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

DIVISION OF
CORPORATION FINANCE

June 6, 2018

Jason Gardner
President and Chief Executive Officer
Magenta Therapeutics, Inc.
50 Hampshire Street
Cambridge, Massachusetts 02139

Re: Magenta Therapeutics, Inc.
Registration Statement on Form S-1
Filed May 24, 2018
File No. 333-225178

Dear Dr. Gardner:

We have reviewed your amended registration statement and have the following comment.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comment applies to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to this comment, we may have additional comments. Unless we note otherwise, our references to prior comments are to comments in our May 16, 2018 letter.

Registration Statement on Form S-1

Prospectus Summary
Our Current Programs, page 4

1. We note your response to our prior comment 1. While we do not object to the presentation of your most advanced discovery programs as a graphic in the Business section or the narrative discussion of such programs following the graphic in the Prospectus Summary, we believe that presenting these programs as a prominent graphic on page 4, in the forepart of the prospectus, is not appropriate given that product candidates have yet to be identified and these programs remain in the discovery phase. Please revise to remove this graphic from page 4.

You may contact Vanessa Robertson at 202-551-3649 or Sharon Blume at 202-551-3474 if you have questions regarding comments on the financial statements and related matters. Please contact Irene Paik at 202-551-6553 or Ada D. Sarmento at 202-551-3798 with any other questions.

Division of Corporation Finance
Office of Healthcare & Insurance

cc: William D. Collins - Goodwin Procter