Mail Stop 6010

June 14, 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 2
Filed June 6, 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

Business

Clinical Development History, page 56

1. We note that "[b]etween 2001 and 2003, [you] conducted several clinical trials" with elvucitabine, and you determined the drug was "associated with an unacceptable reduction in the number of patients' white and red blood cells."

- Please explain why several clinical trials were necessary;
- Please state which phase these clinical trials were; and
- State the status of your investigational new drug application between 2001 and 2005, when you initiated the phase II trials that are now ongoing. Did the FDA keep the IND active throughout this time period? If the IND was placed on a clinical hold due to the unacceptable reduction in red and white blood cells, please revise your disclosure to discuss the clinical hold.

Emory University, page 66

2. We note your response to comment 4. Please revise page 66 to indicate that you will not be required to make annual license maintenance payments.

Item 16. Exhibits and Financial Statement Schedules, page II-4

3. We note you filed exhibit 5.1 with this amendment. We also note that exhibit 5.1 is a form of the legal opinion. Please note that you will be required to file the actual legal opinion prior to effectiveness.

* * *

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