



DIVISION OF
CORPORATION FINANCE

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

August 9, 2018

Frederick C. Beddingfield, III, M.D., Ph.D
President and Chief Executive Officer
Sienna Biopharmaceuticals, Inc.
30699 Russell Ranch Road, Suite 140
Westlake Village, California 91362

Re: Sienna Biopharmaceuticals, Inc.
Registration Statement on Form S-3
Filed August 3, 2018
File No. 333-226595

Dear Dr. Beddingfield:

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.

Sincerely,

Division of Corporation Finance
Office of Healthcare & Insurance

cc: Brian Cuneo - Latham & Watkins LLP