

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

March 25, 2016

Nessan Bermingham, Ph.D. President and Chief Executive Officer Intellia Therapeutics, Inc. 130 Brookline Street, Suite 201 Cambridge, Massachusetts 02139

Re: Intellia Therapeutics, Inc.
Amendment No. 3 to
Draft Registration Statement on Form S-1
Submitted March 17, 2016
CIK No. 0001652130

Dear Dr. Bermingham:

We have reviewed your amended draft 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 providing the requested information and either submitting an amended draft registration statement or publicly filing your registration 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 the information you provide in response to these comments and your amended draft registration statement or filed registration statement, we may have additional comments.

Prospectus Summary Overview, page 1

1. We note your response to our prior comment 3 and your revised disclosures relating to recent developments in the patent interference proceeding. Please revise the last bullet point on page 2 to indicate that the intellectual property is subject to an interference proceeding. You may also indicate that UC/Vienna/Charpentier is presumed to be the first inventor and therefore the Broad Institute bears the burden to prove otherwise.

Nessan Bermingham, Ph.D. Intellia Therapeutics, Inc. March 25, 2016 Page 2

Business

Our Team, page 76

2. We note your response to our prior comment 5. However, your revised disclosure does not disclose Drs. Barrangou's and Doudna's affiliations with Caribou. Please revise your disclosure to describe each individual's affiliation to Caribou.

Senior Executive Cash Incentive Bonus Plan, page 120

3. Please file a copy of this agreement as an exhibit to your Form S-1, in accordance with Item 601(b)(10)(iii)(A) of Regulation S-K.

Please contact Christina Thomas at (202) 551-3577 or me at (202) 551-3675 with any questions.

Sincerely,

/s/ Suzanne Hayes

Suzanne Hayes Assistant Director Office of Healthcare and Insurance

cc: Arthur R. McGivern
Goodwin Procter LLP