

January 9, 2012

VIA EDGAR

Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549-4628

Attention: Jeffrey Riedler
John Krug
Daniel Greenspan

Re: Arrowhead Research Corporation
Registration Statements on Form S-3
Filed November 21, 2011
File Nos. 333-178072 and 333-178073

Ladies and Gentlemen:

Set forth below is the response of Arrowhead Research Corporation, a Delaware corporation (the "Company"), to the comment letter, dated November 22, 2011 (the "Comment Letter"), of the staff of the Division of Corporation Finance (the "Staff") of the Securities and Exchange Commission (the "Commission") to the Company's registration statements on Form S-3 (File Nos. 333-178072 and 333-178073) (the "Registration Statements"). The Registration Statements were filed with the Commission on November 21, 2011. Concurrently herewith, the Company has filed Amendment No. 1 to each of the Registration Statements (each, "Amendment No. 1") incorporating the revisions described in this letter.

For reference purposes, the Staff's comments as reflected in the Comment Letter are reproduced in bold and the corresponding responses of the Company are shown below the comments.

- 1. Please note that Item 12(a)(2) of Form S-3 requires you to incorporate by reference specifically all reports filed pursuant to Section 13(a) or 15(d) of the Exchange Act since the end of the fiscal year covered by the Form 10-K that you incorporate by reference. Please tell us why you have not incorporated by reference into these registration statements the Form 8-K that you filed on October 24, 2011 or revise the disclosure to include this report.**

RESPONSE TO COMMENT 1

In response to the Staff's comment, the Company has provided the requested disclosure in each Amendment No. 1. The additional disclosure is set forth on page 7 in each Amendment No. 1.

The Company hereby acknowledges that (i) the Company is responsible for the adequacy and accuracy of the disclosure in its filing, (ii) Staff comments or changes to disclosure based on Staff comments does not foreclose the Commission from taking any actions with respect to the Company's filing, and (iii) it is the Staff's position that the Company may not assert Staff comments as defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

If you should have any questions about this letter or require any further information, please call the undersigned at (626) 304-3400 or Ryan Murr at (415) 315-6300.

Sincerely,

/s/ Kenneth A. Myszkowski

Kenneth A. Myszkowski
Chief Financial Officer

cc: Ryan Murr, Esq. (Ropes & Gray LLP)