

Mail Stop 6010
Via Facsimile and U.S. Mail

June 28, 2007

Mr. R. Bruce Stewart
Chief Executive Officer
Arrowhead Research Corporation
201 S. Lake Avenue, Suite 703
Pasadena, California 91101

Re: Arrowhead Research Corporation
Form 10-K for fiscal year ended September 30, 2006
Form 10-Q for quarterly period ended March 31, 2007
File No. 000-21898

Dear Mr. Stewart:

We have reviewed your March 15, 2007 response to our February 22, 2007 letter and have the following comments. As appropriate, comply with our comments in your amended Form 10-K for the fiscal year ended September 30, 2006. In some of our comments, we ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may 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 any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for fiscal year ended September 30, 2006

General

1. Please confirm that your amended Form 10-K will reflect all revisions for which you committed to make in future filings.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 29

2. Please refer to prior comment one. Your proposed new disclosure does not appear to adequately discuss uncertain matters that may possess a high degree of

susceptibility to change and require estimates or assumptions that are highly subjective and judgmental. For example, you do not discuss the uncertainties associated with accounting for in-process research and development and goodwill, which appear to be particularly relevant given your correction of an error related to recording Calando goodwill. For all critical accounting estimates, please provide a discussion and quantification of the uncertainties in applying these accounting estimates, the historical accuracy of these estimates, a quantification of their sensitivity to changes in key assumptions and the expected likelihood of material changes in the future. Please refer to Section V of Financial Reporting Release No. 72.

Notes to Consolidated Financial Statements

Note 3. Investment in Subsidiaries, page F-11

3. Please refer to prior comment seven. Given your statement that “Aonex and Calando were formed by Arrowhead,” both companies appear to be newly formed development stage enterprises that should have been accounted for as investments in subsidiaries and not as business combinations that result in goodwill. Please tell us more specifically how you accounted for your initial and subsequent investments in Aonex and Calando, including the interests of minority shareholders, during the past three fiscal years. For example, explain to us your cash flows from investing activities related to your interests in Aonex and Calando. Also, explain to us how you accounted for the R&D activities of Aonex and Calando in your consolidated financial statements.
4. You corrected the erroneous recording of Calando goodwill in the quarterly period ended March 31, 2007 “due to the write off of goodwill to in process R&D to be more conservative in our balance sheet.” Please explain to us why amounts related to your investments should be recorded to IPR&D instead of an investment in subsidiary. Tell us the factors that you considered in concluding that the error corrected in fiscal 2007 was immaterial to 2005 operating results. Also, explain your basis for allocating \$788,640 of this \$963,150 correction to Calando’s minority interest.
5. In 2006, you wrote down goodwill recorded in connection with the Aonex investment. Please tell us why this write down does not represent in substance a correction of an erroneous recording of goodwill in 2004 consistent with Calando.
6. Please refer to prior comment 10. Please describe your accounting for the warrants issued by Aonex, which are described on page 15 of your filing. Also, explain why “there was no accounting entry necessary” for the Calando warrants.

Mr. R. Bruce Stewart
Arrowhead Research Corporation
June 28, 2007
Page 3

As appropriate, please amend your filings and respond to these comments within 10 business days or tell us when you will provide us with a response. You may wish to provide us with marked copies of the amendments to expedite our review. Please furnish a cover letter with your amendments that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please furnish your letter on EDGAR under the form type label CORRESP.

You may contact Frank Wyman, Staff Accountant, at 202-551-3660 or Don Abbott, Senior Staff Accountant, at 202-551-3608, 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