



DIVISION OF  
CORPORATION FINANCE

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

Mail Stop 4546

April 3, 2017

Paula Soteropoulos  
President and Chief Executive Officer  
Akcea Therapeutics, Inc.  
55 Cambridge Parkway, Suite 100  
Cambridge, MA 02142

**Re: Akcea Therapeutics, Inc.**  
**Registration Statement on Form S-1**  
**Filed March 27, 2017**  
**File No. 333-216949**

Dear Ms. Soteropoulos:

We have reviewed your registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments. Unless we note otherwise, our references to prior comments are to comments in our February 13, 2017 letter.

Prospectus Summary  
Overview, page 1

1. We refer to your statements throughout your registration statement that you plan to co-commercialize in selected markets any licensed drug commercialized by Novartis. Please clarify that the terms and conditions of your co-commercialization are to be negotiated with Novartis in the future.

Clinical Pipeline, page 3

2. We acknowledge your revised disclosures in response to comment 2. Please further revise to delete the redundant disclosures regarding this collaboration, including the references to the license fees payable to you if Novartis exercises its options.

Concurrent Private Placement, page 8

3. We note your response to comment 9 and your disclosure that you anticipate the conditions will be satisfied and no additional disclosure will be warranted but that you will provide revised disclosure prior to pricing if the conditions are not met. Please revise the references to the concurrent private placement to clarify that it is conditional and discuss the consequences if the conditions are not met in “Use of Proceeds” and “Dilution.”

Risks Associated with Our Business, page 10

4. We refer to your revised disclosure that three of the patients in the Phase 3 program for volanesorsen experienced serious platelet events. Please also clarify here, and in the risk factors section, that five patients in the APPROACH study discontinued participation due to platelet count declines.

Compass Study, page 104

5. We note your response to comment 13. However, it is not clear whether the results for the subset of FCS patients are statistically significant. Please clarify.

Notes to the Consolidated Financial Statements

7. Subsequent Events, page F-32

6. You state that Novartis purchased \$100 million of Ionis’ common stock at a premium and that you may record revenue relating to this transaction over the period of performance and may record the full amount of the offsetting expense associated with the premium in 2017. Please address the following:
  - Why the premium recorded is not recorded in the financial statements of Ionis;
  - What the nature of the offsetting expense is and the basis for the accounting treatment.

We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

Refer to Rules 460 and 461 regarding requests for acceleration. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

Paula Soteropoulos  
Akcea Therapeutics, Inc.  
April 3, 2017  
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You may contact James Peklenk at 202-551-3661 or Mary Mast at 202-551-3613 if you have questions regarding comments on the financial statements and related matters. Please contact Dorrie Yale at 202-551-8776 or me at 202-551-3675 with any other questions.

Sincerely,

/s/ Mary Beth Breslin for

Suzanne Hayes  
Assistant Director  
Office of Healthcare and Insurance

cc: Nicole Brookshire – Cooley LLP