

Via Facsimile and U.S. Mail  
Mail Stop 4720

February 18, 2010

Elizabeth Williams  
Director of Finance and Acting Chief Financial Officer  
Lorus Therapeutics Inc.  
2 Meridian Road  
Toronto, Ontario, Canada  
M9W 4Z7

**Re: Lorus Therapeutics Inc.  
Form 20-F for the Fiscal Year Ended May 31, 2009  
Filed November 30, 2009  
File Number: 001-32001**

Dear Ms. Williams:

We have reviewed your filing and have the following comment. 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 comment, we ask you to provide us with information to better understand your disclosures. 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 comment or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Item 18. Financial Statements

1. Basis of Presentation

(b) Reorganization, page F-8

1. Please tell us why the continuity of interest method is appropriate for U.S. GAAP given that \$8.5 million of cash was exchanged in the transaction. Also, please tell us why it was appropriate under U.S. GAAP to record a \$6.3 million gain in the reorganization. Refer also to your disclosure in "Gain on sale of shares" and "Plan of Arrangement and corporate reorganization" on pages 45 and 46.

\* \* \* \*

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 comment. 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.

In connection with responding to our comment, 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 comment on your filing.

Please contact Staci Shannon, Staff Accountant, at (202) 551-3374 or Mary Mast, Review Accountant, at (202) 551-3613 if you have any questions regarding this comment. In this regard, do not hesitate to contact me, at (202) 551-3679.

Sincerely,

Jim B. Rosenberg  
Senior Assistant Chief  
Accountant