



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-4631

Mail Stop 4631

October 26, 2015

Via E-Mail

Mr. Tassos Gianakakos
President and Chief Executive Officer
MyoKardia, Inc.
333 Allerton Avenue
South San Francisco, CA 94080

**Re: MyoKardia, Inc.
Pre-effective Amendment 2 to Registration Statement on Form S-1
Filed October 19, 2015
File No. 333-207151**

Dear Mr. Gianakakos:

We reviewed the filing and have the following comment.

Dilution, page 53

1. We note your disclosure on page 53 related to the amount of the total consideration allocated between the existing stockholders and new investors. Please provide us your calculation supporting the \$169.9 million total consideration and resulting \$94.9 million that is attributed to the existing shareholders.

You may contact Ameen Hamady, Staff Accountant, at (202) 551-3891 or Terence S. O'Brien, Accounting Branch Chief, at (202) 551-3355 if you have questions about comments on the financial statements and related matters. You may contact Edward M. Kelly, Special Counsel, at (202) 551-3728 or me at (202) 551-3765 if you have any other questions.

Very truly yours,

/s/ Pamela A. Long

Pamela A. Long
Assistant Director
Office of Manufacturing and Construction

Via E-mail

Mr. Tasso Gianakakos
MyoKardia, Inc.
October 26, 2015
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Mitchell S. Bloom, Esq.
Maggie L. Wong, Esq.
Goodwin Procter LLP
3 Embarcadero Center, 24th Floor
San Francisco, CA 94111