

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

FORM 8-K

**CURRENT REPORT
Pursuant to Section 13 OR 15(d)
of the Securities Exchange Act of 1934**

Date of Report (Date of earliest event reported): September 9, 2020

SPERO THERAPEUTICS, INC.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-38266
(Commission
File Number)

46-4590683
(IRS Employer
Identification No.)

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

02139
(Zip Code)

Registrant's telephone number, including area code: (857) 242-1600

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.001 par value per share	SPRO	The Nasdaq Global Select Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Termination of “At-the-Market” Offering Prospectus Supplement

Pursuant to that certain Controlled Equity OfferingSM Sales Agreement, dated December 3, 2018 (the “Sales Agreement”), that Spero Therapeutics, Inc. (the “Company”) entered into with Cantor Fitzgerald & Co. (“Cantor”), the Company may offer and sell, from time to time, shares of its common stock through Cantor, acting as agent, through an “at the market offering” as defined in Rule 451(a)(4) (the “ATM Offering”), promulgated under the Securities Act of 1933, as amended. On December 3, 2018, the Company filed a prospectus supplement (the “ATM Prospectus Supplement”) pursuant to which it may offer and sell, from time to time, shares of its common stock having an aggregate offering price of up to \$50,000,000 through Cantor under the Sales Agreement. As of the date of this report, the Company has sold \$15,419,270.41 of shares of common stock under the ATM Offering. Effective as of the date of this report, the Company has terminated the ATM Prospectus Supplement, but the Sales Agreement remains in full force and effect. The Company will not make any sales of common stock under the ATM Offering unless and until it files an updated prospectus supplement.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

SPERO THERAPEUTICS, INC.

Date: September 9, 2020

By: /s/ Stephen DiPalma

Stephen DiPalma

Interim Chief Financial Officer and Treasurer