

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

April 20, 2017

Roger Tung President and Chief Executive Officer Concert Pharmaceuticals, Inc. 99 Hayden Avenue, Suite 500 Lexington, MA 02421

Re: Concert Pharmaceuticals, Inc.
Preliminary Proxy Statement on Schedule 14A
Filed March 23, 2017
File No. 001-36310

Dear Mr. Tung:

We have completed our review of your filing. 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 by the staff.

Division of Corporation Finance Office of Healthcare & Insurance

cc: John M. Mutkoski