

**Arrowhead Research Corporation**  
201 South Lake Avenue, Suite 703 Pasadena, California 91101

September 11, 2009

VIA EDGAR CORRESPONDENCE

Securities and Exchange Commission  
450 Fifth Street, N.W.  
Washington, DC 20549

Re: Arrowhead Research Corporation  
Acceleration Request for Registration Statement  
Form S-1 (No. 333-161344)

Ladies and Gentlemen:

Pursuant to Rule 461 under the Securities Act of 1933, as amended, the undersigned registrant hereby requests that the effective date of the above-referenced registration statement be accelerated to Tuesday, September 15, 2009, at 4:00 p.m., (EDT), or as soon thereafter as practicable.

In making this acceleration request, the Company acknowledges that the acceleration of the effectiveness of the registration statement does not foreclose the Commission from taking subsequent action with respect to that filing and does not relieve the Company from its full responsibility for the adequacy and accuracy of the disclosure in such filing. Additionally, the Company acknowledges that it may not assert the Commission's acceleration of the registration statement as a defense in any proceeding under the federal securities laws of the United States initiated by the Commission or any other person.

Sincerely,

/s/ Christopher Anzalone

Christopher Anzalone  
Chief Executive Officer

cc: Nasdaq (via facsimile)