

Aerpio Pharmaceuticals, Inc.  
9987 Carver Road  
Cincinnati, OH 45242

June 21, 2017

VIA EDGAR

Suzanne Hayes  
Mary Beth Breslin  
United States Securities and Exchange Commission  
Division of Corporation Finance  
Office of Healthcare and Insurance  
100 F Street, N.E.  
Washington, D.C. 20549

**Re: Aerpio Pharmaceuticals, Inc. (the "Company")  
Registration Statement on Form S-1  
File No. 333-217320**

Ladies and Gentlemen:

In accordance with Rule 461 under the Securities Act of 1933, as amended (the "**Securities Act**"), the undersigned respectfully requests that the effective date for the Registration Statement referred to above be accelerated so that it will be declared effective at 4:00 p.m., Washington, D.C. time, on June 23, 2017, or at such later time as the Company or its counsel may orally request via telephone call to the staff. Once the Registration Statement has been declared effective, please orally confirm that event with our counsel, Goodwin Procter LLP, by calling Danielle Lauzon at (617) 570-1955.

The Company hereby acknowledges 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 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.

Very truly yours,

Aerpio Pharmaceuticals, Inc.

By: /s/ Joseph H. Gardner  
Name: Joseph H. Gardner  
Title: Chief Executive Officer

cc: Goodwin Procter LLP