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

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**FORM 8-A**

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

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**Spero Therapeutics, Inc.**

(Exact name of registrant as specified in its charter)

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**Delaware**  
(State of incorporation or organization)

**46-4590683**  
(I.R.S. Employer Identification No.)

**675 Massachusetts Avenue, 14th Floor**  
**Cambridge, Massachusetts**  
(Address of principal executive offices)

**02139**  
(Zip Code)

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

<b>Title of each class to be so registered</b>	<b>Name of each exchange on which each class is to be registered</b>
<b>Common Stock, \$0.001 par value per share</b>	<b>The NASDAQ Stock Market LLC</b>

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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) or (e), 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) or (e), check the following box.

If this form relates to the registration of a class of securities concurrently with a Regulation A offering, check the following box.

**Securities Act registration statement or Regulation A offering statement file number to which this form relates: 333-220858**

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

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

Spero Therapeutics, Inc. (the "Registrant") hereby incorporates by reference the description relating to the Registrant's common stock, \$0.001 par value per share, to be registered hereunder set forth in the section titled "Description of Capital Stock" in the prospectus included in the Registrant's Registration Statement on Form S-1 (File No. 333-220858), as originally filed with the U.S. Securities and Exchange Commission (the "Commission") on October 6, 2017, as subsequently amended (the "Registration Statement"). Any form of prospectus subsequently filed by the Registrant with the Commission pursuant to Rule 424(b) under the Securities Act of 1933, as amended, that constitutes part of the Registration Statement shall be deemed to be incorporated herein by reference.

**Item 2. Exhibits.**

Pursuant to the Instructions as to Exhibits for 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, thereto duly authorized.

**SPERO THERAPEUTICS, INC.**

By: /s/ Ankit Mahadevia, M.D.

Name: Ankit Mahadevia, M.D.

Title: Chief Executive Officer and President

Dated: October 30, 2017