



DIVISION OF  
CORPORATION FINANCE

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

October 24, 2017

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

**Re: Rosetta Genomics Ltd.  
Registration Statement on Form F-1  
Filed October 16, 2017  
File No. 333-220985**

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 Irene Paik at 202-551-6553 with any questions.

Division of Corporation Finance  
Office of Healthcare & Insurance

cc: Robert E. Burwell - Mintz, Levin, Cohn, Ferris,  
Glovsky and Popeo, P.C.