

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

May 4, 2018

Adelene Perkins Chief Executive Officer Infinity Pharmaceuticals, Inc. 784 Memorial Drive Cambridge, MA 02139

Re: Infinity Pharmaceuticals, Inc.
Registration Statement on Form S-3
Filed April 30, 2018
File No. 333-224545

Dear Ms. Perkins:

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 Dorrie Yale at 202-551-8776 with any questions.

Division of Corporation Finance Office of Healthcare & Insurance

cc: Cynthia T. Mazareas