

Mail Stop 6010

April 4, 2007

Ms. Kathleen Danenberg
President and Chief Executive Officer
Response Genetics, Inc.
1640 Marengo St., 6th Floor
Los Angeles, California 90033

**Re: Response Genetics, Inc.
Amendment No. 1 to Registration Statement on Form SB-2,
Filed March 15, 2007
File No. 333-139534**

Dear Ms. Danenberg:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with supplemental information so we may better understand your disclosure. After reviewing this information, we may or may not raise additional comments.

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.

Prospectus Cover Page

1. Please remove the words "Sole Bookrunner" on the cover page of the prospectus. You may explain the function of Maxim Group LLC in the "Underwriting" section

Ms. Kathleen Danenberg
Response Genetics Inc.
April 4, 2007

Our Solution, page 3

2. You state that your analyses have produced a success rate of over 90%. Provide more specific reliability rates. Discuss the extent to which these reliability rates currently either meet or do not meet the standard that users will likely require for your product.

Our Strategy, page 4

3. Please remove the reference to the size of both the CRO market and the Central Lab portion thereof on pages 4, 47 and wherever else this information appears in the prospectus. In that regard, the size of the market in which your product and proposed products will compete is substantially smaller than total the market for Central Lab revenues. Alternatively provide statistics for the market in which your product actually competes.

We May Have Difficulty Obtaining Additional Funding, page 9

4. Please revise the title of this risk factor to refer to the actual risk associated with the issuance of additional debt or equity securities to raise additional funds. As discussed in the text, the risk relates to the loss of economic interest by current common stockholders and the creation of rights and preferences that would negatively impact the position of all common stockholders.

Use of Proceeds, page 29

5. Please expand footnote 2 to identify the overseas testing facility locations, disclose the total costs of establishing these facilities and the amount and sources of other funds that will be needed to establish them.

Business, page 37

Strategic Collaborations, page 50

6. We note your response to our prior comment 44 and reissue that comment in part.
 - For your agreement with USC, please disclose any minimum royalty payments that are material.
 - For your patent license agreement with Roche, please describe the obligations/rights to defend the proprietary rights.
 - For your agreement with Taiho, please disclose any material fees paid or payable.
 - For your agreement with GSK, please disclose the minimum annual payments and upfront payment, to the extent material.

Ms. Kathleen Danenberg
Response Genetics Inc.
April 4, 2007

- For your agreement with Applied Biosystems, please describe the term of the agreement.
- 7. For your agreement with Shanghai BioChip, please describe the payment provisions, including any material fees paid or payable and the existence of royalty provisions. Please also include this agreement as an exhibit to the registration statement.
- 8. Please include a description of the material terms of your agreement with Eli Lilly and include the agreement as an exhibit to the registration statement.

Financial Statements

- 9. Please present pro forma net loss per share for the year ended December 31, 2006 and 2005 when pricing information becomes available.

* * * * *

As appropriate, please amend your filing in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested supplemental information. Detailed cover letters greatly facilitate our review. Please file your cover letter on EDGAR under the form type label CORRESP. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

You may contact Todd Sherman at (202) 551-3665 or Lisa Vanjoske at (202) 551-3614 if you have questions regarding comments on the financial statements and related matters. Please contact Sonia Barros at (202) 551-3655 or me at (202) 551-3715 with any other questions.

Sincerely,

Jeffrey P. Riedler
Assistant Director

Ms. Kathleen Danenberg
Response Genetics Inc.
April 4, 2007

cc: Faith L. Charles, Esq.
Kenneth H. Yi, Esq.
Mintz Levin Cohn Ferris Glovsky and Popeo P.C.
Chrysler Center
666 Third Avenue
New York, New York 10017