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

DIVISION OF
CORPORATION FINANCE

February 15, 2019

Yujiro Hata
President and Chief Executive Officer
IDEAYA Biosciences, Inc.
7000 Shoreline Court, Suite 350
South San Francisco, California 94080

Re: IDEAYA Biosciences, Inc.
Draft Registration Statement on Form S-1
Filed January 17, 2019
CIK No. 0001676725

Dear Mr. Hata:

We have reviewed your 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.

Form S-1 filed confidentially on January 17, 2019

Prospectus Summary
Overview, page 1

1. We note your discussion of molecular diagnostics to select the patient populations likely to benefit from your targeted therapies. Please explain whether this approach will limit the potential market for your product candidates and whether the FDA may require you to conduct clinical trials on a broader patient population prior to approving your product candidates.

2. We note your statements here and elsewhere in your prospectus, including the Risk Factors and Business sections, that certain of your product candidates, including IDE196 and IDE697, are "potentially first-in-class." We also note similar disclosure regarding

your synthetic lethality programs, including on page 94. These statements imply an expectation of regulatory approval and are inappropriate given the early stage of development. Please remove or revise these statements.

3. Please revise your pipeline table to include columns for each stage of further development for your product candidates. Please also revise your pipeline table to remove the programs that are in the discovery or target identification phase. Because you have not identified a product candidate for these programs, it is premature to include them in a product pipeline table.

Implications of Being an Emerging Growth Company, page 7

4. 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.

Risk Factors
Risks Related to Our Business, page 15

5. We note your disclosure on page 134 that your Option and License Agreement with CRUK and the University of Manchester is scheduled to expire in April 2019. Please disclose any related potential material risks and consequences.

Risks Related to Our Common Stock and This Offering
Our amended and restated certificate of incorporation will provide for an exclusive forum provision in the Court of Chancery...., page 70

6. We note your disclosure that your amended and restated certificate of incorporation will identify the Court of Chancery of the State of Delaware as the exclusive forum for certain litigation, including any "derivative action." Please disclose whether this provision applies solely to state law claims. If it does not apply solely to state law claims, then please note that that Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder and Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. If this provision is intended to apply solely to state law claims, please also ensure that the exclusive forum provision in the amended and restated certificate of incorporation states this clearly.

Use of Proceeds, page 74

7. Please disclose how far the allocations set forth in the first bullet point will advance IDE196, including the milestone payments to Novartis, and provide further details

regarding the specifics of such development. Similarly, please specify how far the allocation in the second bullet will advance IDE697 and the programs listed in that bullet point.

8. We note that you will require additional funds to advance your product candidates through clinical trials, regulatory approval and commercialization. Please revise to disclose the sources of other funds needed to reach regulatory approval and commercialization for each product candidate. Refer to Instruction 3 to Item 504 of Regulation S-K.

Management's Discussion and Analysis of Financial Condition and Results of Operations
Stock-Based Compensation, page 88

9. Once you have an estimated offering price or range, please explain to us how you determined the fair value of common stock underlying your equity issuances and the reasons for any differences between the recent valuations of your common stock leading up to your initial public offering and the estimated offering price. This information will help facilitate our review of your accounting for equity issuances including stock compensation and beneficial conversion features.

Business
Our Capabilities and Approach to Precision Medicine, page 97

10. We note that Figure 1 on page 97 shows a number of partnerships, including but not limited to those with Monoceros, Blue Dolphin, Monash University and Ventana. To the extent material, please provide more details about such partnerships, including whether these are current or prospective partners, and any related agreements.

Clinical Development, page 100

11. We note your disclosure that you "will advance the product into clinical trial," as well as your disclosure regarding how you design your clinical trials. We also note your disclosure that you have not initiated any of your own clinical trials. Please explain or revise.

Therapies Based on Synthetic Lethality
Overview, page 111

12. We note disclosure, including Figure 14 and the related text on page 111, and elsewhere in your Business section regarding the effectiveness of PARP inhibitors manufactured by other companies, including AstraZeneca. Please revise to explain the relevance to your business and products or delete.

Certain Relationships and Related Party Transactions
Research, Development and Manufacturing Services Agreements, page 176

13. We note that you have entered into master services agreements with each of WuXi AppTec (Hong Kong) Limited and STA Pharmaceutical Hong Kong Limited. To the extent material, please provide more details regarding the subject and terms of such agreements, and file such agreements as exhibits to your registration statement. Please see Item 601(b)(10) of Regulation S-K.

General

14. Please provide us proofs of all graphics, visual, or photographic information you will provide in the printed prospectus prior to its use, for example in a preliminary prospectus. Please note that we may have comments regarding this material.

You may contact Jorge Bonilla at (202) 551-3414 or Mark Rakip at (202) 551-3573 if you have questions regarding comments on the financial statements and related matters. Please contact Liz Walsh at (202) 551-3696 or Chris Edwards at (202) 551-6761 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Healthcare & Insurance

cc: Mark Roeder