



DIVISION OF  
CORPORATION FINANCE

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

July 27, 2017

Nancy Simonian  
President and Chief Executive Officer  
Syros Pharmaceuticals, Inc.  
620 Memorial Drive, Suite 300  
Cambridge, Massachusetts 02139

**Re: Syros Pharmaceuticals, Inc.  
Registration Statement on Form S-3  
Filed July 20, 2017  
File No. 333-219369**

Dear Dr. Simonian:

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 Jeffrey Gabor at (202) 551-2544 with any questions.

Division of Corporation Finance  
Office of Healthcare & Insurance

cc: Cynthia Mazareas, Esq.