

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

May 5, 2021

William Clark
President and Chief Executive Officer
GENOCEA BIOSCIENCES, INC.
100 Acorn Park Drive, 5th Floor
Cambridge, MA 02140

Re: GENOCEA BIOSCIENCES, INC. Registration Statement on Form S-3 Filed April 29, 2021 File No. 333-255610

Dear Mr. Clark:

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 Jeffrey Gabor at 202-551-2544 with any questions.

Sincerely,

Division of Corporation Finance Office of Life Sciences

cc: Marc A. Rubenstein, Esq.