



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 4546

April 12, 2017

Briggs W. Morrison, M.D.
Chief Executive Officer
Syndax Pharmaceuticals, Inc.
Building D, Floor 3
35 Gatehouse Drive
Waltham, Massachusetts 02451

**Re: Syndax Pharmaceuticals, Inc.
Registration Statement on Form S-3
Filed April 6, 2017
File No. 333-217172**

Dear Dr. Morrison:

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.

Sincerely,

/s/ Joseph McCann for

Suzanne Hayes
Assistant Director
Office of Healthcare and Insurance

cc: Jaime L. Chase, Esq.
Cooley LLP