



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

DIVISION OF
CORPORATION FINANCE

November 9, 2021

David Meeker
Chief Executive Officer
Rhythm Pharmaceuticals, Inc.
222 Berkeley Street
12th Floor
Boston, MA 02116

Re: Rhythm Pharmaceuticals, Inc.
Registration Statement on Form S-3
Filed November 2, 2021
File No. 333-260689

Dear Dr. Meeker:

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 Jane Park at 202-551-7439 with any questions.

Sincerely,

Division of Corporation Finance
Office of Life Sciences

cc: Peter Handrinos, Esq.