



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

DIVISION OF  
CORPORATION FINANCE

Mail Stop 4546

April 17, 2017

Peter Van Vlasselaer, Ph.D.  
Chief Executive Officer  
ARMO BioSciences, Inc.  
575 Chesapeake Drive  
Redwood City, CA 94063

**Re: ARMO BioSciences, Inc.  
Amendment No. 1 to Draft Registration Statement on Form S-1  
Submitted April 3, 2017  
CIK No. 0001693664**

Dear Dr. Vlasselaer:

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. Please state clearly what it means for a patient to be “refractory” to standard of care immunotherapy.

AM0010 Phase 1/1b Clinical Trial, page 3

2. We note your revised disclosure in response to prior comment 2. Please expand your disclosure here and in the Business section to explain the meaning of “SDs” and how they are measured. Please also explain what the column labeled “Encouraging Survival Duration” indicates in the table on pages 4 and 74, including what is meant by the

disclosure that the “survival duration in the indicated advanced disease populations is better than the survival duration in less advanced disease populations.”

Management’s Discussion and Analysis of Financial Condition and Results of Operations  
Research and development, page 60

3. You state “For the years ended December 31, 2015 and 2016, over 75% of our R&D expense related to the development of AM0010.” Please revise your disclosure to indicate how much of your research and development expense for each period relates to each of your product candidates AM0010, AM0001, etc., or tell us why you cannot provide this disclosure and what period you expect to have the ability to disclose this data.

Business  
AM0010 with anti-PD-1 in Non-Small Cell Lung Cancer, page 80

4. It appears that you no longer plan to initiate a Phase 3 clinical trial of AM0010 in NSCLC in the first half of 2017, but are instead evaluating Phase 2 clinical trials. Please tell us the reason for this change.

Intellectual Property, page 84

5. We note your responses to our prior comments 12 and 13. Please include the information provided in response to these comments in your prospectus.

Financial Statements  
Consolidated statement of redeemable convertible preferred stock and stockholders’ deficit, page F-5

6. With regard to prior comment 17, it does not appear appropriate to include common shares and preferred shares of ACIR with those of ARMO Biosciences on the consolidated statement of stockholders’ deficit of ARMO Biosciences. Rather, these amounts should be reflected in noncontrolling interest. Please revise the financial statements as necessary or tell us why you believe no revision is necessary.

Note 14. Subsequent events, page F-24

7. You disclose that because the first patient was dosed in your specified Phase 3 clinical trial with AM0010, you are required to pay a milestone payment to Merck. Please revise to quantify the amount of the milestone payment triggered by this event as referenced in your disclosure.

You may contact Lisa Vanjoske at (202) 551-3614 or Kevin Vaughn at (202) 551-3494 if you have questions regarding comments on the financial statements and related matters. Please

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contact Johnny Gharib at (202) 551-3170 or Erin Jaskot at (202) 551-3442 with any other questions.

Sincerely,

/s/ Erin K. Jaskot, *for*

Suzanne Hayes  
Assistant Director  
Office of Healthcare and Insurance

cc: Heidi Mayon, Esq.  
Gunderson Dettmer