

September 20, 2016

VIA EDGAR AND FACSIMILE

United States Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, DC 20549
Attention: Ms. Suzanne Hayes

Re: *Arrowhead Pharmaceuticals, Inc.*
Registration Statement on Form S-3 (File No. 333-213484)

Ladies and Gentlemen:

Pursuant to Rule 461 promulgated under the Securities Act of 1933, as amended, Arrowhead Pharmaceuticals, Inc., a Delaware corporation (the "Company"), respectfully requests the acceleration of the effectiveness of the above-referenced Registration Statement (the "Filing"), so as to become effective at 5:00 p.m. (EST) on September 22, 2016, or as soon as possible thereafter.

The Company hereby acknowledges that:

- should the United States Securities and Exchange Commission (the "Commission") or the staff of the Commission (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 Staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

We request that we be notified of the effectiveness of the Filing by telephone call to Ryan Murr of Gibson, Dunn & Crutcher LLP, at (415) 393-8373.

Please do not hesitate to contact the undersigned at (626) 304-3400, or Ryan Murr of Gibson, Dunn & Crutcher LLP at (415) 393-8373 with any questions or comments with respect to this letter.

Very truly yours,

Arrowhead Pharmaceuticals, Inc.

By: /s/ Christopher Anzalone
Dr. Christopher Anzalone
President and Chief Executive Officer

cc: Ryan Murr, Gibson, Dunn & Crutcher LLP