



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

January 27, 2011

David M. Tanen
President
Arno Therapeutics, Inc.
4 Campus Drive, 2nd Floor
Parsippany, NJ 07054

**Re: Arno Therapeutics, Inc.
Amendment No. 1 to Registration Statement on Form S-1
Filed January 21, 2011
File No. 333-170474**

Dear Mr. Tanen:

We have reviewed your amended registration statement and response letter each filed January 21, 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.

Cover Page

1. On your cover page you disclose that there is not currently a market for your common stock, however, your last registration fee table states that you calculated the registration fee in accordance with Rule 457(c) of the Securities Act of 1933. Since there is no market for your common stock, please revise your registration fee table to calculate the fee in accordance with Rule 457(a) or 457(o) of the Securities Act.

Risk Factors

"The co-lead investors in our September 2010 private placement..." page 10

2. Please expand your disclosure to identify the three co-lead investors, the percent of such investor's beneficial ownership and the director designated by such investor.

Our Business

License Agreements and Intellectual Property, page 46

3. We have reviewed your response to our prior comments 27 and 28 regarding disclosure of a range of royalty rates. We consider a range of royalty rates to be material. We often grant confidential treatment to such terms but require that a royalty range be disclosed. Therefore, our comments are reissued in part. Please expand your disclosure to include the royalty rates payable under each agreement with Ohio State and the agreement with Pitt, noting that for the royalty rate you may provide a reasonable range within which the royalty rate falls, for example “single digits,” “high-teens,” “mid-twenties,” or a range not to exceed ten percent.
4. We have reviewed your response to our prior comments 27 and 28 regarding your intent to not disclose specific payments made or expected to be made under your license agreements. Consistent with your disclosure obligations under Item 303 of Regulation S-K, please confirm that when a material payment under an agreement with Ohio State or Pitt becomes probable, you will disclose the specific material payment in the appropriate disclosure sections of your filings.
5. On page 33, you disclose that “[t]he decrease of approximately \$0.2 million over the three month period in 2009 is due primarily to the expense of a \$0.2 million milestone payment in 2009 related to the initiation of the Phase I clinical trial of AR-12.” On page 47, however, you refer to a July 2010 milestone payment to Ohio State upon the commencement of the Phase I clinical study of AR-12. Please revise your disclosure to clarify whether these payments are referring to different milestones payments. In addition, please disclose the amount of each milestone in your MD&A and Business sections.

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.

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You may contact Ibolya Ignat at (202) 551-3656 or Donald Abbot at (202) 551-3608 if you have questions regarding comments on the financial statements and related matters. Please contact Karen Ubell at (202) 551-3873, Jennifer Riegel at (202) 551-3575 or me at (202) 551-3715 with any other questions.

Sincerely,

Jeffrey Riedler
Assistant Director

cc: Christopher J. Melsha, Esq.
Fredrikson & Byron, P.A.
200 South Sixth Street, Suite 4000
Minneapolis, MN 55402-1425