



DIVISION OF  
CORPORATION FINANCE

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

August 30, 2011

Via E-mail

Robert J. Mulroy  
President and Chief Executive Officer  
Merrimack Pharmaceuticals, Inc.  
One Kendall Square, Suite B7201  
Cambridge, MA 02139

**Re: Merrimack Pharmaceuticals, Inc.  
Amendment No. 1 to Registration Statement on Form S-1  
Filed August 19, 2011  
File No. 333-175427**

Dear Mr. Mulroy:

We have reviewed your amended registration statement and response letter, each filed August 19, 2011, and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

Management's discussion and analysis of financial condition and results of operations

Critical accounting policies and significant judgments and estimates  
Stock Based Compensation, page 69

1. Please refer to your response to our prior comment seven. Please note we may have additional comments once the IPO price is known.

Notes to Consolidated Financial Statements, page F-7

4. License and collaboration agreements  
PharmaEngine, Inc., page F-18

2. Please tell us and disclose how you concluded that PharmaEngine is a variable interest entity, and why you concluded that you are not the primary beneficiary.

13. Series F amount, page F-28

3. It appears that the stockholders paid \$5.51 per share for Series F preferred stock in 2007 and 2008. It also appears that the conversion rate is a one for one rate to common stock. Please tell us why the fair value of your common stock had decreased to \$2.12 in October 2009 as discussed on page 72 in light of the Series F issuances in 2007 and 2008. Also, please expand the tables on pages F-32 and 70 to include option grants in 2008 and 2009.

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 the information the Securities Act of 1933 and all applicable Securities Act rules require. 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.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Tabatha Akins, Staff Accountant, at (202) 551-3658 or Lisa Vanjoske, Accounting Reviewer, at (202) 551-3614 if you have questions regarding comments on the financial statements and related matters. Please contact Karen Ubell, Staff Attorney, at (202) 551-3873, Dan Greenspan, Branch Chief, at (202) 551-3623 or me at (202) 551-3715 with any other questions.

Sincerely,

/s/ Daniel Greenspan for

Jeffrey Riedler  
Assistant Director