

May 23, 2019

Rachel K. King  
Chief Executive Officer  
Glycomimetics, Inc.  
9708 Medical Center Drive  
Rockville, MD 20850

Re: Glycomimetics Inc.  
Registration Statement on Form S-3  
Filed May 17, 2019  
File No. 333-231577

Dear Ms. King:

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 Christine Westbrook at 202-551-5019 with any questions.

Sincerely,

Division of

Office of

Corporation Finance

Healthcare & Insurance

cc: Brian F. Leaf, Esq.