

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

May 24, 2018

Paolo Pucci Chief Executive Officer ArQule, Inc. One Wall Street Burlington, Massachusetts 01803

Re: ArQule, Inc.

Registration Statement on Form S-3

Filed May 17, 2018 File No. 333-225008

Dear Mr. Pucci:

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 Abigail Jacobs at 202-551-2902 or Mary Beth Breslin at 202-551-3625 with any questions.

Division of Corporation Finance Office of Healthcare & Insurance

cc: Richard E. Baltz