

Via Facsimile and U.S. Mail
Mail Stop 6010

June 26, 2008

Yossi Maimon
Chief Financial Officer and Treasurer
Protalix BioTherapeutics, Inc.
2 Snunit Street
Science Park
POB 455
Carmiel, Israel 20100

**Re: Protalix BioTherapeutics
Form 10-K for the Fiscal Year Ended December 31, 2007
Filed March 17, 2008
File Number: 001-33357**

Dear Mr. Maimon:

We have reviewed your filing and have the following comments. We have limited our review to your financial statements and related disclosures and do not intend to expand our review to other portions of your document. In our comments, we ask you to provide us with information to better understand your disclosure. Where a comment requests you to revise disclosure, the information you provide should show us what the revised disclosure will look like and identify the annual or quarterly filing, as applicable, in which you intend to first include it. If you do not believe that revised disclosure is necessary, explain the reason in your response. After reviewing the information provided, we may raise additional comments and/or request that you amend your filing.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Results of Operations, page 58
Research and Development Expenses

1. We believe that your disclosures about historical research and development expenses and estimated future expenses related to your major research and

development projects could be enhanced for investors. Please refer to the Division of Corporation Finance “Current Issues and Rulemaking Projects Quarterly Update” under section VIII – Industry Specific Issues – Accounting and Disclosure by Companies Engaged in Research and Development Activities. You can find it at the following website address: <http://www.sec.gov/divisions/corpfin/cfcrq032001.htm>. Please revise your MD&A to disclose the following information for each of your major research and development projects.

- a. The current status of the project;
- b. The costs incurred during each period presented and to date on each project;
- c. The nature, timing and estimated costs of the efforts necessary to complete each project;
- d. The anticipated completion dates of each project;
- e. The risks and uncertainties associated with completing development on schedule, and the consequences to operations, financial position and liquidity if each project is not completed timely; and finally
- f. The period in which material net cash inflows from significant projects are expected to commence for each project.

Regarding b., if you do not maintain any research and development costs by project, disclose that fact and explain why management does not maintain and evaluate research and development costs by project. Provide other quantitative or qualitative disclosure that indicates the amount of the company’s resources being used on the project.

Regarding c. and d., disclose the amount or range of estimated costs and timing to complete the phase in process and each future phase. To the extent that information is not estimable, disclose those facts and circumstances indicating the uncertainties that preclude you from making a reasonable estimate.

Report of Independent Registered Public Accounting Firm, page F-2

2. Auditor association with the cumulative data is required on an annual basis as long as the registrant is in the development stage. There is no reference to the cumulative data in the accountant’s report. In addition, it does not appear as though a waiver for this requirement was granted by the Office of the Chief Accountant within the Division of Corporation Finance. Please advise whether a waiver was obtained and provide us a copy or include the appropriate accountant report. To be granted a waiver it must be impracticable for you to obtain an audit opinion on the cumulative data. A written submission explaining why it is impracticable must be provided to the Office of the Chief Accountant within the Division of Corporation Finance to obtain a waiver.

Note 4 – Commitments, page F-18

3. Please revise your disclosure to include all of the milestone payments you will be required to pay under certain research and license agreements. Please include the events that would trigger these payments. Also tell us why you did not include these amounts in your contractual obligation table. Finally, please include the length of and the termination provisions for all of your material agreements.
4. Please explain how the \$1,724,000 commitment under your sub-contracting agreements relates to the purchase obligations of \$4,086,000 included in your contractual obligations table.

Note 5 – Share Capital, page F-20

5. Please provide us a chronology of facts, circumstances and events explaining the change in fair value of the common stock issued during 2006 of approximately \$1.50 per share to the trading value immediately after the merger of approximately \$27 per share.
6. You state in Note 5 and on pages 56-57 that you used various methods to determine the fair value of your common stock. It appears as though your stock was trading prior to the March 12, 2007 date that it was listed on the American Stock Exchange. In addition, it appears you used the \$5 per share offering price in October 2007 to value equity issuances granted before that including for issuances during the third quarter ended September 30, 2007 even though there was a trading price of your stock during that period. Please tell us how your use of valuation methods during the first and third quarters of 2007 rather than the trading price of your stock to value equity issuances for compensation expense/consulting expense, etc. complies with FAS 123R.

* * * *

Please provide us the information requested within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter with your response that keys your response to our comments. Detailed cover letters greatly facilitate our review. Please furnish your letter on EDGAR under the form type label CORRESP.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Yossi Maimon
Protalix BioTherapeutics, Inc.
June 26, 2008
Page 4

In connection with responding to our comments, please provide, in your letter, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

You may contact Vanessa Robertson, Staff Accountant, at (202) 551-3649 or Mary Mast, Senior Staff Accountant, at (202) 551-3613 if you have any questions regarding the comments. In this regard, do not hesitate to contact me, at (202) 551-3679.

Sincerely,

Jim B. Rosenberg
Senior Assistant Chief
Accountant