



DIVISION OF
CORPORATION FINANCE

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

January 25, 2018

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 January 19, 2018
File No. 333-222634

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