

Mail Stop 6010

January 4, 2008

Christopher Anzalone  
Chief Executive Officer  
Arrowhead Research Corporation  
201 South Lake Avenue, Suite 703  
Pasadena, CA 91101

**Re: Arrowhead Research Corporation  
Registration Statement on Form S-3  
Filed 12/20/2007  
File Number 333-148218**

Dear Mr. Anzalone:

We have reviewed your filing and have the following comment. Where indicated, we think you should revise your document in response to this comment. 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.

Form S-3

Incorporation of Certain Information by Reference, page 18

1. We note that you filed a Form 10-K for the fiscal year ended September 30, 2007 on December 14, 2007. This filing does not contain information in Part III that is required by Form 10-K. Please amend your filing to include Part III information, or file a Proxy Statement in order to incorporate this information into your filing by reference. Your filing must be complete before we take final action on the registration statement.

\* \* \*

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings reviewed by the staff to be certain that they have provided all information investors require for an informed decision. 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.

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Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert this action as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as a 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. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

Please contact Rose Zukin at (202) 551-3239 or me at (202) 551-3710 with any questions.

Sincerely,

Jeffrey P. Riedler  
Assistant Director

cc: Rachael S. Wexler, Esq.  
Goodwin Procter LLP  
10250 Constellation Boulevard  
Los Angeles, CA 90067