

Via Facsimile and U.S. Mail
Mail Stop 4720

February 3, 2010

Charles A. Reinhart III
Chief Financial Officer
PharmAthene, Inc.
One Park Place,
Suite 450
Annapolis, MD

**Re: PharmAthene, Inc.
Form 10-K for the Year Ended December 31, 2008
Form 10-Q for the Period Ended September 30, 2009
File No. 001-32587**

Dear Mr. Reinhart:

We have reviewed your January 22, 2010 response to our December 22, 2009 comment letter and have the following 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, please explain the reason in your response. After reviewing the information provided, we may raise additional comments and/or request that you amend your filings.

Form 10-K for the Year Ended December 31, 2008

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 47

Results of Operations, page 49

Acquired In-Process Research and Development, page 52

1. As previously requested in part f our prior comment number one, please disclose the significant appraisal assumptions, such as:

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- a. the period in which material net cash inflows from significant projects are expected to commence;
- b. material anticipated changes from historical pricing, margins and expense levels; and
- c. the risk adjusted discount rate applied to the project's cash flows.

Index to Consolidated Financial Statements, page F-1

Note 2 - Summary of Significant Accounting Policies, F-10

Revenue Recognition, page F-14

2. Please refer to your response to our prior comment number two. It is still unclear what is meant by the statement "an estimate of the applicable fees". Please revise to clarify how the estimate of applicable fees is determined. Further, you state "fixed fees under cost-plus-fee contracts to be earned in proportion to the allowable costs". Please revise to clarify what specific drivers of the allowable costs are used to estimate the proportion of revenues earned.

* * *

Please provide us the information requested within 10 business days of the date of this letter or tell us when you will provide a response prior to the expiration of the 10-day period. Please furnish a letter with your responses that keys your response to our comments. Detailed letters greatly facilitate our review. You should furnish the letter on EDGAR under the form type label CORRESP.

You may contact Tabatha Akins, Staff Accountant, at (202) 551-3658 or Mary Mast, Senior Staff Accountant, at (202) 551-3613, if you have questions regarding the comments. In this regard, do not hesitate to contact me, at (202) 551-3679.

Sincerely,

Jim B. Rosenberg
Senior Assistant Chief
Accountant