



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 4546

January 13, 2017

T. Anastasios Gianakakos
President and Chief Executive Officer
MyoKardia, Inc.
333 Allerton Ave.
South San Francisco, CA 94080

Re: MyoKardia, Inc.
Registration Statement on Form S-3
Filed January 5, 2017
File No. 333-215443

Dear Mr. Gianakakos:

This is to advise you that we have not reviewed and will not review your registration statement.

Please refer to Rules 460 and 461 regarding requests for acceleration. We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

Please contact Dorrie Yale at 202-551-8776 with any questions.

Sincerely,

/s/ Erin K. Jaskot, *for*

Suzanne Hayes
Assistant Director
Office of Insurance and Healthcare

cc: Maggie L. Wong, Esq. — Goodwin Procter LLP