

Via Facsimile and U.S. Mail
Mail Stop 6010

December 18, 2007

Ms. Mary Kay Fenton
Chief Financial Officer
Achillion Pharmaceuticals, Inc.
300 George Street
New Haven, CT 06511

**Re: Achillion Pharmaceuticals, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2006
Filed on March 29, 2007
File No. 1-33095**

Dear Ms. Fenton:

We have limited our review of your filing to those issues we have addressed in our 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 on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Financial Statements

Notes to Financial Statements, page F-7

Revenue Recognition, page F-8

1. Regarding your proportionate performance accounting:
 - Revise to disclose the types of payments included in the total effort expected for all of your performance obligations under the arrangement.

Specifically, address if milestones to be achieved are included in the total effort expected. For each payment included in the total effort expected amount, tell us what must occur in order for you to be entitled to the payment and why you believe the amount to be fixed and determinable in accordance with SAB 104.

- Disclose what estimates are included in “actual effort expended in that period,” the uncertainties underlying these estimates, if any. Tell us why you believe that you are able to reasonably estimate this total.

5. Collaboration Arrangement, page F-15-F-16

2. You refer to a valuation analysis performed by an unrelated third-party independent valuation firm. This reference suggests to an investor that you are placing reliance on the firm. Please include the name of the valuation firm in the '34 Act filing. Additionally, if the Form 10-K is incorporated by reference into a '33 Act registration statement, a consent from the valuation specialist must be provided in the '33 Act registration statement.

* * * *

Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your responses to our comments and provide the requested information. Detailed 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 comment, 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 filings;
- 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.

Ms. Mary Kay Fenton
Achillion Pharmaceuticals, Inc.
December 18, 2007
Page 3

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.

You may contact Ibolya Ignat, Staff Accountant at (202) 551-3656, or Mary Mast, Senior Staff Accountant, at (202) 551-3613 if you have questions regarding the comment. In this regard, do not hesitate to contact me, at (202) 551-3679.

Sincerely,

Jim B. Rosenberg
Senior Assistant Chief Accountant