

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

March 12, 2010

Richard M. Marsh  
Executive Vice President, General Counsel and Secretary  
Myriad Genetics, Inc.  
320 Wakara Way  
Salt Lake City, UT 84108

**Re: Myriad Genetics, Inc.**  
**Form 10-K for the Fiscal Year Ended June 30, 2009**  
**Filed August 26, 2009**  
**File Number: 000-26642**

Dear Mr. Marsh:

We have reviewed your filing and have the following comments. In our comments, we ask you to provide us with information to better understand your 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 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 1. Business, page 2

Patents and Proprietary Rights, page 5

1. We note in your disclosure that you currently own or license 213 issued patents in the United States and foreign countries. Please include in your disclosure a

description of all material patents, identify which patents are related to which product families, the range of expiration dates of those patents and the jurisdictions to which they apply.

Exhibits

2. We note that you have filed as an exhibit your form Executive Retention Agreement. Please file each existing Executive Retention Agreement with your named executive officers. These agreements are management contracts that should be included as exhibits, pursuant to Item 601(a)(10)(iii)(A) of Regulation S-K.

\* \* \* \*

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 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 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.

Richard M. Marsh  
Myriad Genetics, Inc.  
March 12, 2010  
Page 3

Please contact Scot Foley, Staff Attorney, at (202) 551-3383, Daniel Greenspan, Special Counsel, at (202) 551-3623, or me at (202) 551-3715 with any questions.

Sincerely,

Jeffrey P. Riedler  
Assistant Director