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VIA EDGAR AND FEDEX

May 24, 2019

U.S. Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549
Attn: Franklin Wyman
Kevin Vaughn
Julia Griffith
Dietrich King

RE: Atreca, Inc.
Draft Registration Statement on Form S-1
Submitted April 24, 2019
CIK No. 0001532346

Ladies and Gentlemen:

On behalf of Atreca, Inc. ("***Atreca***" or the "***Company***"), we are submitting this letter and the following information in response to a letter, dated May 20, 2019, from the staff (the "***Staff***") of the Securities and Exchange Commission (the "***Commission***") with respect to the Company's Confidential Draft Registration Statement on Form S-1 (the "***Registration Statement***"), submitted on April 24, 2019. We are also filing an amended version of the Registration Statement (the "***Amended Registration Statement***") and sending the Staff a hard copy of this letter and a version of the Registration Statement that is marked to show changes to the one confidentially submitted on April 24, 2019.

The numbering of the paragraphs below corresponds to the numbering of the comments in the letter. For the Staff's convenience, we have incorporated your comments into this response letter in italics. Page references in the text of this response letter correspond to the page numbers in the Amended Registration Statement. Capitalized terms used in this letter but otherwise not defined herein shall have the meanings ascribed to such terms in the Amended Registration Statement.

Prospectus Summary

Overview, page 1

1. *We note your statement in the second sentence of the first paragraph that your approach differs from traditional oncology drug discovery approaches. Please revise your disclosure here and in the Business section to explain in greater detail how your approach is different and why you believe that difference is a competitive advantage for your business. In addition, please tell us whether to your knowledge other companies are pursuing drug discovery approaches that are similar to or the same as your approach.*

In response to the Staff's comment, the Company has revised the disclosure on pages 1, 80 and 95 of the Amended Registration Statement.

2. *In the last sentence of the first paragraph, please disclose that the initiation of a Phase 1b clinical trial is subject to the FDA approving your IND application. In addition, please clarify your disclosure regarding the expectation that you will file an IND application in late 2019 by disclosing any uncertainty inherent in the proposed timetable. Please make conforming revisions as necessary throughout the prospectus.*

In response to the Staff's comment, the Company has revised the disclosure on page 1 of the Amended Registration Statement. Additionally, please see the disclosure on pages 15 and 16, which further identifies various potential areas where delays may be caused.

3. *Please explain briefly what you mean by "open-aperture approach" the first time you use the term.*

In response to the Staff's comment, the Company has revised the disclosure on pages 2, 95 and 96 of the Amended Registration Statement.

4. *Please expand the disclosure in the second paragraph of the Overview to explain the relationship between the worldwide market for immune-oncology products for all types of cancer worldwide, and the products that the company is currently trying to develop, whose potential application at this point seems to be less than all types of cancer. Similarly, please reconcile the disclosure in the Overview with the statements in the risk factor on page 22 regarding the use of estimates to determine the market opportunities for your business.*

In response to the Staff's comment, the Company has revised the disclosure on page 1 and 98 of the Amended Registration Statement to remove the statistic. The Company believes as drafted in the Amended Registration Statement the disclosure is clear.

The Atreca Drug Discovery Platform, page 1

5. *In the last paragraph on page 1, please add the examples of first-mover advantages and barriers to entry that you identify on page 97.*

In response to the Staff's comment, the Company has revised the disclosure on pages 1-2 of the Amended Registration Statement.

The Atreca Drug Discovery Platform, page 2

6. *Please clarify what you mean by the phrase "clinically meaningful responses" in the first paragraph on page 2. Further, please clarify what, if any, bearing the fact that the patients with such responses have received "approved cancer treatment" has on your drug discovery platform.*

In response to the Staff's comment, the Company has revised the disclosure on page 2 of the Amended Registration Statement.

Key Attributes of Our Discovery Platform, page 2

7. *Please refer to the fifth bullet point under "Key Attributes" on page 2. Please explain briefly why it would be desirable to generate candidates that "direct the immune system to tumor," or revise to clarify what this statement means.*

In response to the Staff's comment, the Company has revised the disclosure on pages 3 and 96 of the Amended Registration Statement.

Our Lead Generation Programs, page 3

8. *We note your statements that you have identified more than 1,400 antibodies and believe you will be able to exploit them to develop product candidates. Please balance these statements here and in the Business section by providing more context about the potential for development of these antibodies, the extent to which you have actually engaged in development activities with any of them, and the challenges associated with developing them into product candidates. In addition, please discuss how you will or plan to go about allocating your resources among the development candidates.*

In response to the Staff's comment, the Company has revised the disclosure on pages 3 and 96 of the Amended Registration Statement.

Implications of Being an Emerging Growth Company, page 5

9. *Please supplementally provide us with copies of all written communications, as defined in Rule 405 under the Securities Act, that you, or anyone authorized to do so on your behalf, present to potential investors in reliance on Section 5(d) of the Securities Act, whether or not they retain copies of the communications.*

In response to the Staff's comment, the Company is supplementally providing the Staff with copies of all written communications, as defined in Rule 405 under the Securities Act, that the Company, or anyone authorized to do so on the Company's behalf, present to potential investors in reliance on Section 5(d) of the Securities Act, whether or not they retain copies of the communications.

Risk Factors

Our amended and restated certificate of incorporation . . ., page 61

10. *Please revise your disclosure to reconcile the various inconsistencies between the description of your choice of forum provision on page 166 and the description of it in the risk factor on page 61 (e.g., clarify in which documents the provision or provisions will be contained, clarify the scope and terms of the provision, including addressing any application to the federal securities laws, and which courts shall serve as the exclusive forum under which circumstances). Please note that we may have additional comments upon review of your revised disclosure and associated organizational documents.*

In response to the Staff's comment, the Company has revised the disclosure on pages 65, 177 and 178 of the Amended Registration Statement.

Failure to successfully validate, develop and obtain regulatory . . ., page 13

11. *Please explain briefly what you mean by "companion diagnostics" for your product candidates, why they are necessary for your products, and whether you or a third party will develop such diagnostics.*

In response to the Staff's comment, the Company has revised the disclosure on page 16 of the Amended Registration Statement.

Use of Proceeds, page 66

12. *Please disclose how far in the clinical development of ATRC-101 you expect the net proceeds to last. If a material amount of funds other than those raised in the offering will be necessary to complete the clinical development of ATRC-101, please state the amount and the expected sources of such funds.*

In response to the Staff's comment, the Company has revised the disclosure on page 69 of the Amended Registration Statement. The Company also respectfully directs the Staff's attention to the disclosure in the first bullet point of the Use of Proceeds section as well as in the Liquidity and Capital Resources section, wherein the Company has disclosed how far into the clinical development of ATRC-101 the Company expects the proceeds to last. Further, the Company respectfully directs the Staff to the disclosure on page 87 regarding additional funding required.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Stock-Based Compensation, page 84

13. *Once you have an estimated offering price range, please explain to us how you determined the fair value of the common stock underlying your equity issuances and the reasons for any difference between recent valuations of your common stock leading up to the planned offering and the midpoint of your estimated offering price range. This information will help facilitate our review of your accounting for equity issuances, including stock compensation.*

In response to the Staff's comment, the Company confirms that once the estimated offering price range is determined, the Company will supplementally provide the Staff with an analysis explaining how the Company determined the fair value of the common stock underlying its equity issuances and the reason for any differences between recent valuations of the Company's common stock leading up to the planned offering and the midpoint of the Company's estimated offering price range.

Business

Our Strategy, page 90

14. *Please revise the second bullet point under "Our Strategy" on page 89 to clarify that the only product candidate you are currently developing is ATRC-101, and that you have not yet established a pipeline for other antibody-based candidates for oncology, or advise us as to products currently in development and the phase each such product is in.*

In response to the Staff's comment, the Company has revised the disclosure on pages 3 and 96 of the Amended Registration Statement.

Our Lead Candidate: ATRC-101 for the Treatment of Solid Tumors, page 98

15. *Please revise the table to add columns for the additional phases of the FDA clinical trials process and reflect in the diagram where your product candidate is in that process. In doing so, please ensure that your revisions present the process in a fair and balanced manner.*

In response to the Staff's comment, the Company has revised the disclosure on page 105 of the Amended Registration Statement to remove the table, as the information was sufficiently covered elsewhere in the Amended Registration Statement.

Notes to the Consolidated Financial Statements

Note 2 — Summary of Significate Accounting Policies
Collaboration Arrangement, page F-9

16. *Please expand your disclosure to describe and quantify the key terms governing the collaboration agreements in force during the periods presented, including your agreements with the Bill & Melinda Gates Foundation, Bristol-Myers Squibb and the Genome Institute of Singapore and your accounting treatment for payments under these collaborations. Refer us to the technical guidance upon which you have relied and revise your disclosures accordingly.*

In response to the Staff's comment, the Company has revised the disclosure on page 168 of the Amended Registration Statement to clarify the nature of the referenced agreements. In addition, the Company has revised the disclosure on pages F-10 and F-36 of the Amended Registration Statement to clarify the key terms of each of those agreements and the applicable accounting guidance upon which the Company has relied in accounting for those arrangements.

General

17. *Please provide us mockups of any pages that include any additional pictures or graphics to be presented, including any accompanying captions. Please keep in mind, in scheduling your printing and distribution of the preliminary prospectus, that we may have comments after our review of these materials.*

In response to the Staff's comment, the Company advises there are no such additional pictures or graphics anticipated to be presented that are not in the Amended Registration Statement.

Please contact me at (650) 843-5636, Danielle Naftulin at (650) 849-7118 or Barbara Kosacz of Cooley LLP at (650) 843-5818 with any questions or further comments regarding our responses to the Staff's comments.

Sincerely,

/s/ Michael E. Tenta

Michael E. Tenta

cc: John A. Orwin, Atreca, Inc.
Tito A. Serafini, Atreca, Inc.
Barbara Kosacz, Cooley LLP
Danielle E. Naftulin, Cooley LLP
Bruce K. Dallas, Davis Polk & Wardwell LLP