase of property and equipment	\$ 1,657	\$ 1,009	\$ 1,657
Issuance cost not yet paid and accruals — other:	\$ 5	\$ 41	\$ 5
Exercise of options granted to employees	\$ 2		\$ 2
Issuance cost paid by a grant of options			\$ 21
Consultants' and director credit balance converted into shares			\$ 80

* Incorporation date, see Note 1a.

The accompanying notes are an integral part of the condensed consolidated financial statements.

PROTALIX BIOTHERAPEUTICS, INC.
(a development stage company)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(U.S. dollars in thousands, except share data)
(Unaudited)

NOTE 1 — SIGNIFICANT ACCOUNTING POLICIES

a. General

1. Operation

Protalix BioTherapeutics, Inc. (the “Company”), and Protalix Ltd., the Company’s wholly-owned subsidiary which was incorporated in Israel on December 27, 1993 (“Protalix Ltd.”), are biopharmaceutical companies focused on the development and commercialization of recombinant therapeutic proteins based on the Company’s proprietary ProCellEx™ protein expression system (“ProCellEx”). The Company’s lead product development candidate is prGCD for the treatment of Gaucher disease, which the Company is developing using its ProCellEx protein expression system. The Company is currently treating patients in a phase III clinical trial of prGCD.

The Company has been in the development stage since its inception. Successful completion of development program and its transition to normal operations is dependent upon necessary regulatory approvals from the United States Food and Drug Administration (the “FDA”) prior to selling its products within the United States, and foreign regulatory approvals must be obtained to sell its products internationally. There can be no assurance that the Company will receive regulatory approval of any of its product candidates, and a substantial amount of time may pass before the Company achieves a level of sales adequate to support the Company’s operations, if at all. The Company will also incur substantial expenditures in connection with the regulatory approval process and may need to raise additional capital during the developmental period. Obtaining marketing approval will be directly dependent on the Company’s ability to implement the necessary regulatory steps required to obtain marketing approval in the United States and in other countries, and on the success of the Company’s clinical trials. The Company cannot predict the outcome of these activities.

2. Liquidity and Financial Resources

The Company currently does not have sufficient resources to complete the commercialization of any of its proposed products. Based on its current cash resources and commitments, the Company believes it will be able to maintain its current planned development activities and the corresponding level of expenditures for approximately the next 21 months, although no assurance can be given that it will not need additional cash prior to such time. If there are unexpected increases in general and administrative expenses and research and development expenses, the Company may need to seek additional financing during the next 21 months.

b. General Basis of Presentation

The accompanying unaudited condensed consolidated financial statements of the Company have been prepared in accordance with generally accepted accounting principles in the United States (“GAAP”) for interim financial information, Statement of Financial Accounting Standards (“SFAS”) No. 7, “Accounting and Reporting by Development Stage Enterprises”, and Article 10 of Regulation S-X under the Securities Exchange Act of 1934. Accordingly, they do not include all of the information and notes required by GAAP for complete financial statements. In the opinion of management, all adjustments (of a normal recurring nature) considered necessary for a fair statement of the results for the interim periods presented have been included. Operating results for the interim period are not necessarily indicative of the results that may be expected for the full year.

PROTALIX BIOTHERAPEUTICS, INC.
(a development stage company)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(U.S. dollars in thousands, except share data)
(Unaudited)

NOTE 1 — SIGNIFICANT ACCOUNTING POLICIES (Continued):

These unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements in the Annual Report on Form 10-K for the year ended December 31, 2008, filed by the Company with the Securities and Exchange Commission. The comparative balance sheet at December 31, 2008 has been derived from the audited financial statements at that date, but does not include all of the information and notes required under GAAP for complete financial statements.

c. Net loss per share

Basic and diluted loss per share (“LPS”) are computed by dividing net loss by the weighted average number of shares of the Company’s common stock, par value \$.001 per share (the Common Stock”) outstanding for each period.

Shares of restricted Common Stock and the shares of Common Stock underlying outstanding options of the Company were not included in the calculation of diluted LPS because the effect would be anti-dilutive.

Diluted LPS does not include options and restricted shares of Common Stock of the Company in the amount of 10,565,151 and 11,418,079 shares of Common Stock for the three months ended March 31, 2008 and 2009, respectively.

NOTE 2 — STOCK TRANSACTIONS

a. During the three months ended March 31, 2009, the Company issued 35,068 shares of Common Stock in connection with the exercise of a total of 52,978 options by certain officers and employees of the Company. The Company received aggregate cash proceeds equal to approximately \$2 in connection with such exercises and 39,800 of such options were exercised on a “net-exercise” basis.

b. In February 25, 2009, the Company’s board of directors approved the grant of options to purchase 624,400 shares of Common Stock to its officers and employees with an exercise price equal to \$2.65 per share. The options vest as follows:

(i) 504,000 of the options vest immediately upon the achievement of certain clinical and operational performance milestones, which milestones must be achieved within one year of the date of grant or the options will be forfeited. The Company recognized an expense for a portion of such based on management’s assessment that it is probable that the milestones will be achieved during the 12-month period commencing on the date of grant. The options are exercisable over a 10-year period commencing on the date of grant. The Company estimated the fair value of the options on the date of grant using the Black-Scholes option-pricing model to be approximately \$1,068, based on the following weighted average assumptions: dividend yield of 0% for all years; expected volatility of 75.3%; risk-free interest rates of 2.95%; and expected life of 10 years.

(ii) 120,400 of the options vest as follows: 25% within one year from the date of grant, with the remainder vesting in 12 equal quarterly tranches over 36 months. The options are exercisable over a 10-year period commencing on the date of grant. The Company estimated the fair value of the options on the date of grant using the Black-Scholes option-pricing model to be approximately \$212, based on the following weighted average assumptions: dividend yield of 0% for all years; expected volatility of 75.3%; risk-free interest rates of 1.84%; and expected life of six years. The Company’s management used the simplified method to reflect the expected life in calculating the value of these options.

The Company used the simplified method to value stock options for the quarter ended March 31, 2009 as the Company does not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term of the options due to the limited period of time the Company’s equity shares have been publicly traded.

PROTALIX BIOTHERAPEUTICS, INC.
(a development stage company)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(U.S. dollars in thousands, except share data)
(Unaudited)

NOTE 3 — COMMITMENTS

During the three months ended March 31, 2009, the Company entered into contracts with certain third parties in connection with certain clinical services. The aggregate fees payable by the Company during the life of the agreements are equal to approximately \$650,000.

NOTE 4 — SUBSEQUENT EVENTS

During April and May 2009, the Company issued a total of 182,612 shares of Common Stock in connection with the exercise of options to purchase 188,430 shares of Common Stock by a certain officer and employees of the Company. The Company received aggregate cash proceeds equal to approximately \$6 in connection with such exercises and 137,530 of such options were exercised on a “net-exercise” basis.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

You should read the following discussion and analysis of our financial condition and results of operations together with our condensed financial statements and the consolidated financial statements and the related notes included elsewhere in this Form 10-Q and our Annual Report on Form 10-K for the year ended December 31, 2008. Some of the information contained in this discussion and analysis, particularly with respect to our plans and strategy for our business and related financing, includes forward-looking statements that involve risks and uncertainties. You should read "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2008 for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are a biopharmaceutical company focused on the development and commercialization of recombinant therapeutic proteins based on our proprietary ProCellEx™ protein expression system. Using our ProCellEx system, we are developing a pipeline of proprietary and biosimilar or "generic" versions of recombinant therapeutic proteins based on our plant cell-based expression technology that target large, established pharmaceutical markets and that rely upon known biological mechanisms of action. Our initial commercial focus has been on complex therapeutic proteins, including proteins for the treatment of genetic disorders, such as Gaucher disease and Fabry disease. We believe our ProCellEx protein expression system will enable us to develop proprietary recombinant proteins that are therapeutically equivalent or superior to existing recombinant proteins currently marketed for the same indications. Because we are primarily targeting biologically equivalent versions of highly active, well-tolerated and commercially successful therapeutic proteins, we believe our development process is associated with relatively less risk compared to other biopharmaceutical development processes for completely novel therapeutic proteins.

Our lead product development candidate is prGCD for the treatment of Gaucher disease, which we are developing using our ProCellEx protein expression system. Gaucher disease is a rare and serious lysosomal storage disorder with severe and debilitating symptoms. prGCD is our proprietary recombinant form of Glucocerebrosidase (GCD), an enzyme naturally found in human cells that is mutated or deficient in patients with Gaucher disease. In July 2007, we reached an agreement with the United States Food and Drug Administration, or the FDA, on the final design of our pivotal phase III clinical trial of prGCD, through the FDA's special protocol assessment (SPA) process. We completed enrollment of patients in the phase III clinical trial in December 2008 and expect to report results of the clinical trial in the second half of 2009. We anticipate submitting a New Drug Application (NDA) for prGCD to the FDA and other comparable regulatory agencies in other countries in the fourth quarter of 2009. In addition to our phase III clinical trial, we initiated, during the third quarter of 2008, a double-blind, follow-on extension study as part of our phase III clinical trial. In December 2008, we also initiated a clinical study evaluating the safety and efficacy of switching Gaucher patients currently treated under the current standard of care to treatment with prGCD. The current standard of care for Gaucher patients is enzyme replacement therapy with Cerezyme which is produced by Genzyme Corporation and currently the only approved enzyme replacement therapy for Gaucher disease. Enzyme replacement therapy is a medical treatment in which recombinant enzymes are injected into patients in whom the enzyme is lacking or dysfunctional. The switch-over study is not a prerequisite for approval of prGCD.

Although Gaucher disease is a relatively rare disease, it represents a large commercial market due to the severity of the symptoms and the chronic nature of the disease. The annual worldwide sales of Cerezyme were approximately \$1.2 billion in 2008 according to public reports by Genzyme. prGCD is a plant cell expressed version of the GCD enzyme, developed through our ProCellEx protein expression system. prGCD has an amino acid, glycan and three-dimensional structure that is very similar to its naturally-produced counterpart as well as to Cerezyme, which is a mammalian cell expressed version of the same protein. We believe prGCD may prove more cost-effective than the currently marketed alternative due to the cost benefits of expression through our ProCellEx protein expression system. In addition, based on our laboratory testing, preclinical and clinical results, we believe that prGCD may have the potential for increased potency and efficacy compared to the existing enzyme replacement therapy for Gaucher disease, which may translate into lower dosages and/or less frequent treatments.

In addition to prGCD, we are developing an innovative product pipeline using our ProCellEx protein expression system. Our product pipeline currently includes, among other candidates, therapeutic protein candidates for the treatment of Fabry disease, a rare, genetic lysosomal disorder in humans, an acetylcholinesterase enzyme-

[Table of Contents](#)

based therapy for biodefense and intoxication treatments and an additional undisclosed therapeutic protein, all of which are currently being evaluated in animal studies. During the quarter ended March 31, 2009, we held a pre IND (investigational new drug application) meeting with the FDA in connection with our acetylcholinesterase enzyme-based therapy for biodefense applications and are currently performing pre-clinical studies for this indication. We plan to file an investigational new drug application (IND) with the FDA with respect to this product candidate during 2009 and to initiate human clinical studies immediately thereafter. We believe that we may be able to reduce the development risks and time to market for our product candidates as our product candidates are based on well-understood proteins with known biological mechanisms of actions. We hold the worldwide commercialization rights to our proprietary development candidates and we intend to establish an internal, commercial infrastructure and targeted sales force to market prGCD and our other products, if approved, in North America, the European Union and in other significant markets, including Israel. In addition we are continuously evaluating potential strategic marketing partnerships.

Our business is conducted by our wholly-owned subsidiary, Protalix Ltd., which we acquired through a reverse merger transaction effective December 31, 2006. The merger transaction was treated as a recapitalization for accounting purposes and, as such, the results of operations discussed below are those of Protalix Ltd. Prior to the merger transaction, we had not conducted any operations for several years. Protalix Ltd. was originally incorporated in Israel in December 1993. Since its inception in December 1993, Protalix Ltd. has generated significant losses in connection with its research and development, including the clinical development of prGCD. At March 31, 2009, we had an accumulated deficit of \$80.2 million. Since we do not generate revenue from any of our product candidates, we expect to continue to generate losses in connection with the continued clinical development of prGCD and the research and development activities relating to our technology and other drug candidates. Such research and development activities are budgeted to expand over time and will require further resources if we are to be successful. As a result, we believe that our operating losses are likely to be substantial over the next several years. We will need to obtain additional funds for the commercialization of our lead product, prGCD, and to further develop the research and clinical development of our other programs.

Critical Accounting Policies

Our significant accounting policies are more fully described in Note 1 to our consolidated financial statements appearing at the end of this Annual Report. We believe that the accounting policies below are critical for one to fully understand and evaluate our financial condition and results of operations.

The discussion and analysis of our financial condition and results of operations is based on our financial statements, which we prepared in accordance with U.S. generally accepted accounting principles. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported revenues and expenses during the reporting periods. On an ongoing basis, we evaluate such estimates and judgments, including those described in greater detail below. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Results of Operations

Three months ended March 31, 2009 compared to the three months ended March 31, 2008

Research and Development Expenses

Research and development expenses were \$5.1 million for the three months ended March 31, 2009, a decrease of \$567,000, or 10%, from \$5.7 million for the three months ended March 31, 2008. The decrease resulted primarily from the decrease of \$1.0 million in share-based compensation which was partially offset by an increase of \$520,000 in subcontractors and consultants expenses associated with research and development activities.

[Table of Contents](#)

We expect research and development expenses to continue to be our main expense as we enter into a more advanced stage of clinical trials for our product candidates, especially with respect to the anticipated continued progress in our phase III clinical trials of prGCD.

General and Administrative Expenses

General and administrative expenses were \$1.2 million for the three months ended March 31, 2009, a decrease of \$735,000, or 37%, from \$2.0 million for the three months ended March 31, 2008. The decrease resulted primarily from the decrease of \$663,000 in share-based compensation resulting from certain options that were fully-expensed during 2008 and, consequently, were not expensed in the three months ended March 31, 2009.

Financial Expenses and Income

Financial expense was \$148,000 for the three months ended March 31, 2009, compared to a financial income of \$1.2 million for the three months ended March 31, 2008. The expense resulted primarily from the devaluation of the New Israeli Shekel, the NIS, against the US dollar, and lower interest rates payable during the period.

Liquidity and Capital Resources

Sources of Liquidity

As a result of our significant research and development expenditures and the lack of any approved products to generate product sales revenue, we have not been profitable and have generated operating losses since our inception. To date, we have funded our operations primarily with proceeds equal to \$31.3 million from the private sale of our shares of common stock and from sales of convertible preferred and ordinary shares of Protalix Ltd., and an additional \$14.2 million in connection with the exercise of warrants issued in connection with the sale of such ordinary shares, through December 31, 2008. In addition, on October 25, 2007, we generated gross proceeds of \$50 million in connection with an underwritten public offering of our common stock. We believe that the funds currently available to us as are sufficient to satisfy our capital needs for approximately the next 21 months.

Cash Flows

Net cash used in operations was \$6.0 million for the three months ended March 31, 2009. The net loss for the three months ended March 31, 2009 of \$5.2 million was increased due to an increase in accounts receivable of \$1.6 million, mainly due to grants to be received from the OCS, but was partially offset by \$462,000 of non-cash share-based compensation. Net cash used in investing activities for the three months ended March 31, 2009 was \$1.3 million and consisted primarily of purchases of property and equipment.

Net cash used in operations was \$3.8 million for the three months ended March 31, 2008. The net loss for the three months ended March 31, 2008 of \$5.1 million was partially offset by \$2.2 million of non-cash share-based compensation but was increased due to an increase in accounts receivable of \$658,000 million, mainly due to grants to be received from the OCS. Net cash used in investing activities for the three months ended March 31, 2008 was \$856,000 and consisted primarily of purchases of property and equipment. Net cash used in financing activities for the three months ended March 31, 2008 was \$17,000, consisting of expenses paid during such period in connection with the October 2007 underwritten offering.

Future Funding Requirements

We expect to incur losses from operations for the foreseeable future. We expect to incur increasing research and development expenses, including expenses related to the hiring of personnel and additional clinical trials. We expect that general and administrative expenses will also increase as we expand our finance and administrative staff, add infrastructure, and incur additional costs related to being a public company in the United States, including the costs of directors' and officers' insurance, investor relations programs and increased professional fees. In addition, we are considering a new manufacturing facility that would meet the FDA

[Table of Contents](#)

requirements for the manufacture of our product candidates, which would increase our capital expenditures significantly.

We believe that our existing cash and cash equivalents and short-term investments will be sufficient to enable us to fund our operating expenses and capital expenditure requirements for approximately the next 21 months. We have based this estimate on assumptions that are subject to change and may prove to be wrong, and we may be required to use our available capital resources sooner than we currently expect. Because of the numerous risks and uncertainties associated with the development and commercialization of our product candidates, we are unable to estimate the amounts of increased capital outlays and operating expenditures associated with our current and anticipated clinical trials.

Our future capital requirements will depend on many factors, including the progress and results of our clinical trials, the duration and cost of discovery and preclinical development and laboratory testing and clinical trials for our product candidates, the timing and outcome of regulatory review of our product candidates, the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims and other intellectual property rights, the number and development requirements of other product candidates that we pursue and the costs of commercialization activities, including product marketing, sales and distribution.

We will need to finance our future cash needs through public or private equity offerings, debt financings, or corporate collaboration and licensing arrangements. We currently do not have any commitments for future external funding. We may need to raise additional funds more quickly if one or more of our assumptions prove to be incorrect or if we choose to expand our product development efforts more rapidly than we presently anticipate. We may also decide to raise additional funds even before we need them if the conditions for raising capital are favorable. The sale of additional equity or debt securities will likely result in dilution to our shareholders. The incurrence of indebtedness would result in increased fixed obligations and could also result in covenants that would restrict our operations. Additional equity or debt financing, grants or corporate collaboration and licensing arrangements may not be available on acceptable terms, if at all. If adequate funds are not available, we may be required to delay, reduce the scope of or eliminate our research and development programs, reduce our planned commercialization efforts or obtain funds through arrangements with collaborators or others that may require us to relinquish rights to certain product candidates that we might otherwise seek to develop or commercialize independently.

Effects of Inflation and Currency Fluctuations

Inflation generally affects us by increasing our cost of labor and clinical trial costs. We do not believe that inflation has had a material effect on our results of operations during the three months ended March 31, 2009 or the three months ended March 31, 2008.

Currency fluctuations could affect us by increased or decreased costs mainly for goods and services acquired outside of Israel. We do not believe currency fluctuations have had a material effect on our results of operations during the three months ended March 31, 2009 or the three months ended March 31, 2008.

Off-Balance Sheet Arrangements

We have no off-balance sheet arrangements as of each of March 31, 2009 and March 31, 2008.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Currency Exchange Risk

The currency of the primary economic environment in which our operations are conducted is the dollar. We are currently in the development stage with no significant source of revenues; therefore we consider the currency of the primary economic environment to be the currency in which we expend cash. Approximately 50% of our expenses and capital expenditures are incurred in dollars, and a significant source of our financing has been provided in U.S. dollars. Since the dollar is the functional currency, monetary items maintained in currencies other than the dollar are remeasured using the rate of exchange in effect at the balance sheet dates and non-monetary items

[Table of Contents](#)

are remeasured at historical exchange rates. Revenue and expense items are remeasured at the average rate of exchange in effect during the period in which they occur. Foreign currency translation gains or losses are recognized in the statement of operations.

Approximately 35% of our costs, including salaries, expenses and office expenses, are incurred in NIS. Inflation in Israel may have the effect of increasing the U.S. dollar cost of our operations in Israel. If the U.S. dollar declines in value in relation to the NIS, it will become more expensive for us to fund our operations in Israel. A revaluation of 1% of the NIS will affect our income before tax by less than 1%. The exchange rate of the U.S. dollar to the NIS, based on exchange rates published by the Bank of Israel, was as follows:

	Three months ended March 31,		Year ended December 31,
	2009	2008	2008
Average rate for period	4.0585	3.6234	3.5878
Rate at period end	4.1880	3.5530	3.8020

To date, we have not engaged in hedging transactions. In the future, we may enter into currency hedging transactions to decrease the risk of financial exposure from fluctuations in the exchange rate of the U.S. dollar against the NIS. These measures, however, may not adequately protect us from material adverse effects due to the impact of inflation in Israel.

Interest Rate Risk

Our exposure to market risk is confined to our cash and cash equivalents. We consider all short term, highly liquid investments, which include short-term deposits with original maturities of three months or less from the date of purchase, that are not restricted as to withdrawal or use and are readily convertible to known amounts of cash, to be cash equivalents. The primary objective of our investment activities is to preserve principal while maximizing the interest income we receive from our investments, without increasing risk. We invest any cash balances primarily in bank deposits and investment grade interest-bearing instruments. We are exposed to market risks resulting from changes in interest rates. We do not use derivative financial instruments to limit exposure to interest rate risk. Our interest gains may decline in the future as a result of changes in the financial markets.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this Quarterly Report on Form 10-Q. The controls evaluation was conducted under the supervision and with the participation of management, including our Chief Executive Officer and Chief Financial Officer. Disclosure controls and procedures are controls and procedures designed to reasonably assure that information required to be disclosed in our reports filed under the Exchange Act, such as this Quarterly Report on Form 10-Q, is recorded, processed, summarized and reported within the time periods specified in the Commission's rules and forms. Disclosure controls and procedures are also designed to reasonably assure that such information is accumulated and communicated to our management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Based on the controls evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that, as of the end of the period covered by this Quarterly Report on Form 10-Q, our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed in our Exchange Act reports is recorded, processed, summarized and reported within the time periods specified by the Commission, and that material information relating to our company and our consolidated subsidiary is made known to management, including the Chief Executive Officer and Chief Financial Officer, particularly during the period when our periodic reports are being prepared.

Inherent Limitations on Effectiveness of Controls

Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all error and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. The design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Further, because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, within a company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of simple error or mistake. Controls can also be circumvented by the individual acts of some persons, by collusion of two or more people or by management override of the controls. The design of any system of controls is based in part on certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Projections of any evaluation of controls effectiveness to future periods are subject to risks. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures.

Changes in internal controls

There were no changes to our internal controls over financial reporting (as defined in Rules 13a-15f and 15d-15f under the Exchange Act) that occurred during the quarter ended March 31, 2009 that has materially affected, or that is reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION

Item 1. Legal Proceedings

We are not involved in any material legal proceedings.

Item 1A. Risk Factors

There have been no material changes to the risk factors previously disclosed in our Annual Report on Form 10-K for the year ended December 31, 2008.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Unregistered Sales of Equity Securities

There were no unregistered sales of equity securities during the quarter ended March 31, 2009, other than the issuance of 35,068 shares of common stock, in the aggregate, in connection with the exercise of outstanding stock options granted under our 2006 Stock Incentive Plan by a certain officer of our company and other employees for aggregate proceeds equal to approximately \$2,000. The shares were issued pursuant to exemptions from registration under Section 4(2) of the Securities Act of 1933.

Use of Proceeds

The effective date of our first registration statement, filed on Form S-3 under the Securities Act of 1933, which was accompanied by a registration statement on Form S-3 filed pursuant to Rule 462(b) under the Securities Act (Nos. 333-144801 and 333-146919), relating to a public offering of our common stock, was September 26, 2007 and the offering date was October 25, 2007. The sole book-running manager of the offering was UBS Investment Bank and CIBC World Markets (now Oppenheimer) served as the co-manager. In the offering we sold 10,000,000 shares of common stock at a price per share of \$5.00. Our aggregate net proceeds (after underwriting discounts and expenses) amounted to approximately \$46 million. The offering closed on October 30, 2007.

The amount of the underwriting discount paid by us was \$3.5 million and the expenses of the offering, not including the underwriting discount, were approximately \$810,000.

Between October 30, 2007 and March 31, 2009, we have used approximately \$25 million of the net proceeds to fund our operating activities, including activities related to the development of our clinical and preclinical product candidates and for working capital, capital expenditures and other general corporate purposes. During the quarter ended March 31, 2009, our research and development expenses comprised approximately 84% of our operating expenses. We have deposited the net proceeds of the offering in accordance with our investment policy in short-term bank-deposits. There has been no material change in our planned use of proceeds from our public offering as described in our registration statement.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Submission of Matters to a Vote of Security Holders

None.

Item 5. Other Information

On May 10, 2009, Mr. Sharon Toussia-Cohen, a member of the Company's Board of Directors, informed the Board of Directors that he was resigning from the board, effective as of such date. Mr. Toussia-Cohen's decision to resign from the Board of Directors is not the result of any disagreement relating to the Company's operations, policies or practices. On the same date, the Board of Directors appointed Mr. Alfred Akirov, a member of the Company's Board of Directors, to serve on the Audit Committee of the Board of Directors.

Table of Contents

Item 6. Exhibits

<u>Exhibit Number</u>	<u>Exhibit Description</u>	<u>Method of Filing</u>
3.1	Amended and Restated Articles of Incorporation of the Company	Incorporated by reference to the Company's Registration Statement on Form S-4 filed on March 26, 1998, SEC File No. 333-48677
3.2	Article of Amendment to Articles of Incorporation dated June 9, 2006	Incorporated by reference to the Company's Registration Statement on Form 8-A filed on March 9, 2007
3.3	Article of Amendment to Articles of Incorporation dated December 13, 2006	Incorporated by reference to the Company's Registration Statement on Form 8-A filed on March 9, 2007
3.4	Article of Amendment to Articles of Incorporation dated December 26, 2006	Incorporated by reference to the Company's Registration Statement on Form 8-A filed on March 9, 2007
3.5	Article of Amendment to Articles of Incorporation dated February 26, 2007	Incorporated by reference to the Company's Registration Statement on Form 8-A filed on March 9, 2007
3.6	Bylaws of the Company, as amended	Incorporated by reference to the Company's Quarterly Report on 10-Q for the quarter ended June 30, 2008, filed on August 8, 2008
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	Filed herewith
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	Filed herewith
32.1	18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, Certification of Chief Executive Officer	Filed herewith
32.2	18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, Certification of Chief Financial Officer	Filed herewith

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

PROTALIX BIOTHERAPEUTICS, INC.
(Registrant)

Date: May 10, 2009

By: /s/ David Aviezer
David Aviezer, Ph.D.
President and Chief Executive Officer
(Principal Executive Officer)

Date: May 10, 2009

By: /s/ Yossi Maimon
Yossi Maimon
Chief Financial Officer, Treasurer and Secretary
(Principal Financial and Accounting Officer)

CERTIFICATION

I, David Aviezer, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Protalix BioTherapeutics, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 10, 2009

/s/ David Aviezer

David Aviezer, Ph.D.

President and Chief Executive Officer

CERTIFICATION

I, Yossi Maimon, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Protalix BioTherapeutics, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 10, 2009

/s/ Yossi Maimon

Yossi Maimon

Chief Financial Officer, Treasurer

PROTALIX BIOTHERAPEUTICS, INC.CERTIFICATION

In connection with the quarterly report of Protalix BioTherapeutics, Inc. (the "Company") on Form 10-Q for the period ended March 31, 2009 as filed with the Securities and Exchange Commission (the "Report"), I, David Aviezer, President and Chief Executive Officer of the Company, hereby certify as of the date hereof, solely for purposes of Title 18, Chapter 63, Section 1350 of the United States Code, that to the best of my knowledge:

- (1) the Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company at the dates and for the periods indicated.

This Certification has not been, and shall not be deemed, "filed" with the Securities and Exchange Commission.

Date: May 10, 2009

/s/ David Aviezer

David Aviezer, Ph.D.
President and Chief Executive Officer

PROTALIX BIOTHERAPEUTICS, INC.CERTIFICATION

In connection with the quarterly report of Protalix BioTherapeutics, Inc. (the "Company") on Form 10-Q for the period ended March 31, 2009 as filed with the Securities and Exchange Commission (the "Report"), I, Yossi Maimon, Vice President and Chief Financial Officer of the Company, hereby certify as of the date hereof, solely for the purposes of Title 18, Chapter 63, Section 1350 of the United States Code, that to the best of my knowledge:

- (1) the Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company at the dates and for the periods indicated.

This Certification has not been, and shall not be deemed, "filed" with the Securities and Exchange Commission.

Date: May 10, 2009

/s/ Yossi Maimon

Yossi Maimon
Vice President and Chief Financial Officer