



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 4546

May 24, 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. 2 to Draft Registration Statement on Form S-1
Submitted May 11, 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.

AM0010 Phase 1/1b Clinical Trial, page 3

1. We note your revisions in response to our prior comment 2. Please disclose the duration of survival as reported in historical literature versus the duration of survival observed in the Phase 1/1b trial for each indication listed in the "Encouraging Survival Duration" column. Please also tell us supplementally what "historical literature" you relied upon for this data.

Peter Van Vlasselaer, Ph.D.
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Business

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

2. We note your response to our prior comment 4. However, it is unclear how the FDA's approval of KEYTRUDA caused you to delay your Phase 3 clinical trial in NSCLC. Please explain the relationship between the approval of KEYTRUDA and your planned clinical trials for AM0010 in NSCLC, including any adverse impact to your planned regulatory strategy resulting from approval of KEYTRUDA.

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 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