UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

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

Applied Therapeutics, Inc.

(Exact name of registrant as specified in its charter)

81-3405262
(I.R.S. Employer Identification No.)

340 Madison Avenue, 19th Floor New York, New York (Address of principal executive offices)

10173 (Zip Code)

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

Title of each class Name of exchange on which to be so registered

Common Stock, \$0.0001 par value per share

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

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. o

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

Securities Act registration statement or Regulation A offering statement file number to which the form relates: 333-230838

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

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

A description of the common stock, \$0.0001 par value per share, of Applied Therapeutics, Inc., a Delaware corporation (the "Registrant"), to be registered hereunder is contained in the section titled "Description of Capital Stock" in the prospectus forming part of the Registrant's Registration Statement on Form S-1 (File No. 333-230838), initially filed with the Securities and Exchange Commission (the "Commission") on April 12, 2019, as subsequently amended from time to time (the "Registration Statement"), and is incorporated herein by reference. 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.

Under 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.

SIGNATURES

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

Applied Therapeutics, Inc.

Date: May 6, 2019 By: /s/ Shoshana Shendelman

Shoshana Shendelman, Ph.D.

President and Chief Executive Officer

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