

Mail Stop 6010

July 7, 2006

Dr. Andrew Uprichard
President
EPIX Pharmaceuticals, Inc.
161 First Street
Cambridge, Massachusetts 02142

**Re: EPIX Pharmaceuticals, Inc.
Amendment No. 2 to the Registration Statement on Form S-4
File No. 333-133513**

Dear Mr. Uprichard:

We have reviewed your filings and have the following comments. Where indicated, we think you should revise your documents 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 supplemental information so we may better understand your disclosure. After reviewing this information, we may or may not 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 on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form S-4

Opinion of EPIX's Financial Advisor, page 72

1. We note your response to comment 4 and your supplemental response. In the third full paragraph where you discuss the materials reviewed by Needham & Company, there is reference to financial forecasts with respect to EPIX and Predix that were prepared by management of each respective company. Please explain to us what you mean by financial forecasts. Additionally, if such information is material, please revise your disclosure to provide that information. If you do not believe such information is material, please provide us with a detailed and substantive analysis explaining why such information is not material to investors. We may have further comments upon reviewing your response.

Notes to Unaudited Pro Forma Condensed Consolidated Financial Statements

Note 2. Purchase Price, page 13

2. We acknowledge your response to comment 2 of our letter dated June 20, 2006 and reissue our comment in part. Please tell us and disclose how you will account for the difference between the fair value of the stock on the milestone achievement date and the value of the stock based on the terms of the merger agreement.

Epix Management's Discussion and Analysis of Financial Condition and Results of Operations

Critical Accounting Policies and Estimates

Revenue Recognition, page 149

3. We acknowledge your response to comment 9 of our letter dated June 20, 2006. Your analysis under EITF No. 99-19 would seem to indicate that you are the primary obligor for the research and development costs you incur, which would indicate that you should record any revenue streams like license fees and milestone payments on a gross basis. It is still unclear to us why you are recording the reimbursement of expenses from Schering AG as revenue since it appears you are not providing research and development services to Schering AG. As stated on page 141, each party to the agreement will share equally in Vasovist costs and profits. Based on this disclosure, it would appear that you are receiving a reimbursement for expenses incurred and not for services provided. Please tell us why you continue to believe that you should record these expense reimbursements as revenue or revise your financial statements accordingly.

Predix Consolidated Financial Statements

Notes to Consolidated Financial Statements

Note 2. Summary of Significant Accounting Policies

Stock-Based Compensation, page F-46

4. We acknowledge your revised disclosure in response to comment 13 of our letter dated June 20, 2006. Please clarify, both to us and in your financial statements, your accounting policy for recognizing stock-based compensation on an "accelerated" basis versus a straight-line basis, correlating your policy to SFAS No. 123(R) as applicable.

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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 supplemental information. Detailed cover letters greatly facilitate our review. Please file your cover letter on EDGAR under the form type label CORRESP. 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 Amy Bruckner at (202) 551-3657 or Joseph Roesler, Accounting Branch Chief at (202) 551-3628 if you have questions regarding comments on the financial statements and related matters. Please contact Song Brandon at (202) 551-3621, Suzanne Hayes, Legal Branch Chief at (202) 551-3675, or me at (202) 551-3715 with any other questions.

Sincerely,

Jeffrey Riedler
Assistant Director

cc: William T. Whelan, Esq.
Daniel T. Kajunski, Esq.
Mintz, Levin, Cohn, Ferris, Glovsky and Popeo P.C.
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