

Via Facsimile and U.S. Mail  
Mail Stop 6010

December 18, 2007

Bruce L.A. Carter  
President and Chief Executive Officer  
Zymogenetics, Inc.  
1201 Eastlake Avenue East  
Seattle, WA 98102

**Re: Zymogenetics, Inc.**  
**Form 10-K for the Fiscal Year Ended December 31, 2006**  
**Filed March 1, 2007**  
**Form 10-Q for the quarterly period ended September 30, 2007**  
**Filed October 31, 2007**  
**File Number: 000-33489**

Dear Dr. Carter:

We have reviewed your filings 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 documents. 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 filings.

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 filings. 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, page 44

Results of Operations, page 45

License fees and milestone payments, page 45

1. Please provide us your basis for recognizing the entire one-time lump sum fee

from Eli Lilly as revenue in 2005. Please tell us the term and all of your rights and obligations associated with the license agreement.

2. Short-term investments, page 65

2. Please revise your note to include the accounting policy that you apply to the asset-backed securities including how you account for changes in prepayments.

6. Transactions and accounts with related parties, page 67

3. Please revise your disclosure to include the length of and termination provisions for the collaborative data sharing and cross-license agreement with Novo Nordisk discussed on page 16. Please describe your obligations under this agreement and how revenue will be recognized. In addition, please tell us whether you have recorded the milestone payment revenue that was in dispute with Novo Nordisk as of December 31, 2006.

Form 10-Q for the quarterly period ended September 30, 2007

Note 5. Bayer Schering Pharma A.G. agreements, page 7

4. Please revise your disclosure to clarify how the progress towards completion is measured in recognizing revenue. If an input measure such as cost is used, clarify for us why such a measure is appropriate given that output measures are typically more reliable for determining progress.

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 10

Liquidity and Capital Resources, page 15

Contractual Obligations, page 17

5. Please revise your disclosure to clarify whether the obligations associated with the manufacturing agreement with Patheon dated January 19, 2007 are included in the development contracts line item. Also clarify whether this amount reflects obligations under the development services agreement with Novo Nordisk entered into in January 2007 disclosed on page 16 of the 2006 10-K. Finally, confirm whether this amount includes any obligations under the contract manufacturing agreement with Abbott Laboratories disclosed on page 20 of the 2006 10-K.

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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 filings to be certain that the filings include 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 filings;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filings; 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 filings or in response to our comments on your filings.

You may contact Vanessa Robertson, Staff Accountant, at (202) 551-3649 or Lisa Vanjoske, Assistant Chief Accountant, at (202) 551-3614 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