

Mail Stop 6010

October 12, 2006

Michael D. Kishbauch  
President and Chief Executive Officer  
Achillion Pharmaceuticals, Inc.  
300 George Street  
New Haven, Connecticut 06511

**Re: Achillion Pharmaceuticals, Inc.  
Registration Statement on Form S-1, Amendment 6  
Filed October 10, 2006  
File No. 333-132921**

Dear Mr. Kishbauch:

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 information so we may better understand your disclosure. After reviewing this information, we may 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 any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

FORM S-1

Management's Discussion and Analysis

Stock Compensation, page 36-38

1. We note your disclosure on page 38 which references management's approach to establishing an enterprise value using an analysis of comparable companies as well as an income approach. Please tell us and disclose whether this valuation approach was used solely for the 2005 valuation of the market value of your

common stock as of November 2004 or if you have continued to perform this valuation approach for each equity issuance. In addition, please clarify in your disclosure whether your reference to "in 2005" is to the shares valued in 2005 but issued in 2004 or to all equity issuances in 2005.

2. Please revise your disclosure to include the reassessed fair value of the common stock per share in addition to the aggregate fair value of the grant.

Report of Independent Public Registered Public Accounting Firm, page F-2

3. We acknowledge your response to comment 3. Please provide an auditors' opinion with your amendment for which you will request effectiveness that removes the restrictive language in the first paragraph of the opinion.

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As appropriate, please amend your registration statement 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 information. Detailed cover letters greatly facilitate our review. 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 Dana Hartz at (202) 551-3648 or Mary Mast at (202) 551-3613 if you have questions regarding comments on the financial statements and related matters. Please contact Greg Belliston at (202) 551-3861 or me at (202) 551-3715 with any other questions.

Sincerely,

Jeffrey Riedler  
Assistant Director

cc: Steven D. Singer, Esq.  
Wilmer Cutler Pickering Hale and Dorr LLP  
60 State Street  
Boston, MA 02109