

Via Facsimile and U.S. Mail
Mail Stop 6010

March 2, 2009

Walter C. Herlihy, Ph.D.
President, Chief Executive Officer and Director
41 Seyon Street, Building #1, Suite 100
Waltham, Massachusetts 02453

Re: Repligen Corporation
Form 10-K for the Year Ended March 31, 2008
Filed June 13, 2008
File No. 000-14656

Dear Dr. Herlihy:

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 it 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 year ended March 31, 2008

Item 1. Business, page 3

1. Please file as an exhibit to the Form 10-K the supply agreement between the company and Applied Biosystems, Inc.
2. We note your discussion in this section of the exclusive license agreement between the company and the Massachusetts Institute of Technology on page 4. Please describe the material terms of this agreement in this section and file the

agreement as an exhibit to the Form 10-K pursuant to Item 601(b)(10) of Regulation S-K. Alternatively, please provide us with an analysis supporting your determination that the agreement is not material to the company.

3. We note your discussion of the exclusive license agreement between the company and the University of Michigan on page 4, which agreement has been filed as a material contract and incorporated by reference to your 10-K. Please describe the material terms of the agreement in this section of the 10-K.
4. We note your discussion of the settlement agreement between the company and Bristol-Myers Squibb on pages 4, 6 and 55. Please file this agreement as an exhibit to the Form 10-K pursuant to Item 601(b)(10) of Regulation S-K.

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities, page 14

5. Please revise to disclose the information required by Item 201(e) of Regulation S-K.

Notes to Consolidated Financial Statements

11. Scripps Agreement, page 54

6. You state that, pursuant to the company's license agreement with The Scripps Research Institute, Repligen has agreed to make certain additional payments in the event it achieves specified developmental and commercial milestones. Notwithstanding that the company has been granted confidential treatment for portions of this agreement, including the amount of specific potential milestone payments, please disclose the aggregate potential milestone payments to be made under the agreement. Alternatively, please provide your analysis why these aggregate potential payments are not material.

Definitive Proxy Statement

Compensation Discussion and Analysis, page 18

7. We note your statements on page 18 that the Compensation Committee set total executive officer compensation in fiscal 2008 based on the Radford Biotechnology Survey. Please revise your discussion to identify the companies from the survey that were reviewed by the Compensation Committee and used as

a basis for the salaries paid to Repligen's executive officers. If the companies are too numerous to list, please disclose the criteria for including these companies in the Survey.

Annual Cash Incentive Compensation, page 19

8. We note your discussion concerning the performance criteria considered by the Compensation Committee in making its awards for fiscal year 2008, which was comprised of company and individual objectives.
 - (a) With respect to company performance objectives, your disclosure is too general. Please disclose the specific targets against which company performance was measured. Please note that disclosure of these specific targets is warranted unless the company believes that competitive harm would result from such disclosure, in which case it may omit disclosure of the specific targets as long as it complies with Instruction 4 to 402(b). In accordance with that instruction, please supplementally explain to us your basis for keeping the individual performance target information confidential. Please explain why, based upon your specific facts and circumstances, publicly releasing this information will cause Impax competitive harm; and
 - (b) With respect to individual executive performance, to the extent that the performance criteria you have listed was subject to quantification for purposes of the Compensation Committee's performance evaluation, please provide the metrics used. If not, please explain how the Compensation Committee determined the percentage of completion of individual results, as described on pages 21 and 22.

Equity Compensation Plan Information, page 35

9. Please revise the equity compensation plan table to reflect information as of March 31, 2008, the end of the most recently completed fiscal year, rather than as of December 31, 2007, pursuant to Item 201(d) of Regulation S-K.

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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 responses to our comments and provide any requested information. Detailed cover letters greatly facilitate our review. Please furnish your letter on EDGAR under the form type label CORRESP.

Walter C. Herlihy, Ph.D.
Repligen Corporation
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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 Laura Crotty, Staff Attorney, at (202) 551-3563 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,

Jeff Riedler
Assistant Director