

*Via Facsimile and U.S. Mail*  
Mail Stop 4720

May 26, 2010

Douglas E. Williams, Ph.D.  
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, 2009**  
**Filed March 1, 2010**  
**File No. 000-33489**

Dear Dr. Williams:

We have limited our review of your filing to those issues we have addressed in our comments. In our comments, we ask you to provide us with information to better understand your disclosures. 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.

Form 10-K for the Fiscal Year Ended December 31, 2010

General

1. We have not yet reviewed the Part III information that is included in your Form 10-K. We may have further comments after reviewing that information and we will not be able to clear our review of your filing until we have the opportunity to resolve any resulting comments.

Item 1. Business

Collaborative Relationships, page 16

Novo Nordisk License Agreements for IL-21, page 18

2. Please refer to your discussion on page 18 of the amended and restated license agreement between Novo Nordisk and Zymogenetics, effective December 2009. Please revise your discussion to describe the following material terms of this agreement:
  - The range of royalty rates (for example, “low-single-digits,” “high-single-digits,” etc.);
  - The aggregate amount of milestone or other payments payable or receivable to each party, and the amounts paid to date; and
  - Duration and termination provisions.

You currently disclose that you will have a right to receive double-digit royalties on net sales in the United States. However, this information is overly broad. Your disclosure should discuss any anticipated decreases in the royalty rate, including the revised royalty range, as a result of Novo Nordisk having to license additional intellectual property from one or more third parties in order to commercialize a product, or if product sales suffer from direct competition.

Patents and Proprietary Rights, page 19

3. Please revise your disclosure to include a more robust discussion of your material patents, including how many of your issued material patents relate to each commercial product/product candidate, and the jurisdictions in which these material patents were granted. Please also provide a range of patent expiration dates which includes the first expiration date and the last expiration date. See Item 101(c)(1)(iv) of Regulation S-K for guidance.

Item 7A. Qualitative and Quantitative Disclosures About Market Risk

4. We note your disclosure that through 2009, your exposure to market risk increased and impacted your investment portfolio. Please revise your disclosure to provide quantitative analysis about market-related risk, including interest rate risk and credit risk, as required by Item 305(a) of Regulation S-K.

Douglas E. Williams, Ph.D.  
ZymoGenetics, Inc.  
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As appropriate, please amend your Form 10-K for the fiscal year ended December 31, 2009 and respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish on EDGAR under the form type label CORRESP a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and 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 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 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 comment on your filing.

Please contact Rose Zukin, Staff Attorney, at (202) 551-3239 or myself at (202) 551-3715 if you have questions regarding the processing of your response as well as any questions regarding comments and related matters.

Sincerely,

Jeffrey P. Riedler  
Assistant Director