



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