

Mail Stop 6010

May 14, 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. 2 Registration Statement on Form SB-2
Filed May 3, 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.

Our Solution, page 3

1. We note your response to our prior comment 2 and reissue that comment. Please revise your prospectus to provide more specific reliability rates as you have provided in your response to us. Please also revise your prospectus to 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.

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Our Strategy, page 4

2. We note your response to our prior comment 3 and reissue that comment in part. Please remove the reference in this section and on page 52 to the size of both the contract drug development market and the CRO market. The size of the market in which your product and proposed products will compete is substantially smaller than the total market for contract drug development and CROs.

Business, page 42

Strategic Collaborations, page 55

3. We note your response to our prior comment 6 and reissue that comment in part.
 - For your agreement with Taiho, please disclose any material fees paid or payable. Based upon our review of your confidential treatment request, it appears the advance fees paid may be material.
 - For your agreements with GSK and GSK Bio, please disclose the minimum annual payments, to the extent material. Based upon our review of your confidential treatment request, it appears the minimum annual fees may be material.

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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

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with any other questions.

Sincerely,

Jeffrey P. Riedler
Assistant Director

cc: Faith L. Charles, Esq.
Kenneth H. Yi, Esq.
Mintz Levin Cohn Ferris Glovsky and Popeo P.C.
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