

**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) January 30, 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 (see General Instruction A.2. below):

- 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.

Item 1.01 Entry into a Material Definitive Agreement

On January 30, 2020, Spero Therapeutics, Inc. (the “Company”) announced its intent to raise \$30,000,000 through a fully backstopped rights offering at \$9.00 per share of its common stock, par value \$0.001 per share (the “Common Stock”). This rights offering is further described in the press release filed as Exhibit 99.1 hereto (the “Rights Offering”).

In connection with the Rights Offering and concurrent with its announcement, the Company entered into an Investment Agreement (the “Investment Agreement”) with certain affiliates of BVF Partners L.P. (“BVF”), an existing stockholder of the Company. Pursuant to the Investment Agreement, BVF agreed to purchase shares of the Company’s nonvoting Series C convertible preferred stock, par value \$0.001 per share (the “Series C Preferred Stock”) having an aggregate value equal to the value of all shares (if any) offered but not purchased pursuant to the exercise of rights in the Company’s rights offering, including any exercise of rights by BVF, up to \$30,000,000 (the “Backstop Commitment”). The purchase price of the Series C Preferred Stock, each convertible into 1,000 shares of Common Stock (subject to the conversion blocker described below), shall be \$9,000 per share. The Investment Agreement contains customary representations, warranties and covenants by the parties.

The Series C Preferred Stock will have terms substantially similar to shares of the Company’s nonvoting Series A convertible preferred stock (the “Series A Preferred Stock”) and Series B convertible preferred stock (the “Series B Preferred Stock”) already outstanding. Each share of Series C Preferred Stock will be convertible into 1,000 shares of Common Stock, convertible at the option of the holder at any time, provided that the holder will be prohibited from converting Series C Preferred Stock into Common Stock if, as a result of such conversion, the holder, together with its affiliates, would beneficially own a number of shares above a conversion blocker, which is initially set at 9.99% of the total Common Stock then issued and outstanding immediately following the conversion of such shares. In the event of the Company’s liquidation, dissolution or winding up, holders of Series C Preferred Stock will participate *pari passu*, on an as-converted basis, with any distribution of proceeds to holders of Common Stock, Series A Preferred Stock and Series B Preferred Stock in the event of the Company’s liquidation, dissolution or winding up. Like the Series A Preferred Stock and Series B Preferred Stock, holders of Series C Preferred Stock are entitled to receive dividends on shares of Series C Preferred Stock equal (on an as if converted to Common Stock basis) to and in the same form as dividends actually paid on the Common Stock or other junior securities. Shares of Series C Preferred Stock will generally have no voting rights, except as required by law and except that the consent of the holders of the outstanding Series C Preferred Stock will be required to amend the terms of the Series C Preferred Stock.

As of September 30, 2019, BVF owned approximately 5% of the Company’s total outstanding shares of Common Stock, and if all outstanding shares of the Series A Preferred Stock and Series B Preferred Stock were converted, BVF would own approximately 17% of the Company’s total outstanding shares of Common Stock. The Board of Directors of the Company has approved the Investment Agreement and the Backstop Commitment. The Company will not pay a fee to BVF in connection with the Backstop Commitment. The Company has agreed to reimburse up to \$50,000 of BVF’s expenses in connection with the Investment Agreement and the Rights Offering.

The above description of the Investment Agreement does not purport to be complete and is qualified in its entirety by reference to the Investment Agreement filed as Exhibit 10.1 to this Current Report on Form 8-K, which is incorporated herein by reference. A summary of the rights, preferences and privileges of the Series C Preferred Stock described above does not purport to be complete and is qualified in its entirety by reference to a Form of the Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock, which is included as Exhibit A to the Investment Agreement.

Item 3.02 Unregistered Sales of Equity Securities

The information contained in Item 1.01 above is hereby incorporated by reference.

Item 8.01 Other Events

On January 30, 2020, the Company issued a press release announcing the record date and the commencement and expiration dates of the Rights Offering. The Rights Offering may be amended, canceled or extended. A copy of the press release is filed as Exhibit 99.1 hereto.

Item 9.01 Financial Statements and Exhibits

(d) Exhibits

<u>Number</u>	<u>Exhibit Description</u>
10.1	Investment Agreement, dated January 30, 2020
99.1	Press release, dated January 30, 2020

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.

Date: January 30, 2020

SPERO THERAPEUTICS, INC.

/s/ Stephen DiPalma

Stephen DiPalma

Interim Chief Financial Officer and Treasurer

INVESTMENT AGREEMENT

This INVESTMENT AGREEMENT (this "Agreement"), dated as of January 30, 2020, is made by and between Spero Therapeutics, Inc., a Delaware corporation (the "Company"), and each purchaser identified on the signature pages hereto (each, including its permitted successors and assigns, an "Investor" and collectively, the "Investors").

WHEREAS, the Company proposes to conduct a rights offering by distributing, at no charge, non-transferable rights (the "Rights") to purchase shares of the Company's Common Stock, par value \$0.001 per share (the "Common Stock"), and shares of the Company's Series C Convertible Preferred Stock, par value \$0.001 per share, having the rights, preferences and privileges as set forth in the Certificate of Designation attached hereto as Exhibit A (the "Preferred Stock"), to each holder of record of shares of the Common Stock, the Company's Series A Convertible Preferred Stock, par value \$0.001 per share (the "Series A Preferred Stock"), and the Company's Series B Convertible Preferred Stock, par value \$0.001 per share (the "Series B Preferred Stock"), as of the close of business on February 10, 2020 (the "Record Date");

WHEREAS, the Rights will be exercisable for a number of shares of Common Stock and/or shares of Preferred Stock resulting in gross proceeds to the Company of approximately thirty million dollars (\$30,000,000) (the "Offered Shares");

WHEREAS, following the distribution of the Rights, the Company will commence an offering (the "Rights Offering") registered under the Securities Act of 1933, as amended (the "Securities Act"), pursuant to which each Right will entitle the holder thereof to (a) for each share of Common Stock held by such holder on the Record Date, purchase a fraction of a share of Common Stock at a subscription price of \$9.00 per whole share of Common Stock and/or if, as a result of such exercise of such holder's Right to purchase shares of Common Stock, such holder, together with its affiliates, would beneficially own more than 9.99% of the total number of shares of Common Stock then issued and outstanding immediately after the issuance of such shares of Common Stock, to instead purchase a number of shares of Preferred Stock (at a subscription price of \$9,000 per whole share of Preferred Stock (the "Preferred Exercise Price")) equal, on an as-converted basis, to the excess portion of the Common Stock that cannot be purchased by such holder due to the foregoing beneficial ownership limitation and (b) for each share of Series A Preferred Stock or Series B Preferred Stock held by such holder on the Record Date, purchase a fraction of a share of Preferred Stock at a subscription price equal to the Preferred Exercise Price;

WHEREAS, in order to facilitate the Rights Offering, the Investors have agreed to purchase, at the Preferred Exercise Price, upon expiration of the Rights Offering, shares of Preferred Stock having an aggregate value equal to the value of all of the Offered Shares that are not purchased pursuant to the exercise of Rights (including any exercise of Rights by the Investors) in the Rights Offering (the "Backstop Shares" or the "Preferred Shares"), upon the terms and subject to the conditions set forth herein (the "Backstop Commitment"); and

WHEREAS, the Board of Directors of the Company has approved the Rights Offering, the terms of the Preferred Stock, including the Preferred Exercise Price, this Agreement, the Backstop Commitment and the other transactions contemplated hereby.

NOW, THEREFORE, in consideration of the mutual promises, agreements, representations, warranties and covenants contained herein, each of the parties hereto hereby agrees as follows:

1. Conduct of Rights Offering

(a) As soon as practicable after the date hereof, the Company shall publicly announce its plans to conduct the Rights Offering, including disclosing the Record Date, the material terms of the Rights Offering, the anticipated closing date of the Rights Offering and the Investors' purchase commitment hereunder.

(b) The Company shall use commercially reasonable efforts to: (i) initiate the Rights Offering, on the terms set forth above, within five business days after the Record Date, and (ii) close the Rights Offering by no later than 5:00 p.m. (Eastern Time) on March 2, 2020.

2. Purchase and Sale of Securities.

(a) Subject to Section 2(b), each Investor, severally but not jointly, hereby agrees to purchase a number of shares of Preferred Stock with an aggregate value equal to the amount set forth on such Investor's signature page hereto (the "Purchase Commitment").

(b) Upon the completion of the Rights Offering, the Purchase Commitment shall be adjusted for each Investor as follows:

(i) first, the Purchase Commitment shall be offset, on a dollar-for-dollar basis, by the value of Offered Shares that such Investor may elect to purchase in the Rights Offering (such remaining amount (if any) being the "Adjusted Purchase Commitment"); if such Investor purchases Offered Shares in the Rights Offering with a value that equals or exceeds such Investor's Purchase Commitment, then its Adjusted Purchase Commitment shall be zero; and

(ii) second, the Adjusted Purchase Commitment shall be multiplied by a fraction, the numerator of which shall be the total value of Offered Shares remaining unsold after the expiration of the Rights Offering (the "Expiration Time"), and the denominator of which shall be the aggregate value of all Adjusted Purchase Commitments for all Investors (such product being the "Final Purchase Commitment").

(c) As soon as practicable, and in any event within three business days after the Expiration Time, the Company will give each Investor a notice (a "Purchase Notice") of: (i) the aggregate amount of Offered Shares purchased by holders of Rights pursuant to validly exercised Rights in the Rights Offering and (ii) the value of such Investor's Final Purchase Commitment, as well as the number of Backstop Shares (if any) to be purchased hereunder by such Investor. If there are no Backstop Shares to be purchased hereunder, the Company shall provide the Investors with notice of this fact (a "Satisfaction Notice"). The date of transmission of a Purchase Notice or a Satisfaction Notice is referred to herein as the "Determination Date".

(d) On the Closing Date (as defined below), and on the terms and subject to the conditions in this Agreement, the Investors shall purchase from the Company, and the Company shall issue and sell to the Investors, at the Preferred Exercise Price, all of the Backstop Shares (if any), calculated in accordance with Section 2(b).

(e) The closing of the Rights Offering and the purchase of Backstop Shares by the Investors hereunder (the "Closing") will occur as soon as practicable following the Expiration Time and after giving effect to the determinations contemplated by Section 2(b) above (the "Closing Date"). The Company and, to the extent applicable, the Investors, shall use commercially reasonable efforts to cause the Closing Date to occur within five business days following the Expiration Time.

3. Representations and Warranties of the Company. The Company represents and warrants to the Investors as set forth below. Except for representations and warranties that are expressly limited as to their date, each representation and warranty is made as of the date hereof and as of the Closing Date, after giving effect to the transactions contemplated hereby:

(a) Organization and Qualification. Each of the Company and its Subsidiaries (as defined below) has been duly organized and is validly existing and in good standing under the laws of its respective jurisdiction of incorporation or organization, with the requisite power and authority to own its properties and conduct its business as currently conducted. Each of the Company and its Subsidiaries has been duly qualified as a foreign corporation or organization for the transaction of business and is in good standing under the laws of each other jurisdiction in which it owns or leases properties or conducts any business so as to require such qualification, except to the extent that the failure to be so qualified or be in good standing has not had and would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect. For the purpose of this Agreement, "Material Adverse Effect" means any act, development, event or occurrence which reasonably would be expected to have a material adverse effect on: (a) the enforceability of this Agreement, (b) the results of operations, business, properties or financial condition of the Company and its Subsidiaries, taken as a whole, or (c) the Company's ability to perform in any material respect on a timely basis its obligations under this Agreement to be performed as of the date of determination, other than any such change, effect, event or circumstance, including, without limitation, any change in the stock price or trading volume of the Common Stock, that resulted directly or indirectly from (i) any change in the United States or foreign economies or securities or financial markets in general that does not have a disproportionate effect on the Company and its Subsidiaries, taken as a whole, (ii) any

change that generally affects the industry in which the Company and its Subsidiaries operate that does not have a disproportionate effect on the Company and its Subsidiaries, taken as a whole, (iii) any change arising in connection with natural disasters, hostilities, acts of war, sabotage or terrorism or military actions or any escalation or material worsening of any such natural disasters, hostilities, acts of war, sabotage or terrorism or military actions existing as of the date hereof, (iv) any action taken by the Investors, any of their respective affiliates or their respective permitted successors and assigns with respect to the Rights Offering or the transactions contemplated by this Agreement, (v) the effect of any changes in applicable laws or accounting rules that does not have a disproportionate effect on the Company and its Subsidiaries, taken as a whole, and (vi) any change resulting from the announcement or pendency of the Rights Offering or compliance with the terms of this Agreement or the consummation of the Rights Offering or the transactions contemplated by this Agreement. For the purposes of this Agreement, a “Subsidiary” of any person means, with respect to such person, any corporation, partnership or other legal entity of which such person (either alone or through or together with any other subsidiary), owns, directly or indirectly, more than 50% of the stock or other equity interests, has the power to elect a majority of the board of directors or similar governing body, or has the power to direct the business and policies.

(b) Corporate Power and Authority. The Company has the requisite corporate power and authority to enter into, execute and deliver this Agreement, and to perform its obligations hereunder and consummate the transactions contemplated hereby, including the issuance of the Preferred Shares and the shares of Common Stock issuable upon conversion thereof (the “Conversion Shares” and together with the Preferred Shares, the “Securities”). The Company has taken all necessary corporate action required for the due authorization, execution, delivery and performance by it of this Agreement and the conduct of the Rights Offering, including the issuance of the Preferred Shares and the Conversion Shares.

(c) Execution and Delivery; Enforceability. This Agreement has been, or prior to its execution and delivery at the Closing, will be, duly and validly executed and delivered by the Company, and each such document constitutes, or will constitute, the valid and binding obligation of the Company, enforceable against the Company in accordance with its terms subject to: (i) bankruptcy, insolvency, moratorium and other similar laws now or hereafter in effect relating to or affecting creditors’ rights generally, and (ii) general principles of equity (regardless of whether considered in a proceeding at law or in equity).

(d) Authorized and Issued Capital Stock. The authorized capital stock of the Company, immediately prior to the Closing Date, will consist of 60,000,000 shares of Common Stock, par value \$0.001 per share and 10,000,000 shares of preferred stock, par value \$0.001 per share, 2,220 shares of which have been designated as Series A Preferred Stock, 1,000 shares of which have been designated as Series B Preferred Stock and 3,333 shares of which will have been designated as Series C Preferred Stock. As of the close of business on January 28, 2020 (the “Capital Structure Date”), (i) 19,241,995 shares of Common Stock were issued and outstanding, (ii) 1,720 shares of Series A Preferred Stock were issued and outstanding, (iii) 1,000 shares of Series B Preferred stock were issued and outstanding, and (iv) a total of 2,965,806 shares of Common Stock were potentially issuable upon the exercise or conversion of options,

warrants and other convertible securities issued by the Company or pursuant to stockholder-approved equity incentive plans. Except as set forth in the preceding sentence, there were no other shares of capital stock issued and outstanding or securities convertible into or exchangeable for shares of capital stock of the Company, in each case as of the Capital Structure Date. Since the Capital Structure Date, the Company has not issued any capital stock or securities exchangeable or convertible into capital stock of the Company, other than pursuant to stockholder-approved equity incentive plans (including upon the exercise of stock options outstanding as of the Capital Structure Date).

(e) Issuance. The Preferred Shares to be issued and sold by the Company hereunder, when such Preferred Shares are issued and delivered against payment therefor in accordance with the terms hereof, will be duly and validly authorized, fully paid and non-assessable, free and clear of all taxes, liens, preemptive rights, rights of first refusal, subscription and similar rights. The Conversion Shares to be issued upon conversion of the Preferred Shares will be, when issued upon conversion of the Preferred Shares in accordance with the Certificate of Designation, duly and validly authorized, fully paid and non-assessable, free and clear of all taxes, liens, preemptive rights, rights of first refusal, subscription and similar rights.

(f) No Conflict. The execution and delivery by the Company of this Agreement and compliance by the Company with all of the provisions hereof and the consummation of the transactions contemplated herein (including issuance and sale of Preferred Shares and the issuance of the Conversion Shares upon conversion of the Preferred Shares): (i) will not conflict with, or result in a breach or violation of, any of the terms or provisions of, or constitute a default under (with or without notice or lapse of time, or both), or result in the acceleration of, any agreement or instrument to which the Company or any of its Subsidiaries is a party or by which the Company or any of its Subsidiaries is bound or to which any of the property or assets of the Company or any of its Subsidiaries is subject, (ii) will not result in any violation of the provisions of the certificate of incorporation or by-laws or comparable organizational documents of the Company or any of its Subsidiaries, and (iii) will not result in any violation of, or any termination or impairment of any rights under, any law, rule or regulation, any license, authorization, injunction, judgment, order, decree, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its Subsidiaries or any of their properties; except in the case of the foregoing clauses (i) and (iii) for any such breach, violation, termination or impairment that would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect. To the actual knowledge of the Company, the Company further represents and warrants that the Investors will not, by virtue of acquiring the Rights, the Preferred Shares or the Conversion Shares pursuant to this Agreement or through the Rights Offering, trigger any anti-takeover rights or protective provisions, applicable to the Company, including under applicable law or under any stockholder rights agreement (“poison pill”) or similar agreement or arrangement to which the Company is a party.

(g) Consents and Approvals. No consent, approval, authorization, order, registration, notice, filing, recording or qualification of or with any court or governmental agency or body having jurisdiction over the Company or any of its Subsidiaries or any of their properties is required for the execution and delivery by the Company of this Agreement, the performance by

the Company of its obligations hereunder and the consummation of the transactions contemplated hereby, including the sale, issuance and delivery of the Preferred Shares to the Investors hereunder and the issuance of the Conversion Shares upon the conversion of the Preferred Shares, except: (i) the registration under the Securities Act of the issuance of the Offered Shares pursuant to the exercise of the Rights, (ii) the filing of a Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock in the form attached hereto as Exhibit A (the "Certificate of Designation") with the Secretary of State of Delaware, which will be filed prior to the Closing Date, and (iii) such consents, approvals, authorizations, registrations or qualifications as may be required under state securities or Blue Sky laws in connection with the purchase of the Securities by the Investors, including a Form D notice with the Securities and Exchange Commission ("SEC"), if required.

(h) SEC Filings. For the 12 months preceding the date hereof, the Company has timely filed all current and periodic reports required to be filed with the SEC (the "SEC Reports") pursuant the Securities Exchange Act of 1934, as amended (the "Exchange Act"). The SEC Reports, as of the time when they were filed, conformed in all material respects to the requirements of the Exchange Act, and none of the SEC Reports contained any untrue statement of a material fact, or omitted to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(i) Absence of Changes. Except as disclosed in the SEC Reports or as otherwise contemplated by this Agreement, since September 30, 2019: (i) there has been no Material Adverse Effect and (ii) the Company has not entered into any transaction or agreement (whether or not in the ordinary course of business) that is material to the Company or incurred any liability or obligation, direct or contingent, that is material to the Company.

4. Representations and Warranties of the Investors. Each Investor, severally and not jointly, represents and warrants to, and agrees with the Company, as set forth below. Except for representations, warranties and agreements that are expressly limited as to their date, each representation, warranty and agreement is made as of the date hereof and as of the Closing Date after giving effect to the transactions contemplated hereby:

(a) Authority. Each Investor has the requisite power and authority to enter into, execute and deliver this Agreement and to perform its obligations hereunder and consummate the transactions contemplated hereby, including the subscription for the Securities. Each Investor has taken all necessary action required for the due authorization, execution, delivery and performance by it of this Agreement, including the subscription for the Securities.

(b) Execution and Delivery; Enforceability. This Agreement has been, or prior to its execution and delivery at the Closing will be, duly and validly executed and delivered by each Investor, and each such document constitutes, or will constitute, the valid and binding obligation of each Investor, enforceable against such Investor in accordance with its terms subject to (i) bankruptcy, insolvency, moratorium and other similar laws now or hereafter in effect relating to or affecting creditors' rights generally, and (ii) general principles of equity (regardless of whether considered in a proceeding at law or in equity).

(c) No Registration. Each Investor understands that the Securities have not been registered under the Securities Act by reason of a specific exemption from the registration provisions of the Securities Act, the availability of which depends upon, among other things, the bona fide nature of the investment intent and the accuracy of such Investor's representations as expressed herein or otherwise made pursuant hereto.

(d) Investment Intent. Each Investor is acquiring the Securities for investment for its own account, not as a nominee or agent, and not with the view to, or for resale in connection with, any distribution thereof not in compliance with applicable securities laws, and such Investor has no present intention of selling, granting any participation in, or otherwise distributing the same, except in compliance with applicable securities laws.

(e) Securities Laws Compliance. The Securities will not be offered for sale, sold or otherwise transferred by each Investor except pursuant to a registration statement or in a transaction exempt from, or not subject to, registration under the Securities Act and any applicable state securities laws.

(f) Sophistication. Each Investor has such knowledge and experience in financial and business matters that it is capable of evaluating the merits and risks of its investment in the Securities being acquired hereunder. Each Investor is a "qualified institutional buyer" within the meaning of Rule 144A under the Securities Act or an "accredited investor" within the meaning of Rule 501 of Regulation D under the Securities Act. Each Investor understands and is able to bear any economic risks associated with such investment (including, without limitation, the necessity of holding the Securities for an indefinite period of time). Without derogating from or limiting the representations and warranties of the Company, each Investor acknowledges that it has been afforded the opportunity to ask questions and receive answers concerning the Company and to obtain additional information that it has requested to verify the information contained herein.

(g) Legended Securities. Each Investor understands and acknowledges that upon the original issuance thereof, and until such time as the same is no longer required under any applicable requirements of the Securities Act or applicable state securities laws, the Securities shall be represented by a certificate bearing the following legend (the "Securities Act Legend"):

NEITHER THESE SECURITIES NOR THE SECURITIES ISSUABLE UPON CONVERSION OF THE SECURITIES REPRESENTED HEREBY HAVE BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION, OR THE SECURITIES COMMISSION OF ANY STATE UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND, ACCORDINGLY, SUCH SECURITIES MAY NOT BE OFFERED OR SOLD (I) EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT, (II) PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE

WITH APPLICABLE STATE SECURITIES LAWS, AS EVIDENCED BY A LEGAL OPINION OF COUNSEL SELECTED BY THE HOLDER TO SUCH EFFECT, THE SUBSTANCE OF WHICH SHALL BE REASONABLY ACCEPTABLE TO THE COMPANY, OR (III) UNLESS SOLD PURSUANT TO RULE 144 OR RULE 144A UNDER THE SECURITIES ACT.

The foregoing Securities Act Legend shall be promptly removed from the Securities and the Company shall issue, or cause to be issued, to each Investor a certificate for such Securities without such legend or any other legend, or, if so requested by an Investor, by electronic delivery at the applicable balance account at the Depository Trust Company, if one of the following conditions is met: (a) such Securities are eligible for resale pursuant to Rule 144 of the Securities Act without regard to any volume limitations; (b) in connection with a sale, assignment or other transfer of such Securities, an Investor provides the Company with an opinion of counsel, in a generally acceptable form to the Company and its transfer agent, to the effect that such sale, assignment or transfer of such Securities may be made without registration under the applicable requirements of the Securities Act and that the legend can be removed from the Securities; or (c) the Securities are registered and sold pursuant to an effective registration statement for resale under the Securities Act.

(h) No Short Sales. Each Investor has not, nor has any person acting on behalf of or pursuant to any understanding with such Investor, directly or indirectly, executed any "short sales" (as defined in Rule 200 of Regulation SHO under the Exchange Act) ("Short Sales") of the securities of the Company during the period commencing as of the time that such Investor was first contacted by the Company or any other person regarding the transactions contemplated hereby and ending the date hereof.

5. Short Sales After the Date Hereof. Each Investor covenants that neither it nor any affiliates acting on its behalf or pursuant to any understanding with it will, directly or indirectly, engage in any Short Sales involving the Company's securities during the period from the date hereof until the earlier of (i) the Closing Date or (ii) such time as this Agreement is terminated in full.

6. Conditions to the Obligations of the Parties.

(a) The obligations of each Investor hereunder to consummate the transactions contemplated hereby shall be subject to the satisfaction prior to the Closing Date of each of the following conditions (which may be waived in whole or in part by an Investor (with respect to itself only) in its sole discretion):

(i) Rights Offering. The Rights Offering shall have been completed by the Company before March 6, 2020 on the terms set forth herein and each Investor shall have been offered the right to purchase Offered Shares in the Rights Offering with a value at least equal to such Investor's Final Purchase Commitment.

(ii) Purchase or Satisfaction Notice. Such Investor shall have timely received either a Purchase Notice from the Company on the Determination Date, certifying the number of Backstop Shares to be purchased pursuant to the Backstop Commitment, or a Satisfaction Notice.

(iii) Consents. All governmental and third party notifications, filings, consents, waivers and approvals required for the consummation of the transactions contemplated by this Agreement shall have been made or received, including filing of the Certificate of Designation with the Secretary of State of Delaware and any applicable approvals required by The Nasdaq Global Select Market.

(iv) Representations and Warranties. The representations and warranties of the Company contained in this Agreement shall be true and correct in all material respects (except with respect to representations and warranties that are qualified by the term “material” or “Material Adverse Effect” or similar term, which shall be true and correct in all respects) on the date hereof and as of the Closing Date.

(v) No Material Adverse Effect. Since the date of this Agreement, there shall not have occurred (i) any outbreak of hostilities or escalation thereof or other calamity or crisis or any change or development involving a prospective change in national or international political, financial or economic conditions, (ii) a suspension or material limitation on trading, or minimum or maximum prices for trading having been fixed, or maximum ranges for prices having been required, by The Nasdaq Global Select Market or any other securities exchange or by order of the SEC or any other governmental authority, (iii) a material disruption in commercial banking or securities settlement or clearance services in the United States, or (iv) a declaration of a banking moratorium by either Federal or New York authorities.

(b) The obligation of the Company to issue and sell the Preferred Shares is subject to the following conditions (which may be waived in whole or in part by the Company in its sole discretion):

(i) No Legal Impediment to Issuance. No statute, rule, regulation or order shall have been enacted, adopted or issued by any federal, state or foreign governmental or regulatory authority, and no judgment, injunction, decree or order of any federal, state or foreign court shall have been issued, that prohibits the issuance of the Preferred Shares to the Investors or the consummation of the transactions contemplated by this Agreement.

(ii) Representations and Warranties. The representations and warranties of each Investor shall be true and correct in all material respects (except with respect to representations and warranties that are qualified by the term “material” or “Material Adverse Effect” or similar term, which shall be true and correct in all respects) on the date hereof and as of the Closing Date.

(iii) Rights Offering. The Rights Offering shall have been completed by the Company.

7. **Termination.** This Agreement may be terminated by mutual written consent of the Company and an Investor (with respect to itself only) or by an Investor (with respect to itself only) if the Closing has not been consummated within ten (10) business days from the Expiration Time through no fault of such Investor; provided, however, that no such termination will affect the right of any party to sue for any breach by the other party (or parties).

8. **Notices.** All notices and other communications in connection with this Agreement will be in writing and will be deemed given (and will be deemed to have been duly given upon receipt) if delivered personally, sent via electronic transmission or facsimile (with confirmation), mailed by registered or certified mail (return receipt requested) or delivered by an express courier (with confirmation) to the parties at the following addresses (or at such other address for a party as will be specified by like notice):

If to the Company:

Spero Therapeutics, Inc.
675 Massachusetts Avenue, 14th Floor
Cambridge, MA 02139
Attn: Ankit Mahadevia, M.D.
Email: ankit@sperotherapeutics.com

with a copy (which shall not constitute notice) to:

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
One Financial Center
Boston, MA 02111
Attn: Matthew Gardella
Email: mgardella@mintz.com

If to the Investors:

c/o BVF Partners, LP
44 Montgomery Street 40th Floor
San Francisco, California 94104
Attn: Matthew Perry
Email: perry@bvflp.com

with a copy (which shall not constitute notice) to:

Gibson, Dunn & Crutcher, LLP
555 Mission St., Suite 3000
San Francisco, CA 94105
Attn: Ryan Murr
Email: rmurr@gibsondunn.com

9. Assignment; Third Party Beneficiaries. Neither this Agreement nor any of the rights, interests or obligations under this Agreement may be assigned by any of the parties (whether by operation of law or otherwise) without the prior written consent of the other party, provided that each Investor may assign part or all of its rights and obligations hereunder to an affiliate of such Investor, provided that the assigning party shall remain liable for any non-performance of such assignee's assigned obligations. This Agreement (including the documents and instruments referred to in this Agreement) is not intended to and does not confer upon any person other than the parties hereto any rights or remedies under this Agreement.

10. Prior Negotiations; Entire Agreement. This Agreement (including the agreements attached as exhibits to and the documents and instruments referred to in this Agreement) constitutes the entire agreement of the parties and supersedes all prior agreements, arrangements or understandings, whether written or oral, between the parties with respect to the subject matter of this Agreement, except that the parties hereto acknowledge that any confidentiality agreements heretofore executed among the parties will continue in full force and effect.

11. Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Agreement shall be governed by and construed and enforced in accordance with the internal laws of the State of Delaware, without regard to the principles of conflicts of law thereof. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Agreement (whether brought against a party hereto or its respective affiliates, directors, officers, shareholders, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the State of Delaware. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the State of Delaware for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of this Agreement), and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If either party shall commence an action or proceeding to enforce any provisions of this Agreement, then the prevailing party in such action or proceeding shall be reimbursed by the other party for its reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

12. Fees and Expenses. Except as expressly set forth in this Agreement to the contrary, each party shall pay the fees and expenses of its advisers, counsel, accountants and other experts, if any, and all other expenses incurred by such party incident to the negotiation, preparation, execution, delivery and performance of this Agreement; provided, however, at the Closing, the Company shall reimburse the Investors for their reasonable and documented legal fees and expenses incurred in connection with this Agreement and the Rights Offering, not to exceed \$50,000 in the aggregate.

13. Certain Defined Terms. For purposes of this Agreement, (a) except where otherwise expressly provided, the term “affiliate” has the meaning set forth in Rule 405 under the Securities Act; and (b) the term “business day” means any day other than a day on which banks are permitted or required to be closed in New York City.

14. Counterparts. This Agreement may be executed in counterparts, all of which will be considered one and the same agreement and will become effective when counterparts have been signed by each of the parties and delivered to the other party (including via facsimile or other electronic transmission), it being understood that each party need not sign the same counterpart.

15. Waivers and Amendments. This Agreement may be amended, modified, superseded, cancelled, renewed or extended, and the terms and conditions of this Agreement may be waived, only by a written instrument signed by all the parties or, in the case of a waiver, by the party waiving compliance. No delay on the part of any party in exercising any right, power or privilege pursuant to this Agreement will operate as a waiver thereof, nor will any waiver on the part of any party of any right, power or privilege pursuant to this Agreement, nor will any single or partial exercise of any right, power or privilege pursuant to this Agreement, preclude any other or further exercise thereof or the exercise of any other right, power or privilege pursuant to this Agreement. The rights and remedies provided pursuant to this Agreement are cumulative and are not exclusive of any rights or remedies which any party otherwise may have at law or in equity.

16. Headings. The headings in this Agreement are for reference purposes only and will not in any way affect the meaning or interpretation of this Agreement.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have caused this Investment Agreement to be signed by their respective officers thereunto duly authorized, all as of the date first written above.

Spero Therapeutics, Inc.

By: /s/ Stephen DiPalma

Name: Stephen DiPalma

Title: Interim Chief Financial Officer

[Company Signature Page to Investment Agreement]

Biotechnology Value Fund, L.P.

By: /s/ Mark Lampert

Name: Mark Lampert

Title: President BVF Inc., General Partner of BVF Partners L.P., itself GP of Biotechnology Value Fund, L.P.

Date: 01/30/2020

Estimated Allocation of Purchase Commitment: 51%

Biotechnology Value Fund II, LP

By: /s/ Mark Lampert

Name: Mark Lampert

Title: President BVF Inc., General Partner of BVF Partners L.P., itself GP of Biotechnology Value Fund II, LP

Date: 01/30/2020

Estimated Allocation of Purchase Commitment: 39%

Biotechnology Value Trading Fund OS, L.P.

By: /s/ Mark Lampert

Name: Mark Lampert

Title: President BVF Inc., General Partner of BVF Partners L.P., itself sole member of BVF Partners OS Ltd., itself GP of Biotechnology Value Trading Fund OS, L.P.

Date: 01/30/2020

Estimated Allocation of Purchase Commitment: 7%

MSI BVF SPV, L.L.C.

By: /s/ Mark Lampert

Name: Mark Lampert

Title: President BVF Inc., General Partner of BVF Partners L.P., itself attorney-in-fact for MSI BVF SPV, L.L.C.

Date: 01/30/2020

Estimated Allocation of Purchase Commitment: 3%

[BVF Signature Page to Investment Agreement]

EXHIBIT A

SERIES C CERTIFICATE OF DESIGNATION

[See attachment]

SPERO THERAPEUTICS, INC.
CERTIFICATE OF DESIGNATION OF PREFERENCES,
RIGHTS AND LIMITATIONS
OF
SERIES C CONVERTIBLE PREFERRED STOCK

PURSUANT TO SECTION 151 OF THE
DELAWARE GENERAL CORPORATION LAW

The undersigned, Ankit Mahadevia, does hereby certify that:

1. He is the President and Chief Executive Officer of Spero Therapeutics, Inc., a Delaware corporation (the "**Corporation**").
2. The Corporation is authorized to issue 10,000,000 shares of preferred stock, 3,220 of which have been designated.
3. The following resolutions were duly adopted by the board of directors of the Corporation (the "**Board of Directors**") in accordance with the provisions of Section 103 of the Delaware General Corporation Law (the "**DGCL**") does hereby certify that, in accordance with Section 151 of the DGCL, the following resolution was duly adopted by the Board of Directors of the Corporation or by a duly authorized committee thereof, on January 27, 2020:

WHEREAS, the Amended and Restated Certificate of Incorporation of the Corporation, as amended (the "**Certificate of Incorporation**"), provides for a class of its authorized stock known as preferred stock, consisting of 10,000,000 shares, \$0.001 par value per share, issuable from time to time in one or more series;

WHEREAS, the Board of Directors is authorized to fix the dividend rights, dividend rate, voting rights, conversion rights, rights and terms of redemption and liquidation preferences of any wholly unissued series of preferred stock and the number of shares constituting any series and the designation thereof, of any of them; and

WHEREAS, it is the desire of the Board of Directors, pursuant to its authority as aforesaid, to fix the rights, preferences, restrictions and other matters relating to a new series of the preferred stock, which shall consist of 3,333 shares of the preferred stock which the Corporation has the authority to issue, as follows:

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors does hereby provide for the issuance of a series of preferred stock for cash or exchange of other securities, rights or property and does hereby fix and determine the rights, preferences, restrictions and other matters relating to such series of preferred stock as follows:

RESOLVED, pursuant to authority expressly set forth in the Amended and Restated Certificate of Incorporation of the Corporation, as amended (the "**Certificate of Incorporation**"), the

issuance of a series of Preferred Stock designated as the Series C Convertible Preferred Stock, par value \$.001 per share, of the Corporation is hereby authorized and the designation, number of shares, powers, preferences, rights, qualifications, limitations and restrictions thereof (in addition to any provisions set forth in the Certificate of Incorporation that are applicable to the Preferred Stock of all classes and series) are hereby fixed, and the Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock is hereby approved as follows:

SERIES C CONVERTIBLE PREFERRED STOCK

Section 1. **Definitions.** For the purposes hereof, the following terms shall have the following meanings:

“**Affiliate**” means any person or entity that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a person or entity, as such terms are used in and construed under Rule 144 under the Securities Act. With respect to a Holder, any investment fund or managed account that is managed on a discretionary basis by the same investment manager as such Holder will be deemed to be an Affiliate of such Holder.

“**Alternate Consideration**” shall have the meaning set forth in Section 7(b).

“**Beneficial Ownership Limitation**” shall have the meaning set forth in Section 6(c).

“**Business Day**” means any day except Saturday, Sunday, any day which shall be a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

“**Buy-In**” shall have the meaning set forth in Section 6(d)(iii).

“**Closing Sale Price**” means, for any security as of any date, the last closing trade price for such security prior to 4:00 p.m., New York City time, on the principal securities exchange or trading market where such security is listed or traded, as reported by Bloomberg, L.P. (or an equivalent, reliable reporting service mutually acceptable to and hereafter designated by Holders of a majority of the then-outstanding Series C Preferred Stock and the Corporation), or if the foregoing do not apply, the last trade price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg, L.P., or, if no last trade price is reported for such security by Bloomberg, L.P., the average of the bid prices of any market makers for such security as reported on the OTC Pink Market by OTC Markets Group, Inc. If the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Sale Price of such security on such date shall be the fair market value as determined in good faith by the Board of Directors of the Corporation.

“**Commission**” means the U.S. Securities and Exchange Commission.

“**Common Stock**” means the Corporation’s common stock, par value \$.001 per share, and stock of any other class of securities into which such securities may hereafter be reclassified or changed into.

“**Conversion Date**” shall have the meaning set forth in Section 6(a).

“**Conversion Ratio**” shall have the meaning set forth in Section 6(b).

“**Conversion Shares**” means, collectively, the shares of Common Stock issuable upon conversion of the shares of Series C Preferred Stock in accordance with the terms hereof.

“**Daily Failure Amount**” means the product of (x).005 multiplied by (y) the Closing Sale Price of the Common Stock on the applicable Share Delivery Date.

“**Distributions**” shall have the meaning set forth in Section 5(a).

“**DTC**” shall have the meaning set forth in Section 6(a).

“**DWAC Delivery**” shall have the meaning set forth in Section 6(a).

“**Exchange Act**” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

“**Fundamental Transaction**” shall have the meaning set forth in Section 7(b).

“**Holder**” means any holder of Series C Preferred Stock.

“**Junior Securities**” shall have the meaning set forth in Section 5(a).

“**Notice of Conversion**” shall have the meaning set forth in Section 6(a).

“**Parity Securities**” shall have the meaning set forth in Section 5(a).

“**Person**” means any individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

“**Securities Act**” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“**Senior Securities**” shall have the meaning set forth in Section 5(a).

“**Series C Preferred Stock**” shall have the meaning set forth in Section 2(a).

“**Series C Preferred Stock Register**” shall have the meaning set forth in Section 2(b).

“**Share Delivery Date**” shall have the meaning set forth in Section 6(d)(i).

“**Trading Day**” means a day on which the Common Stock is traded for any period on the principal securities exchange or if the Common Stock is not traded on a principal securities exchange, on a day that the Common Stock is traded on another securities market on which the Common Stock is then being traded.

Section 2. Designation, Amount and Par Value; Assignment.

(a) The series of preferred stock designated by this Certificate of Designation shall be designated as the Corporation’s Series C Convertible Preferred Stock (the “**Series C Preferred Stock**”) and the number of shares so designated shall be 3,333. Each share of Series C Preferred Stock shall have a par value of \$.001 per share. The Series C Preferred Stock shall be issued in book-entry form, or if requested by any Holder, such Holder’s shares may be issued in certificated form. To the extent that any shares of Series C Preferred Stock are issued in book-entry form, references herein to “certificates” shall refer to the book-entry notation relating to such shares.

(b) The Corporation shall register shares of the Series C Preferred Stock, upon records to be maintained by the Corporation for that purpose (the “**Series C Preferred Stock Register**”), in the name of the Holders thereof from time to time. The Corporation may deem and treat the registered Holder of shares of Series C Preferred Stock as the absolute owner thereof for the purpose of any conversion thereof and for all other purposes. The Corporation shall register the transfer of any shares of Series C Preferred Stock in the Series C Preferred Stock Register, upon surrender of the certificates evidencing such shares to be transferred, duly endorsed by the Holder thereof, to the Corporation at its address specified herein. Upon any such registration or transfer, a new certificate evidencing the shares of Series C Preferred Stock so transferred shall be issued to the transferee and a new certificate evidencing the remaining portion of the shares not so transferred, if any, shall be issued to the transferring Holder, in each case, within three Business Days. The provisions of this Certificate of Designation are intended to be for the benefit of all Holders from time to time and shall be enforceable by any such Holder.

Section 3. Dividends. Holders shall be entitled to receive, and the Corporation shall pay, dividends on shares of the Series C Preferred Stock equal (on an as-if-converted-to-Common-Stock basis, without regard to the Beneficial Ownership Limitation) to and in the same form, and in the same manner, as dividends (other than dividends in the form of Common Stock) actually paid on shares of the Common Stock when, as and if such dividends (other than dividends in the form of Common Stock) are paid on shares of the Common Stock. Other than as set forth in the previous sentence, no other dividends shall be paid on shares of Series C Preferred Stock, and the Corporation shall pay no dividends (other than dividends in the form of Common Stock) on shares of the Common Stock unless it simultaneously complies with the previous sentence.

Section 4. Voting Rights. Except as otherwise provided herein or in the Certificate of Incorporation, or as otherwise required by the DGCL, the Series C Preferred Stock shall have no voting rights. However, as long as any shares of Series C Preferred Stock are outstanding, the Corporation shall not, without the affirmative vote of the Holders of a majority of the then outstanding shares of the Series C Preferred Stock, (i) alter or change the powers, preferences or special rights given to the shares of Series C Preferred Stock so as to affect them adversely, (ii) issue further shares of Series C Preferred Stock or increase or decrease (other than by conversion) the number of authorized shares of Series C Preferred Stock, or (iii) enter into any agreement with respect to any of the foregoing.

Section 5. Rank; Liquidation.

(a) The Series C Preferred Stock shall rank: (i) senior to all of the Common Stock; (ii) senior to any class or series of capital stock of the Corporation hereafter created specifically ranking by its terms junior to any Series C Preferred Stock (“**Junior Securities**”); (iii) on parity with all shares of the Corporation’s Series A Convertible Preferred Stock and Series B Convertible Preferred Stock; (iv) on parity with any class or series of capital stock of the Corporation hereafter created specifically ranking by its terms on parity with the Series C Preferred Stock (together with the Corporation’s Series A Convertible Preferred Stock and Series B Convertible Preferred Stock, the “**Parity Securities**”); and (v) junior to any class or series of capital stock of the Corporation hereafter created specifically ranking by its terms senior to any Series C Preferred Stock (“**Senior Securities**”), in each case, as to distributions of assets upon liquidation, dissolution or winding up of the Corporation, whether voluntarily or involuntarily (all such distributions being referred to collectively as “**Distributions**”) and/or as to the right to receive dividends.

(b) Subject to the prior and superior rights of the holders of any Senior Securities of the Corporation, upon liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, each holder of shares of Series C Preferred Stock shall be entitled to receive, in preference to any distributions of any of the assets or surplus funds of the Corporation to the holders of the Common Stock and Junior Securities and pari passu with any distribution to the holders of Parity Securities, an amount equal to \$.001 per share of Series C Preferred Stock, plus an additional amount equal to any dividends declared but unpaid on such shares, before any payments shall be made or any assets distributed to holders of any class of Common Stock or Junior Securities. If, upon any such liquidation, dissolution or winding up of the Corporation, the assets of the Corporation shall be insufficient to pay the holders of shares of the Series C Preferred Stock the amount required under the preceding sentence, then all remaining assets of the Corporation shall be distributed ratably to holders of the shares of the Series C Preferred Stock and Parity Securities. After such preferential payment, each holder of shares of Series C Preferred Stock shall be entitled to participate pari passu with the holders of Common Stock (on an as-converted basis, without regard to the Beneficial Ownership Limitation) and holders of Parity Securities in the remaining distribution of the net assets of the Corporation available for distribution.

Section 6. Conversion.

(a) Conversions at Option of Holder. Each share of Series C Preferred Stock shall be convertible, at any time and from time to time from and after the date of issuance, at the option of the Holder thereof, into a number of shares of Common Stock equal to the Conversion Ratio. Holders shall effect conversions by providing the Corporation with the form of conversion notice attached hereto as Annex A (a “**Notice of Conversion**”), duly completed and executed. Other than a conversion following a Fundamental Transaction or following a notice provided for under Section 7(d)(ii) hereof, the Notice of Conversion must specify at least a number of shares of Series C Preferred Stock to be converted equal to the lesser of (x) 100 shares (such number

subject to appropriate adjustment following the occurrence of an event specified in Section 7(a) hereof) and (y) the number of shares of Series C Preferred Stock then held by the Holder. Provided the Corporation's transfer agent is participating in the Depository Trust Company ("**DTC**") Fast Automated Securities Transfer program, the Notice of Conversion may specify, at the Holder's election, whether the applicable Conversion Shares shall be credited to the account of the Holder's prime broker with DTC through its Deposit Withdrawal Agent Commission system (a "**DWAC Delivery**"). The "**Conversion Date**", or the date on which a conversion shall be deemed effective, shall be defined as the Trading Day that the Notice of Conversion, completed and executed, is sent by facsimile to, and received during regular business hours by, the Corporation; provided that the original certificate(s) (if applicable) representing such shares of Series C Preferred Stock being converted, duly endorsed, and the accompanying Notice of Conversion, are received by the Corporation within two (2) Trading Days thereafter. In all other cases, the Conversion Date shall be defined as the Trading Day on which the original share certificates (if applicable) of Series C Preferred Stock being converted, duly endorsed, and the accompanying Notice of Conversion, are received by the Corporation. The calculations set forth in the Notice of Conversion shall control in the absence of manifest or mathematical error.

(b) **Conversion Ratio.** The "**Conversion Ratio**" for each share of Series C Preferred Stock shall initially be 1,000 shares of Common Stock issuable upon the conversion of each share of Series C Preferred Stock (corresponding to a ratio of 1:1,000), subject to adjustment pursuant to Section 7.

(c) **Beneficial Ownership Limitation.** Notwithstanding anything herein to the contrary, the Corporation shall not effect any conversion of the Series C Preferred Stock, and a Holder shall not have the right to convert any portion of the Series C Preferred Stock, to the extent that, after giving effect to an attempted conversion set forth on an applicable Notice of Conversion, such Holder (together with such Holder's Affiliates, and any other Person whose beneficial ownership of Common Stock would be aggregated with the Holder's for purposes of Section 13(d) or Section 16 of the Exchange Act and the applicable regulations of the Commission, including any "group" of which the Holder is a member (the foregoing, "**Attribution Parties**")) would beneficially own a number of shares of Common Stock in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by such Holder and its Attribution Parties shall include the number of shares of Common Stock issuable upon conversion of the Series C Preferred Stock subject to the Notice of Conversion with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which are issuable upon (A) conversion of the remaining, unconverted Series C Preferred Stock beneficially owned by such Holder or any of its Attribution Parties, and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Corporation (including any warrants) beneficially owned by such Holder or any of its Attribution Parties that are subject to a limitation on conversion or exercise similar to the limitation contained herein. For purposes of this Section 6(c), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the applicable regulations of the Commission. In addition, for purposes hereof, "group" has the meaning set forth in Section 13(d) of the Exchange Act and the applicable regulations of the Commission. For purposes of this Section 6(c), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as stated in the most recent of the following: (A) the Corporation's most recent periodic or annual

filing with the Commission, as the case may be, (B) a more recent public announcement by the Corporation that is filed with the Commission, or (C) a more recent notice by the Corporation or the Corporation's transfer agent to the Holder setting forth the number of shares of Common Stock then outstanding. Upon the written request of a Holder (which may be by email), the Corporation shall, within three (3) Trading Days thereof, confirm in writing to such Holder (which may be via email) the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to any actual conversion or exercise of securities of the Corporation, including shares of Series C Preferred Stock, by such Holder or its Attribution Parties since the date as of which such number of outstanding shares of Common Stock was last publicly reported or confirmed to the Holder. The "**Beneficial Ownership Limitation**" shall initially be 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock pursuant to such Notice of Conversion (to the extent permitted pursuant to this Section 6(c)). The Corporation shall be entitled to rely on representations made to it by the Holder in any Notice of Conversion regarding its Beneficial Ownership Limitation. Notwithstanding the foregoing, by written notice to the Corporation, which will not be effective until the sixty-first (61st) day after such notice is delivered to the Corporation, the Holder may reset the Beneficial Ownership Limitation percentage to a higher or lower percentage, not to exceed 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock pursuant to such Notice of Conversion. Upon such a change by a Holder of the Beneficial Ownership Limitation, the Beneficial Ownership Limitation may not be further amended by such Holder without first providing the minimum notice required by this Section 6(c). Notwithstanding the foregoing, at any time following notice of a Fundamental Transaction, the Holder may waive and/or change the Beneficial Ownership Limitation effective immediately upon written notice to the Corporation and may reinstitute the Beneficial Ownership Limitation at any time thereafter effective immediately upon written notice to the Corporation.

(d) Mechanics of Conversion.

- (i) Delivery of Certificate or Electronic Issuance Upon Conversion. Not later than three Trading Days after the applicable Conversion Date, or if the Holder requests the issuance of physical certificate(s), two (2) Trading Days after receipt by the Corporation of the original certificate(s) representing such shares of Series C Preferred Stock being converted, duly endorsed, and the accompanying Notice of Conversion (the "**Share Delivery Date**"), the Corporation shall (a) deliver, or cause to be delivered, to the converting Holder a physical certificate or certificates representing the number of Conversion Shares being acquired upon the conversion of shares of Series C Preferred Stock, or (b) in the case of a DWAC Delivery (if so requested by the Holder), electronically transfer such Conversion Shares by crediting the account of the Holder's prime broker with DTC through its DWAC system. If in the case of any Notice of Conversion such certificate or certificates are not delivered to or as directed by or, in the case of a DWAC Delivery, such shares are not electronically delivered to or as directed by, the applicable Holder by the Share Delivery Date, the applicable Holder shall be entitled to elect to rescind such Notice of Conversion by written notice to the Corporation at any time on or before its receipt of such certificate or certificates

for Conversion Shares or electronic receipt of such shares, as applicable, in which event the Corporation shall promptly return to such Holder any original Series C Preferred Stock certificate delivered to the Corporation and such Holder shall promptly return to the Corporation any Common Stock certificates or otherwise direct the return of any shares of Common Stock delivered to the Holder through the DWAC system, representing the shares of Series C Preferred Stock unsuccessfully tendered for conversion to the Corporation.

- (ii) Obligation Absolute. Subject to Section 6(c) hereof and subject to Holder's right to rescind a Notice of Conversion pursuant to Section 6(d)(i) above, the Corporation's obligation to issue and deliver the Conversion Shares upon conversion of Series C Preferred Stock in accordance with the terms hereof are absolute and unconditional, irrespective of any action or inaction by a Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by such Holder or any other Person of any obligation to the Corporation or any violation or alleged violation of law by such Holder or any other Person, and irrespective of any other circumstance which might otherwise limit such obligation of the Corporation to such Holder in connection with the issuance of such Conversion Shares. Subject to Section 6(c) hereof and subject to Holder's right to rescind a Notice of Conversion pursuant to Section 6(d)(i) above, in the event a Holder shall elect to convert any or all of its Series C Preferred Stock, the Corporation may not refuse conversion based on any claim that such Holder or anyone associated or affiliated with such Holder has been engaged in any violation of law, agreement or for any other reason, unless an injunction from a court, on notice to Holder, restraining and/or enjoining conversion of all or part of the Series C Preferred Stock of such Holder shall have been sought and obtained by the Corporation, and the Corporation posts a surety bond for the benefit of such Holder in the amount of 150% of the value of the Conversion Shares into which would be converted the Series C Preferred Stock which is subject to such injunction, which bond shall remain in effect until the completion of arbitration/litigation of the underlying dispute and the proceeds of which shall be payable to such Holder to the extent it obtains judgment. In the absence of such injunction, the Corporation shall, subject to Section 6(c) hereof and subject to Holder's right to rescind a Notice of Conversion pursuant to Section 6(d)(i) above, issue Conversion Shares upon a properly noticed conversion. If the Corporation fails to deliver to a Holder such certificate or certificates, or electronically deliver (or cause its transfer agent to electronically deliver) such shares in the case of a DWAC Delivery, pursuant to Section 6(d)(i) on or prior to the fifth (5th) Trading Day after the Share Delivery Date applicable to such conversion (other than a failure caused by incorrect or incomplete information provided by Holder to the Corporation), then, unless the Holder has rescinded the applicable Notice of Conversion pursuant to Section 6(d)(i) above, the Corporation shall pay (as liquidated damages and not as a penalty) to such Holder an amount payable, at the Corporation's option, either (a) in cash or (b) to the extent that it would not cause the Holder or its Attribution Parties to exceed

the Beneficial Ownership Limitation, in shares of Common Stock that are valued for these purposes at the Closing Sale Price on the date of such calculation, in each case equal to the product of (x) the number of Conversion Shares required to have been issued by the Corporation on such Share Delivery Date, (y) an amount equal to the Daily Failure Amount and (z) the number of Trading Days actually lapsed after such fifth (5th) Trading Day after the Share Delivery Date during which such certificates have not been delivered, or, in the case of a DWAC Delivery, such shares have not been electronically delivered; provided, however, the Holder shall only receive up to such amount of shares of Common Stock such that Holder and its Attribution Parties and any other persons or entities whose beneficial ownership of Common Stock would be aggregated with the Holder's for purposes of Section 13(d) of the Exchange Act (including shares held by any "group" of which the Holder is a member, but excluding shares beneficially owned by virtue of the ownership of securities or rights to acquire securities that have limitations on the right to convert, exercise or purchase similar to the limitation set forth herein) shall not collectively beneficially own greater than the Beneficial Ownership Limitation. Nothing herein shall limit a Holder's right to pursue actual damages for the Corporation's failure to deliver Conversion Shares within the period specified herein and such Holder shall have the right to pursue all remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief; provided that Holder shall not receive duplicate damages for the Corporation's failure to deliver Conversion Shares within the period specified herein. The exercise of any such rights shall not prohibit a Holder from seeking to enforce damages pursuant to any other Section hereof or under applicable law.

- (iii) Compensation for Buy-In on Failure to Timely Deliver Certificates Upon Conversion. If the Corporation fails to deliver to a Holder the applicable certificate or certificates or to effect a DWAC Delivery, as applicable, by the Share Delivery Date pursuant to Section 6(d)(i) (other than a failure caused by incorrect or incomplete information provided by Holder to the Corporation), and if after such Share Delivery Date such Holder is required by its brokerage firm to purchase (in an open market transaction or otherwise), or the Holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by such Holder of the Conversion Shares which such Holder was entitled to receive upon the conversion relating to such Share Delivery Date (a "**Buy-In**"), then the Corporation shall (A) pay in cash to such Holder (in addition to any other remedies available to or elected by such Holder) the amount by which (x) such Holder's total purchase price (including any brokerage commissions) for the shares of Common Stock so purchased exceeds (y) the product of (1) the aggregate number of shares of Common Stock that such Holder was entitled to receive from the conversion at issue multiplied by (2) the actual sale price at which the sell order giving rise to such purchase obligation was executed (including any brokerage commissions) and (B) at the option of such Holder, either reissue (if surrendered) the shares of Series C Preferred Stock equal to the number of shares of Series C Preferred Stock submitted for conversion or deliver to such Holder the number of shares of Common Stock that would have been

issued if the Corporation had timely complied with its delivery requirements under Section 6(d)(i). For example, if a Holder purchases shares of Common Stock having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted conversion of shares of Series C Preferred Stock with respect to which the actual sale price (including any brokerage commissions) giving rise to such purchase obligation was a total of \$10,000 under clause (A) of the immediately preceding sentence, the Corporation shall be required to pay such Holder \$1,000. The Holder shall provide the Corporation written notice, within three (3) Trading Days after the occurrence of a Buy-In, indicating the amounts payable to such Holder in respect of such Buy-In together with applicable confirmations and other evidence reasonably requested by the Corporation. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Corporation's failure to timely deliver certificates representing shares of Common Stock upon conversion of the shares of Series C Preferred Stock as required pursuant to the terms hereof; provided, however, that the Holder shall not be entitled to both (i) require the reissuance of the shares of Series C Preferred Stock submitted for conversion for which such conversion was not timely honored and (ii) receive the number of shares of Common Stock that would have been issued if the Corporation had timely complied with its delivery requirements under Section 6(d)(i).

- (iv) Reservation of Shares Issuable Upon Conversion. The Corporation covenants that it will at all times reserve and keep available out of its authorized and unissued shares of Common Stock for the sole purpose of issuance upon conversion of the Series C Preferred Stock, free from preemptive rights or any other actual contingent purchase rights of Persons other than the Holders of the Series C Preferred Stock, not less than such aggregate number of shares of the Common Stock as shall be issuable (taking into account the adjustments of Section 7) upon the conversion of all outstanding shares of Series C Preferred Stock. The Corporation covenants that all shares of Common Stock that shall be so issuable shall, upon issue, be duly authorized, validly issued, fully paid and non-assessable.
- (v) Fractional Shares. No fractional shares or scrip representing fractional shares of Common Stock shall be issued upon the conversion of the Series C Preferred Stock. As to any fraction of a share which a Holder would otherwise be entitled to receive upon such conversion, the Corporation shall pay a cash adjustment in respect of such fractional share of Common Stock in an amount equal to such fraction multiplied by the Closing Sale Price.
- (vi) Transfer Taxes. The issuance of certificates for shares of the Common Stock upon conversion of the Series C Preferred Stock shall be made without charge to any Holder for any documentary stamp or similar taxes that may be payable in respect of the issue or delivery of such certificates, provided that the Corporation shall not be required to pay any tax that may be payable in respect of any transfer involved

in the issuance and delivery of any such certificate upon conversion in a name other than that of the registered Holder(s) of such shares of Series C Preferred Stock and the Corporation shall not be required to issue or deliver such certificates unless or until the Person or Persons requesting the issuance thereof shall have paid to the Corporation the amount of such tax or shall have established to the satisfaction of the Corporation that such tax has been paid.

(e) Status as Stockholder. Upon each Conversion Date: (i) the shares of Series C Preferred Stock being converted shall be deemed converted into shares of Common Stock; and (ii) the Holder's rights as a holder of such converted shares of Series C Preferred Stock shall cease and terminate, excepting only the right to receive certificates for such shares of Common Stock and to any remedies provided herein or otherwise available at law or in equity to such Holder because of a failure by the Corporation to comply with the terms of this Certificate of Designation. In all cases, the holder shall retain all of its rights and remedies for the Corporation's failure to convert Series C Preferred Stock.

Section 7. Certain Adjustments.

(a) Stock Dividends and Stock Splits. If the Corporation, at any time while this Series C Preferred Stock is outstanding: (A) pays a stock dividend or otherwise makes a distribution or distributions payable in shares of Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Corporation upon conversion of this Series C Preferred Stock) with respect to the then outstanding shares of Common Stock; (B) subdivides outstanding shares of Common Stock into a larger number of shares; or (C) combines (including by way of a reverse stock split) outstanding shares of Common Stock into a smaller number of shares, then the Conversion Ratio shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding any treasury shares of the Corporation) outstanding immediately after such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately before such event (excluding any treasury shares of the Corporation). Any adjustment made pursuant to this Section 7(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision or combination.

(b) Fundamental Transaction. If, at any time while this Series C Preferred Stock is outstanding, (A) the Corporation effects any merger or consolidation of the Corporation with or into another Person or any stock sale to, or other business combination (including, without limitation, a reorganization, recapitalization, spin-off, share exchange or scheme of arrangement) with or into another Person (other than such a transaction in which the Corporation is the surviving or continuing entity and its Common Stock is not exchanged for or converted into other securities, cash or property), (B) the Corporation effects any sale of all or substantially all of its assets in one transaction or a series of related transactions, (C) any tender offer or exchange offer (whether by the Corporation or another Person) is completed pursuant to which more than 50% of the Common Stock not held by the Corporation or such Person is exchanged for or converted into other securities, cash or property, or (D) the Corporation effects any reclassification of the Common Stock or any compulsory share exchange pursuant (other than as a result of a dividend, subdivision or combination covered by Section 7(a) above) to which the

Common Stock is effectively converted into or exchanged for other securities, cash or property (in any such case, a “**Fundamental Transaction**”), then, upon any subsequent conversion of this Series C Preferred Stock the Holders shall have the right to receive, in lieu of the right to receive Conversion Shares, for each Conversion Share that would have been issuable upon such conversion immediately prior to the occurrence of such Fundamental Transaction, the same kind and amount of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of one share of Common Stock (the “**Alternate Consideration**”). For purposes of any such subsequent conversion, the determination of the Conversion Ratio shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Corporation shall adjust the Conversion Ratio in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holders shall be given the same choice as to the Alternate Consideration it receives upon any conversion of this Series C Preferred Stock following such Fundamental Transaction. To the extent necessary to effectuate the foregoing provisions, any successor to the Corporation or surviving entity in such Fundamental Transaction shall file a new Certificate of Designation with the same terms and conditions and issue to the Holders new preferred stock consistent with the foregoing provisions and evidencing the Holders’ right to convert such preferred stock into Alternate Consideration. The terms of any agreement to which the Corporation is a party and pursuant to which a Fundamental Transaction is effected shall include terms requiring any such successor or surviving entity to comply with the provisions of this Section 7(b) and insuring that this Series C Preferred Stock (or any such replacement security) will be similarly adjusted upon any subsequent transaction analogous to a Fundamental Transaction. The Corporation shall cause to be delivered to each Holder, at its last address as it shall appear upon the stock books of the Corporation, written notice of any Fundamental Transaction at least 20 calendar days prior to the date on which such Fundamental Transaction is expected to become effective or close.

(c) Calculations. All calculations under this Section 7 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 7, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding any treasury shares of the Corporation) issued and outstanding.

(d) Notice to the Holders.

- (i) Adjustment to Conversion Ratio. Whenever the Conversion Ratio is adjusted pursuant to any provision of this Section 7, the Corporation shall promptly deliver to each Holder a notice setting forth the Conversion Ratio after such adjustment and setting forth a brief statement of the facts requiring such adjustment.
- (ii) Other Notices. If (A) the Corporation shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Corporation shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Corporation shall authorize the granting to all holders of the

Common Stock of rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Corporation shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Corporation is a party, any sale or transfer of all or substantially all of the assets of the Corporation, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Corporation shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Corporation, then, in each case, the Corporation shall cause to be filed at each office or agency maintained for the purpose of conversion of this Series C Preferred Stock, and shall cause to be delivered to each Holder at its last address as it shall appear upon the stock books of the Corporation, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange, provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice.

Section 8. Miscellaneous.

(a) Redemption. The Series C Preferred Stock is not redeemable.

(b) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Conversion, shall be in writing and delivered personally, sent electronically (with confirmation of receipt), or sent by a nationally recognized overnight courier service, addressed to the Corporation, at 675 Massachusetts Ave., 14th Floor, Cambridge, MA 02139, Attention President and CEO, or such other address as the Corporation may specify for such purposes by notice to the Holders delivered in accordance with this Section. Any and all notices or other communications or deliveries to be provided by the Corporation hereunder shall be in writing and delivered personally, by facsimile, email, or sent by a nationally recognized overnight courier service addressed to each Holder at the facsimile number, email address or mailing address of such Holder appearing on the books of the Corporation, or if no such facsimile number, email address, or mailing address appears on the books of the Corporation, at the principal place of business of such Holder. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of: (i) the date of transmission, if such notice or communication is delivered via facsimile or email prior to 5:30 p.m. (New York City time) on any date, (ii) the date immediately following the date of transmission, if such notice or communication is delivered via facsimile or email between 5:30 p.m. and 11:59 p.m. (New York City time) on any

date, (iii) the second Business Day following the date of mailing, if sent by nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given.

(c) Lost or Mutilated Series C Preferred Stock Certificate. If a Holder's Series C Preferred Stock certificate shall be mutilated, lost, stolen or destroyed, the Corporation shall execute and deliver, in exchange and substitution for and upon cancellation of a mutilated certificate, or in lieu of or in substitution for a lost, stolen or destroyed certificate, a new certificate for the shares of Series C Preferred Stock so mutilated, lost, stolen or destroyed, but only upon receipt of evidence of such loss, theft or destruction of such certificate, and of the ownership thereof, reasonably satisfactory to the Corporation and, in each case, customary and reasonable indemnity, if requested. Applicants for a new certificate under such circumstances shall also comply with such other reasonable regulations and procedures and pay such other reasonable third-party costs as the Corporation may prescribe.

(d) Waiver. Any waiver by the Corporation or a Holder of a breach of any provision of this Certificate of Designation shall not operate as or be construed to be a waiver of any other breach of such provision or of any breach of any other provision of this Certificate of Designation or a waiver by any other Holders. The failure of the Corporation or a Holder to insist upon strict adherence to any term of this Certificate of Designation on one or more occasions shall not be considered a waiver or deprive that party (or any other Holder) of the right thereafter to insist upon strict adherence to that term or any other term of this Certificate of Designation. Any waiver by the Corporation or a Holder must be in writing. Notwithstanding any provision in this Certificate of Designation to the contrary, any provision contained herein and any right of the Holders of Series C Preferred Stock granted hereunder may be waived as to all shares of Series C Preferred Stock (and the Holders thereof) upon the written consent of the Holders of not less than a majority of the shares of Series C Preferred Stock then outstanding, unless a higher percentage is required by the DGCL, in which case the written consent of the Holders of not less than such higher percentage shall be required.

(e) Severability. If any provision of this Certificate of Designation is invalid, illegal or unenforceable, the balance of this Certificate of Designation shall remain in effect, and if any provision is inapplicable to any Person or circumstance, it shall nevertheless remain applicable to all other Persons and circumstances. If it shall be found that any interest or other amount deemed interest due hereunder violates the applicable law governing usury, the applicable rate of interest due hereunder shall automatically be lowered to equal the maximum rate of interest permitted under applicable law.

(f) Next Business Day. Whenever any payment or other obligation hereunder shall be due on a day other than a Business Day, such payment shall be made on the next succeeding Business Day.

(g) Headings. The headings contained herein are for convenience only, do not constitute a part of this Certificate of Designation and shall not be deemed to limit or affect any of the provisions hereof.

(h) Status of Converted Series C Preferred Stock. If any shares of Series C Preferred Stock shall be converted or reacquired by the Corporation, such shares shall resume the status of authorized but unissued shares of preferred stock and shall no longer be designated as Series C Preferred Stock.

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Designation this _____ day of _____, 2020.

By: _____
Ankit Mahadevia, M.D.,
President and Chief Executive Officer

ANNEX A

NOTICE OF CONVERSION

(TO BE EXECUTED BY THE REGISTERED HOLDER
IN ORDER TO CONVERT SHARES OF SERIES C PREFERRED STOCK)

The undersigned Holder hereby irrevocably elects to convert the number of shares of Series C Preferred Stock indicated below, [represented by stock certificate No(s). (the "**Preferred Stock Certificates**") [represented in book-entry form], into shares of common stock, par value \$.001 per share (the "**Common Stock**"), of Spero Therapeutics, Inc., a Delaware corporation (the "**Corporation**"), as of the date written below. If securities are to be issued in the name of a person other than the undersigned, the undersigned will pay all transfer taxes payable with respect thereto. Capitalized terms utilized but not defined herein shall have the meaning ascribed to such terms in that certain Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock (the "**Certificate of Designation**") filed by the Corporation with the Secretary of State of the State of Delaware on _____, 2020.

As of the date hereof, the number of shares of Common Stock beneficially owned by the undersigned Holder (together with such Holder's Affiliates, and any other Person whose beneficial ownership of Common Stock would be aggregated with the Holder's for purposes of Section 13(d) or Section 16 of the Exchange Act and the applicable regulations of the Commission, including any "group" of which the Holder is a member (the foregoing, "**Attribution Parties**")), including the number of shares of Common Stock issuable upon conversion of the Series C Preferred Stock subject to this Notice of Conversion, but excluding the number of shares of Common Stock which are issuable upon (A) conversion of the remaining, unconverted Series C Preferred Stock beneficially owned by such Holder or any of its Attribution Parties, and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Corporation (including any warrants) beneficially owned by such Holder or any of its Attribution Parties that are subject to a limitation on conversion or exercise similar to the limitation contained in Section 6(c) of the Certificate of Designation, is []%. For purposes hereof, beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the applicable regulations of the Commission. In addition, for purposes hereof, "group" has the meaning set forth in Section 13(d) of the Exchange Act and the applicable regulations of the Commission.

Conversion calculations:

Date to Effect Conversion: _____

Number of shares of Series C Preferred
Stock owned prior to Conversion: _____

Number of shares of Series C Preferred
Stock to be Converted: _____

Number of shares of Common Stock to be
Issued: _____

Address for delivery of physical
certificates:

or

for DWAC Delivery:

DWAC Instructions:

Broker no:

Account no:

HOLDER

By:

Name:

Title:

Date:

Spero Therapeutics Announces Proposed Rights Offering

\$30 Million fully backstopped rights offering will be available to all stockholders of record on February 10, 2020

CAMBRIDGE, Mass., January 30, 2020 (GLOBE NEWSWIRE) — Spero Therapeutics, Inc. (Nasdaq: SPRO), a multi-asset clinical-stage biopharmaceutical company focused on identifying, developing and commercializing treatments in high unmet need areas involving multi-drug resistant bacterial infections and rare diseases, today announced its intent to raise \$30.0 million through a fully backstopped rights offering. Under the terms of the proposed rights offering (the “Rights Offering”), holders of record of Spero’s common stock (“Common Stock”), Series A convertible preferred stock (“Series A Preferred”) and Series B convertible preferred stock (“Series B Preferred”) as of the close of business on February 10, 2020 (the “Record Date”) will receive a non-transferable subscription right entitling them to purchase shares of Common Stock at \$9.00 per share in proportion to their *pro rata* ownership of Common Stock outstanding, assuming the conversion of all outstanding Series A Preferred and Series B Preferred into Common Stock. The Rights Offering will be fully backstopped by certain affiliates of BVF Partners L.P. (“BVF”), which have agreed to purchase, at a minimum, their respective as-converted *pro rata* share of the offering amount, plus an additional amount of securities that are not subscribed for by other purchasers in the Rights Offering, for a total of up to \$30.0 million.

The subscription rights will be exercisable for an aggregate of up to 3,333,333 shares of Common Stock, with participation to be allocated among holders of Common Stock, Series A Preferred and Series B Preferred on a *pro rata* basis (assuming full conversion of the Series A Preferred and Series B Preferred into shares of Common Stock), subject to the aggregate offering threshold and ownership limitations. The subscription rights may be exercised only during the anticipated subscription period of February 10, 2020 through 5:00 p.m. (EST) on March 2, 2020, unless extended. Any participant in the Rights Offering that, by exercise of such participant’s subscription right would become a beneficial owner of greater than 9.99% of the outstanding number of shares of Common Stock following the Rights Offering may elect to instead purchase shares of newly-designated Series C convertible preferred stock (“Series C Preferred”). Spero intends to sell the Series C Preferred at \$9,000 per share, and any such holder so electing would have a right to purchase one one-thousandth of a share of Series C Preferred for each share of Common Stock such holder had a right to purchase pursuant to such holder’s subscription rights. Each share of Series C Preferred will, subject to certain limitations, be convertible into 1,000 shares of Common Stock at the election of the holder. The Series C Preferred will generally have no voting rights, except as required by law, and will participate *pari passu*, on an as-converted basis, with any distribution of proceeds to holders of Common Stock, Series A Preferred and Series B Preferred in the event of Spero’s liquidation, dissolution or winding up.

The Rights Offering will be made pursuant to Spero’s effective shelf registration statement on file with the Securities and Exchange Commission (“SEC”) and only by means of a prospectus supplement and accompanying prospectus. Spero expects to mail subscription certificates evidencing the subscription rights and a copy of the prospectus supplement and accompanying prospectus for the Rights Offering shortly following the Record Date.

This press release is not intended to and does not constitute an offer to sell or the solicitation of an offer to subscribe for or buy or an invitation to purchase or subscribe for any securities in any jurisdiction, nor shall there be any sale, issuance or transfer of securities in any jurisdiction in contravention of applicable law. No offer of securities shall be made except by means of a prospectus meeting the requirements of Section 10 of the Securities Act of 1933, as amended.

BVF, which currently owns approximately 5% of Spero's outstanding Common Stock (and approximately 17% on an as-converted basis), will backstop the Rights Offering and has agreed to purchase up to \$30.0 million of Series C Preferred at a price of \$9,000 per share in a private placement promptly following the conclusion of the Rights Offering, with the dollar amount to be purchased in such private placement to be reduced by the dollar amount sold by Spero (including to BVF) in the Rights Offering.

About Spero

Spero Therapeutics, Inc. is a multi-asset, clinical-stage biopharmaceutical company focused on identifying, developing and commercializing novel treatments for multidrug-resistant (MDR) bacterial infections and rare diseases.

Spero's lead product candidate, Tebipenem HBr (tebipenem pivoxil hydrobromide; formerly SPR994), is designed to be the first oral carbapenem-class antibiotic for use in adults to treat MDR Gram-negative infections.

Spero is also advancing SPR720, its novel oral therapy product candidate designed for the treatment of rare, orphan disease caused by pulmonary non-tuberculous mycobacterial (NTM) infections.

Spero also has a platform technology known as its Potentiator Platform that it believes will enable it to develop drugs that will expand the spectrum and potency of existing antibiotics, including formerly inactive antibiotics, against Gram-negative bacteria. Spero's potentiator product candidate, SPR206, is designed to treat MDR Gram-negative infections in the hospital setting.

For more information, visit <https://sperotherapeutics.com>.

Forward Looking Statement

Investors are cautioned that statements in this press release regarding the intention, completion and timing relating to the proposed rights offering, the intended use of proceeds from the rights offering and Spero's future development plans for its product candidates and the timing and costs thereof constitute forward-looking statements that involve risks and uncertainties, including,

without limitation, risks and uncertainties related to market conditions and the satisfaction of customary closing conditions related to the proposed rights offering and the uncertainties inherent in the research and clinical development process. There can be no assurance that Spero will be able to complete the proposed public offering. Additional information on risks facing Spero can be found under the heading "Risk Factors" in Spero's periodic reports, including its annual report on Form 10-K and quarterly reports on Form 10-Q, and in the preliminary prospectus relating to the proposed offering to be filed with the SEC, each available on the SEC's web site at www.sec.gov. Spero expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in its expectations with regard thereto or any change in events, conditions or circumstances on which any such statements are based.

Spero Investor and Media Contact:

Sharon Klahre

Senior Director, Investor Relations

857-242-1547

IR@sperotherapeutics.com