



DIVISION OF
CORPORATION FINANCE

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

October 3, 2017

Rene Russo
President and Chief Executive Officer
Arsanis, Inc.
890 Winter Street, Suite 230
Waltham, MA 02451

Re: Arsanis, Inc.
Amendment No. 1 to Draft Registration Statement on Form S-1
Submitted September 20, 2017
CIK No. 0001501697

Dear Dr. Russo:

We have reviewed your amended draft offering 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 providing the requested information and either submitting an amended draft offering statement or publicly filing your offering statement on EDGAR. 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 draft offering statement or filed offering 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 September 6, 2017 letter.

Amendment No. 1 to Draft Registration Statement on Form S-1

Prospectus Summary
Our Pipeline, page 1

1. We refer to your revised disclosure on page 4 in response to prior comment 1 that you are currently conducting preclinical studies for your ASN300 program. However, we note that you state on your website that you are "currently set to enter preclinical development" for this program. Please reconcile this discrepancy, and if the ASN300 program remains in the discovery phase, please revise your table here and in the Business section to remove this program as it would be premature to include it.

Key Advantages of ASN100, page 2

2. We acknowledge your revised disclosure and response to prior comment 3. Your revised disclosure indicates that you expect to conduct an interim analysis to assess the probability that the trial will succeed as currently designed. To balance your disclosure in the fourth bullet on page 2, please also include a brief reference in the bullet to this expected interim analysis.

ASN300 and ASN200, page 4

3. We refer to your revised disclosure that in early studies, you have observed "efficacy" and "potentiation of antibiotic efficacy." As efficacy determinations are solely within the FDA's authority, please remove these statements here and elsewhere in your prospectus regarding these product candidates' efficacy.

Use of Proceeds, page 60

4. We acknowledge your response to prior comment 10. Please also clarify that the proposed use described in the third bullet of the third paragraph is not expected to apply to the ASN500 program.

Business

Phase 2 Clinical Trial, page 99

5. We acknowledge your revised disclosure, but we note that your discussion in the first paragraph on page 99 states that your trial is designed to detect a "statistically significant" reduction in the occurrence of *S. aureus* pneumonia, and that you note the risk on page 43 that clinical trial results may not meet the level of statistical significance required for FDA approval. Please expand your discussion to explain the term and discuss how statistical significance relates to the FDA's evidentiary standards of efficacy. Refer to prior comment 13.

Collaboration and License Agreements, page 107

6. We acknowledge your revised disclosure in response to prior comment 17. Please further revise your disclosure to provide investors with a sense of understanding of when the Adimab Option Agreement will expire if you do not exercise the option. Additionally, with respect to both of the Adimab agreements, please revise your disclosure to clarify the expiration of the royalty terms.

Transactions with Related Persons, page 158

7. Please file as an exhibit the Stockholders' Agreement discussed on page 161 or advise why you believe the agreement is not required to be filed.

Rene Russo
Arsanis, Inc.
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You may contact Ibolya Ignat at 202-551-3636 or Sharon Blume at 202-551-3474 if you have questions regarding comments on the financial statements and related matters. Please contact Dorrie Yale at 202-551-8776 or Christopher Edwards at 202-551-6761 with any other questions.

Division of Corporation Finance
Office of Healthcare & Insurance

cc: Cynthia T. Mazareas