

Via Facsimile and U.S. Mail  
Mail Stop 6010

June 15, 2007

Mr. J. Nick Riehle  
Vice President, Administration and Chief Financial Officer  
Chelsea Therapeutics International, Ltd.  
13950 Ballantyne Corporate Place, Suite 325  
Charlotte, NC 28277

**Re: Chelsea Therapeutics International, Ltd.  
Form 10-K for the Fiscal Year Ended December 31, 2006  
Filed March 12, 2007  
File No. 005-81457**

Dear Mr. Riehle:

We have reviewed your filing and have the following comments. We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your document. In some of our comments, we ask you to provide us with information so we may better understand your disclosure.

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.

Form 10-K for the Fiscal Year Ended December 31, 2006

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 32

Results of Operations, page 35

1. We acknowledge the information included in the section entitled "Product Pipeline Summary" beginning on page 1, as well as the information included in your "Results of Operations" discussion. However, 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#secviii>.

Please then provide us with the following information, in a disclosure-type format, for each of your major research and development projects:

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

Regarding a., if you do not maintain research and development costs by project, please tell us why management does not maintain and evaluate research and development costs by project. Include other quantitative or qualitative analyses that indicate the amount of the company’s resources being used on these projects.

Regarding b. and c., please provide us with 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, please tell us the facts and circumstances indicating the uncertainties that preclude you from making a reasonable estimate.

Notes to Consolidated Financial Statements, page F-7

Stock-Based Compensation, page F-10

2. Please provide us with additional information to support your volatility rates of 37.66% and “0% to 41.31%” for the years ended December 31, 2006 and 2005. Please also tell us why you have disclosed a range for fiscal 2005, as opposed to a single volatility value. Address the applicable factors in paragraph A32. of SFAS No. 123R in your response.

\* \* \* \*

Please provide us the information requested within 10 business days of the date of this letter or tell us when you will provide a response prior to the expiration of the 10-day period. Please furnish a letter with your responses that keys your responses to our

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comments. Detailed letters greatly facilitate our review. You should furnish the letter to us via EDGAR under the form type label CORRESP. Please understand that we may have additional comments after reviewing your responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that they have provided 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.

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 Amy Bruckner, Senior Accountant, at (202) 551-3657 or Mary Mast, Senior Accountant, at (202) 551-3613 if you have questions regarding comments on the financial statements and related matters. In this regard, please do not hesitate to contact me at (202) 551-3679.

Sincerely,

Jim B. Rosenberg  
Senior Assistant Chief Accountant