

September 14, 2023

Aoife Brennan  
President, Chief Executive Officer and Director  
SYNLOGIC, INC.  
301 Binney Street, Suite 402  
Cambridge, MA 02142

Re: SYNLOGIC, INC.  
Registration

Statement on Form S-1

Filed September 8,

2023

File No. 333-274421

Dear Aoife Brennan:

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 Cindy

Polynice at 202-551-8707 with any questions.

Sincerely,

Division of Corporation Finance

Office of Life Sciences

cc:

Nishant M. Dharia, Esq.