



DIVISION OF
CORPORATION FINANCE

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

May 12, 2017

Kenneth A. Berlin
Chief Executive Officer
Rosetta Genomics Ltd.
10 Plaut Street, Science Park
Rehovot 76706 POB 4059
Israel

Re: Rosetta Genomics Ltd.
Registration Statement on Form F-1
Filed May 8, 2017
File No. 333-217765

Dear Mr. Berlin:

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 Ada D. Sarmento at (202) 551-3798 with any questions.

Division of Corporation Finance
Office of Healthcare and
Insurance

cc: Robert E. Burwell