

Via Facsimile and U.S. Mail
Mail Stop 6010

February 27, 2008

Mr. Peter D. Meldrum
President and Chief Executive Officer
Myriad Genetics, Inc.
320 Wakara Way
Salt Lake City, UT 84108

**Re: Myriad Genetics, Inc.
Form 10-K for Fiscal Year Ended June 30, 2007
File No. 0-26642**

Dear Mr. Meldrum:

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. 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 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 June 30, 2007

Management's Discussion and Analysis of Financial Condition and Results of Operations

Overview, page 31

1. You do not appear to separately quantify costs incurred for your five product candidates or provide sufficient information that would allow investors to determine the reasonably likely timing for your product commercialization and related revenue generation. Please revise your disclosure to provide the following information for each of these research and development projects. 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>.

- 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 for the project;
- d. The risks and uncertainties associated with completing development on schedule, and the consequences to operations, financial position and liquidity if the project is not completed timely; and
- e. The period in which material net cash inflows from the project are expected to commence.

Regarding a. if you do not maintain any research and development costs by project, disclose why management does not maintain and evaluate research and development costs by project. Provide other quantitative or qualitative disclosure that indicates the amount of the company’s resources being used on the project.

Regarding b. and c. disclose 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, disclose those facts and circumstances indicating the uncertainties that preclude you from making a reasonable estimate.

Critical Accounting Policies, page 31

2. You disclose that your estimate for the allowance for doubtful accounts requires difficult, subjective or complex judgments. In Business on page 11 you indicate that sales of your therapeutic and molecular diagnostic products depend significantly on the availability of third-party reimbursement. It is unclear whether your allowance for doubtful accounts relates solely to bad debt expense or whether it includes contractual allowances for concessions to third-party payors. Please address the following comments:
 - a. Please revise your revenue recognition policy disclosure and critical accounting policy disclosure to clearly indicate how you account for contractual allowances due to third-party payors. In this regard, please clarify whether your receivables and revenues are presented net of third-party allowances.
 - b. Please disclose whether your accrued liabilities include estimates for contractual allowances, rebates and/or discounts. In addition, please revise your financial statement disclosure to provide each accrual greater

than 5% of current liabilities as required by Item 5-02.20 of Regulation S-X.

- c. Please revise your critical accounting policies disclosure to provide the effect that a reasonably likely change could have, as of the latest balance sheet provided, on your estimate of the allowance for doubtful accounts. In addition, for each period presented please revise to disclose the dollar amount effect that the revision to your prior-period estimate of the allowance had on your results of operations. Please see FR-72.

Results of Operations, page 32

3. Please revise your disclosure to separately discuss the impact of price and volume changes on your reported revenues as required by Item 303(a)(3)(iii) of Regulation S-K.

Contractual Obligations, page 36

4. Please revise your contractual obligations table to present in the table or in a footnote thereto the aggregate total potential milestone obligations you identify in Business on page 8, as required by Item 303(a)(5) of Regulation S-K. In addition, please revise your financial statement footnote disclosures to include the amount of your commitments under these arrangements and the events that trigger payments of the milestones.

Financial Statements

Note 8: Segment and Related Information, page F-17

5. Please revise your disclosure to provide the following information:
 - a. The amount of assets by segment and a reconciliation to your total assets as required by paragraph 25 of SFAS 131.
 - b. The amount of your diagnostic revenues by product or group of products as required by paragraph 37 of SFAS 131. In this regard, it appears that you identify your individual diagnostic products in Business on page 4.

Note 10: Investment in Prolexys Pharmaceuticals, Inc., page F-19

6. It appears that your investment in Prolexys meets the 20% significance levels under Item 3-09 of Regulation S-X for at least fiscal 2005 and fiscal 2006. However, it does not appear that you provide the required financial statements of Prolexys in either this Form 10-K or those of the preceding two fiscal years. Please provide us your significance tests under Item 3-09 of Regulation S-X for your equity investment in Prolexys for each of the last three fiscal years and

explain to us why you have not provided the audited or unaudited financial statements required under that rule.

Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please submit a letter that keys your responses to our comments and provides the requested information. Detailed letters greatly facilitate our review. Please furnish your letter to us via 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 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.

If you have any questions, please contact Mark Brunhofer, Senior Staff Accountant, at (202) 551-3638. In this regard, do not hesitate to contact me, at (202) 551-3679.

Sincerely,

Jim B. Rosenberg
Senior Assistant Chief
Accountant