
SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

FORM 8-A

**FOR REGISTRATION OF CERTAIN CLASSES OF SECURITIES
PURSUANT TO SECTION 12(B) OR (G) OF
THE SECURITIES EXCHANGE ACT OF 1934**

GlycoMimetics, Inc.

(Exact Name of Registrant as Specified in its Charter)

Delaware
(State of Incorporation or Organization)

06-1686563
(I.R.S. Employer Identification No.)

401 Professional Drive, Suite 250
Gaithersburg, Maryland
(Address of principal executive offices)

20879
(Zip code)

Securities to be registered pursuant to Section 12(b) of the Act:

**Title of each class
to be so registered**
Common Stock, \$0.001 par value per share

**Name of exchange on which
each class is to be registered**
The NASDAQ Stock Market LLC

If this form relates to the registration of a class of securities pursuant to Section 12(b) of the Exchange Act and is effective pursuant to General Instruction A. (c), please check the following box.

If this form relates to the registration of a class of securities pursuant to Section 12(g) of the Exchange Act and is effective pursuant to General Instruction A. (d), check the following.

Securities Act registration statement number to which the form relates:
333-191567

Securities to be registered pursuant to Section 12(g) of the Act:
None

Item 1. Description of Registrant's Securities to be Registered.

GlycoMimetics, Inc. (the "**Registrant**") hereby incorporates by reference the description of its common stock, par value \$0.001 per share, to be registered hereunder contained under the heading "Description of Capital Stock" in the Registrant's Registration Statement on Form S-1 (File No. 333-191567), as originally filed with the Securities and Exchange Commission (the "**Commission**") on October 4, 2013, as subsequently amended (the "**Registration Statement**"), and in the prospectus included in the Registration Statement to be filed separately by the Registrant with the Commission pursuant to Rule 424(b) under the Securities Act of 1933, which description included in such prospectus shall be deemed to be incorporated by reference herein.

Item 2. Exhibits.

Pursuant to the Instructions as to Exhibits with respect to Form 8-A, no exhibits are required to be filed because no other securities of the Registrant are registered on The NASDAQ Stock Market LLC and the securities registered hereby are not being registered pursuant to Section 12(g) of the Securities Exchange Act of 1934, as amended.

SIGNATURE

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: November 5, 2013

GlycoMimetics, Inc.

By: /s/ Rachel K. King

Name: Rachel K. King

Title: Chief Executive Officer