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

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**FORM 8-K**

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

**Date of Report (Date of earliest event reported): March 23, 2018**

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**PROTEOSTASIS THERAPEUTICS, INC.**

(Exact name of registrant as specified in its charter)

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**Delaware**  
(State or other jurisdiction of  
incorporation)

**001-37695**  
(Commission  
File Number)

**20-8436652**  
(I.R.S. Employer  
Identification No.)

**200 Technology Square, 4th Floor**  
**Cambridge, MA 02139**  
(Address of principal executive offices, including zip code)

**(617) 225-0096**  
(Registrant's telephone number, including area code)

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

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

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.

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**Item 1.01 Entry Into a Material Definitive Agreement.**

On March 23, 2018, Proteostasis Therapeutics, Inc. (the “Company”) entered into a Sales Agreement (the “Agreement”) with Leerink Partners LLC (“Leerink”) with respect to an at-the-market offering program under which the Company may offer and sell, from time to time at its sole discretion, shares of its common stock, par value \$0.001 per share (the “Common Stock”), having an aggregate offering price of up to \$50,000,000 (the “Placement Shares”) through Leerink as its sales agent. The issuance and sale, if any, of the Placement Shares by the Company under the Agreement will be made pursuant to the Company’s effective registration statement on Form S-3 (Registration Statement No. 333-218545). A copy of the opinion of Goodwin Procter LLP relating to the legality of the issuance and sale of the Placement Shares is attached as Exhibit 5.1 hereto.

Leerink may sell the Placement Shares by any method permitted by law deemed to be an “at-the-market” offering as defined in Rule 415 of the Securities Act of 1933, as amended, including, without limitation, sales made through The NASDAQ Global Market (“Nasdaq”) or on any other existing trading market for the Common Stock. Leerink will use commercially reasonable efforts to sell the Placement Shares from time to time, based upon instructions from the Company (including any price, time or size limits or other customary parameters or conditions the Company may impose). The Company will pay Leerink a commission equal to 3.0 percent (3.0%) of the gross sales proceeds of any Placement Shares sold through Leerink under the Agreement, and also has provided Leerink with customary indemnification and contribution rights.

The Company is not obligated to make any sales of Common Stock under the Agreement. The Company or Leerink may suspend or terminate the offering of Shares upon notice to the other party and subject to other conditions. Leerink will act as sales agent on a commercially reasonable efforts basis consistent with its normal trading and sales practices and applicable state and federal law, rules and regulations and the rules of Nasdaq.

The foregoing description of the Agreement is not complete and is qualified in its entirety by reference to the full text of the Agreement, a copy of which is filed herewith as Exhibit 1.1 to this Current Report on Form 8-K and is incorporated herein by reference. A copy of the opinion of Goodwin Procter LLP relating to the legality of the issuance and sale of the shares in the Offering is attached as Exhibit 5.1 hereto.

This Current Report on Form 8-K shall not constitute an offer to sell or the solicitation of an offer to buy the securities discussed herein, nor shall there be any offer, solicitation, or sale of the securities in any state in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state.

**Item 9.01 Financial Statements and Exhibits.**

*(d) Exhibits*

<b>Exhibit No.</b>	<b>Description</b>
1.1	<a href="#">Sales Agreement dated March 23, 2018 by and between Proteostasis Therapeutics, Inc. and Leerink Partners LLC.</a>
5.1	<a href="#">Opinion of Goodwin Procter LLP.</a>
23.1	<a href="#">Consent of Goodwin Procter LLP (included in Exhibit 5.1).</a>

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**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: March 23, 2018

Proteostasis Therapeutics, Inc.

By: /s/ Meenu Chhabra  
Meenu Chhabra  
President and Chief Executive Officer

PROTEOSTASIS THERAPEUTICS, INC.

\$50,000,000

COMMON STOCK

SALES AGREEMENT

March 23, 2018

Leerink Partners LLC  
One Federal Street, Floor 37  
Boston, MA 02110

Ladies and Gentlemen:

Proteostasis Therapeutics, Inc., a Delaware corporation (the "**Company**"), confirms its agreement (this "**Agreement**") with Leerink Partners LLC ("**Leerink**"), as follows:

1. **Issuance and Sale of Shares.** The Company agrees that, from time to time during the term of this Agreement, on the terms and subject to the conditions set forth herein, it may issue and sell through Leerink, acting as agent and/or principal, shares (the "**Placement Shares**") of the Company's common stock, par value \$0.001 per share (the "**Common Stock**"), having an aggregate offering price of up to \$50,000,000. Notwithstanding anything to the contrary contained herein, the parties hereto agree that compliance with the limitation set forth in this **Section 1** on the aggregate offering price of Common Stock issued and sold under this Agreement shall be the sole responsibility of the Company, and Leerink shall have no obligation in connection with such compliance. The issuance and sale of Common Stock through Leerink will be effected pursuant to the Registration Statement (as defined below) filed by the Company and declared effective by the Securities and Exchange Commission (the "**Commission**"), although nothing in this Agreement shall be construed as requiring the Company to use the Registration Statement (as defined below) to issue any Placement Shares.

The Company has filed, in accordance with the provisions of the Securities Act of 1933, as amended, and the rules and regulations thereunder (collectively, the "**Securities Act**"), with the Commission a registration statement on Form S-3, including a base prospectus, relating to certain securities, including the Common Stock, to be issued from time to time by the Company, and which incorporates by reference documents that the Company has filed or will file in accordance with the provisions of the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder (collectively, the "**Exchange Act**"). The Company has prepared a prospectus specifically relating to the Placement Shares (the "**ATM Prospectus**") that is included as part of such registration statement. Following the date that such ATM Prospectus is filed, the Company shall furnish to Leerink, for use by Leerink, copies of the ATM Prospectus. Except where the context otherwise requires, such registration statement, as amended, including all documents filed as part thereof or incorporated by reference therein, and including any information contained in a Prospectus (as defined below) subsequently filed with the Commission pursuant to Rule 424(b) under the Securities Act or deemed to be a part of such registration statement pursuant to Rule 430B of the Securities Act, is herein called the "**Registration Statement**." The ATM Prospectus, including all documents incorporated therein by reference, included in the Registration Statement, in the form in which such ATM Prospectus

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has most recently been filed by the Company with the Commission pursuant to Rule 424(b) under the Securities Act, together with any “issuer free writing prospectus,” as defined in Rule 433 of the Securities Act regulations (“**Rule 433**”), relating to the Placement Shares that (i) is required to be filed with the Commission by the Company or (ii) is exempt from filing pursuant to Rule 433(d)(5)(i), in each case in the form filed or required to be filed with the Commission or, if not required to be filed, in the form retained in the Company’s records pursuant to Rule 433(g), is herein called the “**Prospectus**.”

Any reference herein to the Registration Statement, the Prospectus or any amendment or supplement thereto shall be deemed to refer to and include the documents incorporated by reference therein, and any reference herein to the terms “amend,” “amendment” or “supplement” with respect to the Registration Statement or the Prospectus shall be deemed to refer to and include the filing after the execution hereof of any document with the Commission deemed to be incorporated by reference therein. For purposes of this Agreement, all references to the Registration Statement, the Prospectus or to any amendment or supplement thereto shall be deemed to include any copy filed with the Commission pursuant to the Electronic Data Gathering Analysis and Retrieval System (“**EDGAR**”).

2. **Placements.** Each time that the Company wishes to issue and sell any Placement Shares hereunder (each, a “**Placement**”), it will notify Leerink by email notice (or other method mutually agreed to in writing by the parties) (a “**Placement Notice**”) containing the parameters in accordance with which it desires such Placement Shares to be sold, which shall at a minimum include the maximum number of Placement Shares to be issued, the time period during which sales are requested to be made, any limitation on the number of Placement Shares that may be sold in any one Trading Day (as defined in **Section 3**) and any minimum price below which sales may not be made, a form of which containing such minimum sales parameters necessary is attached hereto as **Schedule 1**. The Placement Notice shall originate from any of the individuals from the Company set forth on **Schedule 2** (with a copy to each of the other individuals from the Company listed on such schedule), and shall be addressed to each of the individuals from Leerink set forth on **Schedule 2**, as such **Schedule 2** may be updated by either party from time to time by sending a notice containing a revised **Schedule 2** to the other party in the manner provided in **Section 12**. The Placement Notice shall be effective upon receipt by Leerink unless and until (i) Leerink declines to accept the terms contained therein for any reason, in its sole discretion, within two (2) Trading Days from the time the Placement Notice was received, (ii) the entire amount of the Placement Shares has been sold, (iii) in accordance with the notice requirements set forth in **Section 4**, the Company suspends or terminates the Placement Notice for any reason in its sole discretion, (iv) the Company issues a subsequent Placement Notice with parameters superseding those on the earlier dated Placement Notice, or (v) this Agreement has been terminated under the provisions of **Section 11**. The amount of any discount, commission or other compensation to be paid by the Company to Leerink in connection with the sale of the Placement Shares shall be calculated in accordance with the terms set forth in **Schedule 3**. It is expressly acknowledged and agreed that neither the Company nor Leerink will have any obligation whatsoever with respect to a Placement or any Placement Shares unless and until the Company delivers a Placement Notice to Leerink and Leerink does not decline such Placement Notice pursuant to the terms set forth above, and then only upon the terms specified therein and herein.

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3. Sale of Placement Shares by Leerink. Subject to the provisions of **Section 5(a)**, Leerink, for the period specified in the Placement Notice, will use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable state and federal laws, rules and regulations and the rules of the Nasdaq Global Market ("**Nasdaq**") to sell such Placement Shares up to the amount specified, and otherwise in accordance with the terms of such Placement Notice. Leerink will provide written confirmation to the Company (including by email correspondence to each of the individuals of the Company set forth on **Schedule 2**, if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply) no later than the opening of the Trading Day (as defined below) immediately following the Trading Day on which it has made sales of Placement Shares hereunder setting forth the number of Placement Shares sold on such day, the volume-weighted average price of the Placement Shares sold, and the Net Proceeds (as defined below) payable to the Company. Leerink may sell Placement Shares by any method permitted by law deemed to be an "at the market" offering as defined in Rule 415 of the Securities Act, including without limitation sales made through Nasdaq, on any other existing trading market for the Common Stock or to or through a market maker. If expressly authorized by the Company in a Placement Notice, Leerink may also sell Placement Shares in negotiated transactions. For the purposes hereof, "**Trading Day**" means any day on which the Common Stock is purchased and sold on the principal market on which the Common Stock is listed or quoted.

4. Suspension of Sales.

(a) The Company or Leerink may, upon notice to the other party in writing (including by email correspondence to each of the individuals of the other party set forth on **Schedule 2**, if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply) or by telephone (confirmed immediately by verifiable facsimile transmission or email correspondence to each of the individuals of the other party set forth on **Schedule 2**), suspend any sale of Placement Shares; *provided, however*, that such suspension shall not affect or impair either party's obligations with respect to any Placement Shares sold hereunder prior to the receipt of such notice. Each of the parties agrees that no such notice under this **Section 4** shall be effective against the other unless it is made to one of the individuals named on **Schedule 2** hereto, as such schedule may be amended from time to time.

(b) Notwithstanding any other provision of this Agreement, during any period in which the Company is in possession of material non-public information, the Company and Leerink agree that (i) no sale of Placement Shares will take place, (ii) the Company shall not request the sale of any Placement Shares, and (iii) Leerink shall not be obligated to sell or offer to sell any Placement Shares.

(c) If either Leerink or the Company has reason to believe that the exemptive provisions set forth in Rule 101(c)(1) of Regulation M under the Exchange Act are not satisfied with respect to the Common Stock, it shall promptly notify the other party, and Leerink may, at its sole discretion, suspend sales of the Placement Shares under this Agreement.

5. Sale, Settlement and Delivery of the Placement Shares.

(a) Sale of Placement Shares. On the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, upon Leerink's

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acceptance of the terms of a Placement Notice, and unless the sale of the Placement Shares described therein has been declined, suspended, or otherwise terminated in accordance with the terms of this Agreement, Leerink, for the period specified in the Placement Notice, will use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable law and regulations to sell such Placement Shares up to the amount specified in, and otherwise in accordance with, the terms of such Placement Notice. The Company acknowledges and agrees that (i) there can be no assurance that Leerink will be successful in selling Placement Shares, (ii) Leerink will incur no liability or obligation to the Company or any other person or entity if it does not sell Placement Shares for any reason other than a failure by Leerink to use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable law and regulations to sell such Placement Shares as required under this Agreement and (iii) Leerink shall be under no obligation to purchase Placement Shares on a principal basis pursuant to this Agreement, except as otherwise agreed by Leerink and the Company.

(b) Settlement of Placement Shares. Unless otherwise specified in the applicable Placement Notice, settlement for sales of Placement Shares will occur on the second (2nd) Trading Day (or such earlier day as is industry practice or as is required for regular-way trading) following the date on which such sales are made (each, a “**Settlement Date**”). The amount of proceeds to be delivered to the Company on a Settlement Date against receipt of the Placement Shares sold (the “**Net Proceeds**”) will be equal to the aggregate sales price received by Leerink at which such Placement Shares were sold, after deduction for (i) Leerink’s commission, discount or other compensation for such sales payable by the Company pursuant to **Section 2** hereof, (ii) any other amounts due and payable by the Company to Leerink hereunder pursuant to **Section 7(g)** (Expenses) hereof, and (iii) any transaction fees imposed by any governmental or self-regulatory organization in respect of such sales.

(c) Delivery of Placement Shares. On or before each Settlement Date, the Company will, or will cause its transfer agent to, electronically transfer the Placement Shares being sold by crediting Leerink’s or its designee’s account (provided Leerink shall have given the Company written notice of such designee prior to the Settlement Date) at The Depository Trust Company through its Deposit and Withdrawal at Custodian System or by such other means of delivery as may be mutually agreed upon in writing by the parties hereto which in all cases shall be freely tradeable, transferable, registered shares in good deliverable form. On each Settlement Date, Leerink will deliver the related Net Proceeds in same day funds to an account designated by the Company on, or prior to, the Settlement Date. The Company agrees that if the Company, or its transfer agent (if applicable), defaults in its obligation to deliver duly authorized Placement Shares on a Settlement Date through no fault of Leerink, the Company agrees that in addition to and in no way limiting the rights and obligations set forth in **Section 9(a)** (Company Indemnification) hereto, it will (i) indemnify and hold Leerink harmless against any loss, claim, damage, or expense (including reasonable legal fees and expenses), as incurred, arising out of or in connection with such default by the Company and (ii) pay to Leerink any commission, discount, or other compensation to which it would otherwise have been entitled absent such default.

(d) Limitations on Offering Size. Under no circumstances shall the Company cause or request the offer or sale of any Placement Shares if, after giving effect to the sale of such Placement Shares, the aggregate gross sales proceeds of Placement Shares sold pursuant to this

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Agreement would exceed the lesser of: (i) the number or dollar amount of shares of Common Stock registered pursuant to the Registration Statement pursuant to which the offering will be made, (ii) the number of authorized but unissued and unreserved shares of Common Stock of the Company, (iii) the number or dollar amount of shares of Common Stock permitted to be sold under Form S-3 (including general Instruction I.B.6 thereof, if applicable), (iv) the amount authorized from time to time to be issued and sold under this Agreement by the Company's board of directors, a duly authorized committee thereof or a duly authorized executive committee, and notified to Leerink in writing, or (v) the number or dollar amount of shares of Common Stock for which the Company has filed the ATM Prospectus or other prospectus supplement. Under no circumstances shall the Company cause or request the offer or sale of any Placement Shares pursuant to this Agreement at a price lower than the minimum price authorized from time to time by the Company's board of directors, a duly authorized committee thereof or a duly authorized executive committee, and notified to Leerink in writing.

6. Representations and Warranties of the Company. The Company represents and warrants to, and agrees with, Leerink that as of the date of this Agreement, each Representation Date (as defined in Section 7(m)), each date on which a Placement Notice is given, any date on which Placement Shares are sold hereunder and each Settlement Date:

(a) The Company and the transactions contemplated by this Agreement meet the requirements for and comply with the applicable conditions set forth in Form S-3 under the Securities Act. The sale of the Placement Shares hereunder meets the requirements of General Instruction I.B.1 of Form S-3. Prior to the delivery of any Placement Notice by the Company, the Registration Statement will have become effective; no stop order suspending the effectiveness of the Registration Statement is in effect, and no proceedings for such purpose are pending before or, to the knowledge of the Company, threatened by the Commission.

(b) (i) Each document filed or to be filed pursuant to the Exchange Act and incorporated by reference in the Registration Statement or the Prospectus complied or will comply when so filed in all material respects with the Exchange Act and the applicable rules and regulations of the Commission thereunder, (ii) the Registration Statement, as of its effective date, did not or will not contain and, as amended or supplemented, if applicable, will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, (iii) the Registration Statement and the Prospectus comply or will comply, and, as amended or supplemented, if applicable, will comply, in all material respects with the Securities Act and the applicable rules and regulations of the Commission thereunder and (iv) the Prospectus does not or will not contain, and, as amended or supplemented, if applicable, will not contain, any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, except that the representations and warranties set forth in this paragraph do not apply to Agent's Information (as defined below).

(c) (i) At the time of filing the Registration Statement and (ii) at the time of the execution of this Agreement (with such date being used as the determination date for purposes of this clause (ii)), the Company was not and is not an Ineligible Issuer (as defined in Rule 405), without taking account of any determination by the Commission pursuant to Rule 405 that it is not necessary that the Company be considered an Ineligible Issuer.



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(d) Since January 1, 2017, the Company has been and is an “emerging growth company”, as defined in Section 2(a) of the Securities Act (an “**Emerging Growth Company**”).

(e) Each free writing prospectus does not include any information that conflicts with the information contained in the Registration Statement on file at the time of issuance of such free writing prospectus, including any document incorporated by reference therein and any prospectus supplement deemed to be a part thereof that has not been superseded or modified. The foregoing sentence does not apply to Agent’s Information.

(f) The Company has not distributed and will not distribute, prior to the completion of Leerink’s distribution of the Placement Shares, any offering material in connection with the offering and sale of the Placement Shares other than the Prospectus or the Registration Statement.

(g) The interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement fairly presents the information called for in all material respects and has been prepared in accordance with the Commission’s rules and guidelines applicable thereto.

(h) The Company is subject to and in compliance in all material respects with the reporting requirements of Section 13 or Section 15(d) of the Exchange Act. The Common Stock is registered pursuant to Section 12(b) or Section 12(g) of the Exchange Act and is listed on Nasdaq, and the Company has taken no action designed to, or reasonably likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act or delisting the Common Stock from Nasdaq, nor has the Company received any notification that the commission or Nasdaq is contemplating terminating such registration or listing.

(i) Except for Leerink, there is no broker, finder or other party that is entitled to receive from the Company any brokerage or finder’s fee or other fee or commission as a result of any transactions contemplated by this Agreement.

(j) The Company has no subsidiaries.

(k) The Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of the jurisdiction in which it is chartered or organized with full corporate power and authority to own or lease, as the case may be, and to operate its properties and conduct its business as described in the Prospectus, and is duly qualified to do business as a foreign corporation and is in good standing under the laws of each jurisdiction which requires such qualification, except where the failure to be so qualified or in good standing would not reasonably be expected, individually or in the aggregate, to have a material adverse effect on the condition (financial or otherwise), prospects, earnings, business or properties of the Company, taken as a whole, whether or not arising from transactions in the ordinary course of business (a “**Material Adverse Effect**”).

(l) The shares of Common Stock outstanding prior to the issuance of the Placement Shares have been duly authorized and are validly issued, fully paid and nonassessable.

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(m) The Placement Shares have been duly and validly authorized, and, when issued and delivered to and paid for by Leerink pursuant to this Agreement, will be fully paid and nonassessable, and the issuance of such Placement Shares will not be subject to any preemptive or similar rights.

(n) There is no franchise, contract or other document of a character required to be described in the Prospectus, or to be filed as an exhibit to the Registration Statement, which is not described or filed as required; and the statements in the Prospectus under the headings “Risk Factors—Risks Relating to Protecting Our Intellectual Property”, “Risk Factors—Risks Relating to the Development and Regulatory Approval of our Product Candidates”, “Business—Intellectual Property”, “Business—Government Regulation”, and “Description of Capital Stock”, insofar as such statements summarize legal matters, agreements, documents or proceedings discussed therein, are accurate and fair summaries of such legal matters, agreements, documents or proceedings.

(o) This Agreement has been duly authorized, executed and delivered by the Company.

(p) The Company is not and, after giving effect to the offering and sale of the Placement Shares and the application of the proceeds thereof as described in the Prospectus, will not be an “investment company” as defined in the Investment Company Act of 1940, as amended.

(q) No consent, approval, authorization, filing with or order of any court or governmental agency or body is required in connection with the transactions contemplated herein, except such as have been obtained under the Securities Act and such as may be required under the blue sky laws of any jurisdiction in connection with the purchase and distribution of the Placement Shares by Leerink in the manner contemplated herein and in the Prospectus.

(r) Neither the issue and sale of the Placement Shares nor the consummation of any other of the transactions herein contemplated nor the fulfillment of the terms hereof will conflict with, result in a breach or violation of, or imposition of any lien, charge or encumbrance upon any property or assets of the Company pursuant to, (i) the certificate of incorporation or by-laws of the Company, (ii) the terms of any indenture, contract, lease, mortgage, deed of trust, note agreement, loan agreement or other agreement, obligation, condition, covenant or instrument to which the Company is a party or bound or to which its property is subject, or (iii) any statute, law, rule, regulation, judgment, order or decree applicable to the Company of any court, regulatory body, administrative agency, governmental body, arbitrator or other authority having jurisdiction over the Company or any of its properties, except, in the case of clauses (ii) and (iii) above, for any such conflict, breach, violation or default that would not, individually or in the aggregate, have a Material Adverse Effect.

(s) There has not occurred any material adverse change, or any development involving a prospective material adverse change, in the condition, financial or otherwise, or in the earnings, business or operations of the Company from that set forth in the Registration Statement or Prospectus.

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(t) No holders of securities of the Company have rights to the registration of such securities under the Registration Statement except for such rights that have been waived.

(u) The consolidated historical financial statements and schedules of the Company included in the Prospectus and the Registration Statement present fairly in all material respects the financial condition, results of operations and cash flows of the Company as of the dates and for the periods indicated, comply as to form in all material respects with the applicable accounting requirements of the Securities Act and have been prepared in conformity with generally accepted accounting principles applied on a consistent basis throughout the periods involved (except as otherwise noted therein) and except in the case of unaudited financial statements, which are subject to normal and recurring year-end adjustments and do not contain certain footnotes as permitted by the applicable rules of the Commission.

(v) No action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or its or their property is pending or, to the best knowledge of the Company, threatened that (i) could reasonably be expected to have a material adverse effect on the performance of this Agreement or the consummation of any of the transactions contemplated hereby or (ii) could reasonably be expected to have a Material Adverse Effect, except as set forth in or contemplated in the Prospectus.

(w) The Company owns or leases all such properties as are necessary to the conduct of its operations as presently conducted in all material respects.

(x) The Company is not in violation or default of (i) any provision of its certificate of incorporation or by-laws, (ii) the terms of any indenture, contract, lease, mortgage, deed of trust, note agreement, loan agreement or other agreement, obligation, condition, covenant or instrument to which it is a party or bound or to which its property is subject, or (iii) any statute, law, rule, regulation, judgment, order or decree of any court, regulatory body, administrative agency, governmental body, arbitrator or other authority having jurisdiction over the Company or any of its properties, as applicable, except, in the case of clauses (ii) and (iii) above, for any such default or violation that would not, individually or in the aggregate, have a Material Adverse Effect.

(y) PricewaterhouseCoopers LLP, who have audited certain financial statements of the Company and delivered their report with respect to the audited financial statements included in the Prospectus, are independent public accountants with respect to the Company within the meaning of the Securities Act and the applicable published rules and regulations thereunder.

(z) There are no transfer taxes or other similar fees or charges under federal law or the laws of any state, or any political subdivision thereof, required to be paid in connection with the execution and delivery of this Agreement or the issuance by the Company or sale by the Company of the Placement Shares.

(aa) The Company has filed all tax returns that are required to be filed or has requested extensions thereof (except in any case in which the failure so to file would not have a Material Adverse Effect) and has paid all taxes required to be paid by it and any other assessment, fine or penalty levied against it, to the extent that any of the foregoing is due and payable, except for any such assessment, fine or penalty that is currently being contested in good faith or as would not have a Material Adverse Effect.

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(bb) No labor problem or dispute with the employees of the Company exists or, to the Company's knowledge, is threatened or imminent, and the Company is not aware of any existing or imminent labor disturbance by the employees of any of its principal suppliers, contractors or customers, that would have a Material Adverse Effect.

(cc) The Company is insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as the Company reasonably believes are prudent and customary in the business in which it is engaged; all policies of insurance and fidelity or surety bonds insuring the Company or its businesses, assets, employees, officers and directors are in full force and effect; the Company is in compliance with the terms of such policies and instruments in all material respects; and there are no claims by the Company under any such policy or instrument as to which any insurance company is denying liability or defending under a reservation of rights clause; the Company has not been refused any insurance coverage sought or applied for; and the Company does not have any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a reasonable cost.

(dd) The Company has good and marketable title to all personal property owned by them that is material to the business of the Company (except with respect to intellectual property, which is addressed exclusively in subsection 6(pp) below), in each case free and clear of all liens, encumbrances and defects except such as do not materially affect the value of such property and do not interfere with the use made and proposed to be made of such property by the Company; and any real property and buildings held under lease by the Company are held by them under valid, subsisting and enforceable leases (subject to the effects of (A) bankruptcy, insolvency, fraudulent conveyance, fraudulent transfer, reorganization, moratorium or other similar laws relating to or affecting the rights or remedies of creditors generally; (B) the application of general principles of equity (including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing, regardless of whether enforcement is considered in proceedings at law or in equity); and (C) applicable law and public policy with respect to rights to indemnity and contribution) with such exceptions as are not material and do not interfere with the use made and proposed to be made of such property and buildings by the Company.

(ee) The Company possesses all licenses, certificates, permits and other authorizations (collectively, "**Permits**") issued by all applicable authorities necessary to conduct its business, except where the failure to possess same would not have a Material Adverse Effect. The Company has not received any notice of proceedings relating to the revocation or modification of any Permits, which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would have a Material Adverse Effect.

(ff) The Company maintains a system of internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is

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compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Since the end of the Company's most recently audited fiscal year, there has been no change in the Company's internal control over financial reporting that has materially adversely affected, or is reasonably likely to materially adversely affect, the Company's internal controls over financial reporting, and the Company is not aware of any material weakness in its internal control over financial reporting.

(gg) The Company maintains "disclosure controls and procedures" (as such term is defined in Rule 13a-15(e) under the Exchange Act) that have been designed by, or under the supervision of, the Company's principal executive officer and principal financial officer, or persons performing similar functions, to ensure that material information relating to the Company is made known to the Company's principal executive officer and principal financial officer by others within the Company (it being understood neither subsection (ff) nor this subsection (gg) requires the Company to comply with Section 404 of the Sarbanes-Oxley Act of 2002 as of an earlier date than it would otherwise be required to so comply under applicable law).

(hh) The Company has not taken, directly or indirectly, without giving effect to activities by Leerink, any action designed to or that would constitute or that would reasonably be expected to cause or result in, under the Exchange Act or otherwise, stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Placement Shares.

(ii) Except in each case as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect, the Company (i) is in compliance with any and all applicable foreign, federal, state and local laws and regulations relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants ("**Environmental Laws**"), (ii) has received and is in compliance with all Permits required of it under applicable Environmental Laws to conduct its business and (iii) has not received notice of any actual or potential liability under any Environmental Law. The Company has not been named as a "potentially responsible party" under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended.

(jj) None of the following events has occurred or exists: (i) a failure to fulfill the obligations, if any, under the minimum funding standards of Section 302 of the United States Employee Retirement Income Security Act of 1974, as amended ("**ERISA**"), and the regulations and published interpretations thereunder with respect to a Plan (defined below) that is required to be funded, determined without regard to any waiver of such obligations or extension of any amortization period that would be reasonably be expected to have a Material Adverse Effect; (ii) a current or pending audit or investigation by the Internal Revenue Service, the U.S. Department of Labor, the Pension Benefit Guaranty Corporation or any other federal or state governmental agency or any foreign regulatory agency with respect to the employment or compensation of employees by the Company that would reasonably be expected to have a Material Adverse Effect; (iii) any breach of any contractual obligation, or any violation of law or applicable qualification standards, with respect to the employment or compensation of employees by the Company that would reasonably be expected to have a Material Adverse Effect. None of the following events has occurred or is reasonably likely to occur: (i) a material increase in the aggregate amount of contributions required to be made to all Plans in the current

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fiscal year of the Company compared to the amount of such contributions made in the most recently completed fiscal year of the Company; (ii) a material increase in the “accumulated post-retirement benefit obligations” (within the meaning of Statement of Financial Accounting Standards 106) of the Company compared to the amount of such obligations in the most recently completed fiscal year of the Company; (iii) any event or condition giving rise to a liability under Title IV of ERISA that would reasonably be expected to have a Material Adverse Effect; or (iv) the filing of a claim by one or more employees or former employees of the Company related to their employment that would reasonably be expected to have a Material Adverse Effect. For purposes of this paragraph, the term “Plan” means a plan (within the meaning of Section 3(3) of ERISA) subject to Title IV of ERISA with respect to which the Company may have any liability.

(kk) There is and has been no failure on the part of the Company and any of the Company’s directors or officers, in their capacities as such, to comply with any provision of the Sarbanes-Oxley Act of 2002 and the rules and regulations promulgated in connection therewith, including Section 402 relating to loans.

(ll) Neither the Company nor, to the knowledge of the Company, any director, officer, agent, employee or affiliate of the Company, has taken or will take any action in furtherance of an offer, payment, promise to pay, or authorization or approval of the payment or giving of money, property, gifts or anything else of value, directly or indirectly, to any “government official” (including any officer or employee of a government or government-owned or controlled entity or of a public international organization, or any person acting in an official capacity for or on behalf of any of the foregoing, or any political party or party official or candidate for political office) to influence official action or secure an improper advantage; and the Company and its affiliates have conducted their businesses in compliance with applicable anti-corruption laws and have instituted and maintain and will continue to maintain policies and procedures designed to promote and achieve compliance with such laws and with the representation and warranties contained herein.

(mm) Neither the Company nor, to the knowledge of the Company, any director, officer, agent, employee or affiliate of the Company is aware of or has taken any action, directly or indirectly, that would result in a violation by such persons of the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (the “FCPA”), including, without limitation, making use of the mails or any means or instrumentality of interstate commerce corruptly in furtherance of an offer, payment, promise to pay or authorization of the payment of any money, or other property, gift, promise to give, or authorization of the giving of anything of value to any “foreign official” (as such term is defined in the FCPA) or any foreign political party or official thereof or any candidate for foreign political office, in contravention of the FCPA; and the Company and, to the knowledge of the Company, its affiliates have conducted their businesses in compliance with the FCPA and have instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

(nn) The operations of the Company are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements and the money laundering statutes and the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the “Money Laundering Laws”) and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

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(oo) Neither the Company nor, to the knowledge of the Company, any director, officer, agent, employee or affiliate of the Company is currently subject to any sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department (“**OFAC**”), and the Company will not directly or indirectly use the proceeds of the offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity, for the purpose of financing the activities of any person currently subject to any U.S. sanctions administered by OFAC.

(pp) Except as described in the Prospectus, the Company owns, possesses, licenses or has other rights to use, on reasonable terms, all patents, patent applications, trade and service marks, trade and service mark registrations, trade names, copyrights, licenses, inventions, trade secrets, technology, know-how and other intellectual property (collectively, the “**Intellectual Property**”) necessary for the conduct of the Company’s business in all material respects as now conducted or as proposed in the Prospectus to be conducted. Except as set forth in Registration Statement and the Prospectus, (i) there are no rights of third parties to any such Intellectual Property, including no liens, security interests, or other encumbrances; (ii) to the knowledge of the Company, no third party has any ownership right in or to any Intellectual Property that is owned or purported to be owned by the Company, other than any co-owner of any patent constituting Intellectual Property who is listed on the records of the U.S. Patent and Trademark Office and any co-owner of any patent application constituting Intellectual Property who is named in such patent application; (iii) to the Company’s knowledge, there is no material infringement or misappropriation by third parties of any such Intellectual Property; (iv) there is no pending or, to the Company’s knowledge, threatened action, suit, proceeding or claim by others challenging the Company’s rights in or to any such Intellectual Property, and the Company is aware of no factual basis for any such claim; (v) such Intellectual Property has not been adjudged by a court of competent jurisdiction invalid or unenforceable, in whole or in part, there is no pending or, to the Company’s knowledge, threatened action, suit, proceeding or claim by others challenging the validity or scope of any such Intellectual Property, including interferences, oppositions, reexaminations, or government proceedings, and the Company is aware of no factual basis for any such claim; (vi) there is no pending or, to the Company’s knowledge, threatened action, suit, proceeding or claim by others that the Company infringes, misappropriates, or otherwise violates any patent, trademark, copyright, trade secret or other proprietary rights of others, and the Company is aware of no factual basis for any such claim; (vii) the Company has not received notice of any claim of infringement, misappropriation or conflict with any asserted rights of others with respect to any of the Company’s products, proposed products, processes or Intellectual Property; (viii) to the knowledge of the Company, neither the development nor sale nor any currently proposed use of any of the Company’s product candidates or processes referred to in the Prospectus, in the current or proposed conduct of the business of the Company in the manner and to the extent described in the Prospectus, do currently, or will upon commercialization, to the knowledge of the Company, infringe any proprietary right or valid patent claim of any third party; (ix) the Company is not obligated to pay a material royalty, grant a license, or provide other material consideration to any third party in connection with the Intellectual Property; (x) to the Company’s knowledge, no employee of

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the Company is in or has been in violation of any term of any employment contract, patent disclosure agreement, invention assignment agreement, non-competition agreement, non-solicitation agreement, nondisclosure agreement or any restrictive covenant to or with a former employer where the basis of such violation relates to such employee's employment with the Company; (xi) to the Company's knowledge, there is no patent or published patent application in the United States or other jurisdiction which contains claims that dominate or may dominate any Intellectual Property described in the Prospectus as being owned by or licensed to the Company or that interferes with the issued or pending claims of any such Intellectual Property; (xii) to the Company's knowledge, there is no prior art that may render any patent held by the Company invalid or any patent application held by the Company unpatentable; and (xiii) all prior art of which the Company is aware that may be material to the validity of a U.S. patent or to the patentability of a U.S. patent application has been disclosed to the U.S. Patent and Trademark Office, and all such prior art has been disclosed to the patent office of other jurisdictions where required; and (xiv) the Company has taken all reasonable measures to protect its confidential information and trade secrets and to maintain and safeguard the Intellectual Property, including the execution of appropriate nondisclosure and confidentiality agreements. All licenses and material agreements to which the Company is a party relating to the Intellectual Property are in full force and effect and the Company is not in violation of any term of such license.

(qq) The Company (i) does not have any material lending or other relationship with any bank or lending affiliate of Leerink and (ii) does not intend to use any of the proceeds from the sale of the Placement Shares hereunder to repay any outstanding debt owed to any affiliate of Leerink.

(rr) The Company (i) is and at all times has been in compliance with all statutes, rules, and regulations applicable to the ownership, testing, development, manufacture, packaging, processing, use, storage, import, export or disposal of any product candidates of the Company, including, without limitation, the Federal Food, Drug and Cosmetic Act (21 U.S.C. § 301 et seq.), the federal Anti-kickback Statute (42 U.S.C. § 1320a-7b(b)), the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, and the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Affordability Reconciliation Act of 2010, the regulations promulgated pursuant to such laws, and any successor government programs, and comparable state laws, regulations relating to Good Clinical Practices and Good Laboratory Practices and all other local, state, federal, national, supranational and foreign laws, rules, regulations, manual provisions, policies and administrative guidance relating to the regulation of the Company (collectively, the "**Applicable Laws**"), except where such noncompliance would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; (ii) except as described in the Prospectus, has not received any written notice from any court or arbitrator or governmental or regulatory authority or third party alleging or asserting non-compliance with any Applicable Laws or any licenses, exemptions, certificates, approvals, clearances, authorizations, permits, registrations and supplements or amendments thereto required by any such Applicable Laws ("**Authorizations**"); (iii) to its knowledge, possesses all material Authorizations and such Authorizations are valid and in full force and effect and are not in violation of any term of any such Authorizations; (iv) has not received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any court or arbitrator or governmental or regulatory authority or



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third party alleging that any product operation or activity is in violation of any Applicable Laws or Authorizations nor, to the Company's knowledge, is any such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action threatened; (v) has not received written notice that any court or arbitrator or governmental or regulatory authority has taken, is taking or intends to take action to materially limit, suspend, materially modify or revoke any Authorizations nor, to the Company's knowledge, is any such limitation, suspension, modification or revocation threatened; (vi) has filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Applicable Laws or Authorizations and that all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete and accurate on the date filed in all material respects (or were corrected or supplemented by a subsequent submission); and (vii) is not a party to any corporate integrity agreements, monitoring agreements, consent decrees, settlement orders, or similar agreements with or imposed by any governmental or regulatory authority.

(ss) (i) To the Company's knowledge, the clinical and pre-clinical trials conducted by or on behalf of or sponsored by the Company, or in which the Company has participated, that are described in the Prospectus or the results of which are referred to in the Prospectus, as applicable, or are intended to be submitted to Regulatory Authorities (as defined below) as a basis for product approval, were and, if still pending, are being conducted in all material respects in accordance with the protocols established for each such clinical and pre-clinical trial, with standard medical and scientific research procedures, and with all applicable statutes, rules, regulations and guidance of the U.S. Food and Drug Administration, or FDA, and similar foreign, state and local regulatory authorities (collectively, the "**Regulatory Authorities**"), including, without limitation, 21 C.F.R. Parts 50, 54, 56, 58 and 312, the United States Animal Welfare Act and good clinical practices and good laboratory practices; (ii) the descriptions in the Registration Statement or the Prospectus of the results of such trials and tests are accurate and complete in all material respects and fairly present the data derived from such trials; (iii) the Company has no knowledge of any other trials the results of which are materially inconsistent with or otherwise discredit or call into question the results described or referred to in the Prospectus; (iv) the Company has operated and is currently in compliance in all material respects with all applicable statutes, rules, regulations, guidelines and policies, including, but not limited to, applicable rules, regulations and policies of the Regulatory Authorities relating to registration, investigational use, premarket clearance, licensure, application approval, good manufacturing practices, good laboratory practices, good clinical practice, product listing, quotas, labeling, advertising, record keeping and filing of reports; (v) except as may be described in the Prospectus, the Company has not received any written notices, correspondence or other communication from the Regulatory Authorities or any other governmental agency requiring the termination or suspension of any clinical or pre-clinical trials or delay of any clinical trials that are described in the Prospectus; and (vi) to the Company's knowledge, there are no reasonable grounds for the same.

(tt) The Company has filed and received approval of all Permits issued by, and has made all declarations and filings with, the applicable federal, state, local or foreign governmental or regulatory authorities that are necessary for the ownership or lease of its properties or the conduct of its business as described in the Prospectus, or to permit all clinical and nonclinical studies and trials conducted by or on behalf of the Company, including, without limitation, all

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necessary FDA and applicable foreign regulatory agency approvals; the Company is in compliance with and is not in violation of, or in default under, any such Permit; and, to the Company's knowledge, no event has occurred which allows, or after notice or lapse of time would allow, revocation, termination or modification of any such Permit or result in any other material impairment of the rights of the holder of any such Permit and does not have any reason to believe that any such Permit will not be renewed in the ordinary course, except where such revocation, termination, modification or nonrenewal would not reasonably be expected to have a Material Adverse Effect. All such Permits are in full force and effect. The Company (i) is, and at all times has been, in compliance with all Applicable Laws, except where such noncompliance would not reasonably be expected to have a Material Adverse Effect, and (ii) has not received any FDA Form 483, written notice of adverse finding, warning letter, untitled letter or other communication from any court or arbitrator or governmental or regulatory authority alleging or asserting substantial non-compliance with (A) any Applicable Laws or (B) any Permits required by any such Applicable Laws.

(uu) None of the Company's product candidates have received marketing approval from any Regulatory Authority.

(vv) The Company acknowledges and agrees that Leerink has informed the Company that Leerink may, to the extent permitted under the Securities Act and the Exchange Act, purchase and sell shares of Common Stock for its own account while this Agreement is in effect.

(ww) The Company is not a party to any agreement with an agent or underwriter for any other "at-the-market" or continuous equity transaction.

Any certificate signed by any officer of the Company and delivered to Leerink or its counsel in connection with the offering of the Placement Shares shall be deemed a representation and warranty by the Company, as to matters covered thereby, to Leerink.

7. Covenants of the Company. The Company covenants and agrees with Leerink that:

(a) Registration Statement Amendments. After the date of this Agreement and during any period in which a Prospectus relating to any Placement Shares is required to be delivered by Leerink under the Securities Act (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act or a similar rule); (i) the Company will notify Leerink promptly of the time when any subsequent amendment to the Registration Statement, other than documents incorporated by reference, has been filed with the Commission and/or has become effective or any subsequent supplement to the Prospectus, other than documents incorporated by reference, has been filed and of any request by the Commission for any amendment or supplement to the Registration Statement or Prospectus or for additional information; (ii) the Company will prepare and file with the Commission, promptly upon Leerink's request, any amendments or supplements to the Registration Statement or Prospectus that, in Leerink's reasonable opinion, may be necessary or advisable in connection with the distribution of the Placement Shares by Leerink (*provided, however*, that the failure of Leerink to make such request shall not relieve the Company of any obligation or liability hereunder, or affect Leerink's right to rely on the representations and warranties made by the Company in this Agreement and *provided, further*, that the only remedy Leerink shall have with respect to the

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failure by the Company to make such filing (but without limiting Leerink's rights under **Section 9** hereof) will be to cease making sales under this Agreement until such amendment or supplement is filed); (iii) the Company will not file any amendment or supplement to the Registration Statement or Prospectus, other than documents incorporated by reference, relating to the Placement Shares or a security convertible into the Placement Shares unless a copy thereof has been submitted to Leerink within a reasonable period of time before the filing and Leerink has not reasonably objected thereto (*provided, however*, that the failure of Leerink to make such objection shall not relieve the Company of any obligation or liability hereunder, or affect Leerink's right to rely on the representations and warranties made by the Company in this Agreement and *provided, further*, that the only remedy Leerink shall have with respect to the Company making such filing notwithstanding Leerink's objection (but without limiting Leerink's rights under **Section 9** hereof) will be to cease making sales under this Agreement) and the Company will furnish to Leerink at the time of filing thereof a copy of any document that upon filing is deemed to be incorporated by reference into the Registration Statement or Prospectus, except for those documents available via EDGAR; and (iv) the Company will cause each amendment or supplement to the Prospectus, other than documents incorporated by reference, to be filed with the Commission as required pursuant to the applicable paragraph of Rule 424(b) of the Securities Act, or in the case of any document to be incorporated therein by reference, to be filed with the Commission as required pursuant to the Exchange Act, within the time period prescribed.

(b) **Notice of Commission Stop Orders.** The Company will advise Leerink, promptly after it receives notice or obtains knowledge thereof, of the issuance or threatened issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement, of the suspension of the qualification of the Placement Shares for offering or sale in any jurisdiction, or of the initiation or threatening of any proceeding for any such purpose; and it will promptly use its commercially reasonable efforts to prevent the issuance of any stop order or to obtain its withdrawal if such a stop order should be issued. The Company will advise Leerink promptly after it receives any request by the Commission for any amendments to the Registration Statement or any amendment or supplements to the Prospectus or for additional information related to the offering of the Placement Shares or for additional information related to the Registration Statement or the Prospectus.

(c) **Delivery of Prospectus; Subsequent Changes.** During any period in which a Prospectus relating to the Placement Shares is required to be delivered by Leerink under the Securities Act with respect to the offer and sale of the Placement Shares (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act or a similar rule), the Company will comply with all requirements imposed upon it by the Securities Act, as from time to time in force, and to file on or before their respective due dates all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Sections 13(a), 13(c), 14, 15(d) or any other provision of or under the Exchange Act. If during such period any event occurs as a result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances then existing, not misleading, or if during such period it is necessary to amend or supplement the Registration Statement or Prospectus to comply with the Securities Act, the Company will promptly notify Leerink to suspend the offering of Placement Shares during such period and the Company will promptly amend or supplement the Registration Statement or Prospectus (at the expense of the Company) so as to correct such statement or omission or effect such compliance.

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(d) Listing of Placement Shares. During any period in which the Prospectus relating to the Placement Shares is required to be delivered by Leerink under the Securities Act with respect to a pending sale of the Placement Shares (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act or a similar rule), the Company will use its commercially reasonable efforts to cause the Placement Shares to be listed on Nasdaq and to qualify the Placement Shares for sale under the securities laws of such jurisdictions as Leerink reasonably designates and to continue such qualifications in effect so long as required for the distribution of the Placement Shares; *provided, however*, that the Company shall not be required in connection therewith to qualify as a foreign corporation or dealer in securities or file a general consent to service of process in any jurisdiction.

(e) Delivery of Registration Statement and Prospectus. The Company will furnish to Leerink and its counsel (at the expense of the Company) copies of the Registration Statement, the Prospectus (including all documents incorporated by reference therein) and all amendments and supplements to the Registration Statement or Prospectus that are filed with the Commission during any period in which a Prospectus relating to the Placement Shares is required to be delivered under the Securities Act (including all documents filed with the Commission during such period that are deemed to be incorporated by reference therein), in each case as soon as reasonably practicable and in such quantities as Leerink may from time to time reasonably request and, at Leerink's request, will also furnish copies of the Prospectus to each exchange or market on which sales of the Placement Shares may be made; *provided, however*, that the Company shall not be required to furnish any document (other than the Prospectus) to Leerink to the extent such document is available on EDGAR.

(f) Earnings Statement. The Company will make generally available to its security holders and to Leerink as soon as practicable, but in any event not later than 15 months after the end of the Company's current fiscal quarter, an earnings statement covering a 12-month period that satisfies the provisions of Section 11(a) and Rule 158 of the Securities Act.

(g) Expenses. The Company, whether or not the transactions contemplated hereunder are consummated or this Agreement is terminated, in accordance with the provisions of **Section 11** hereunder, will pay all expenses incident to the performance of its obligations hereunder, including, but not limited to, expenses relating to (i) the preparation, printing and filing of the Registration Statement and each amendment and supplement thereto, of each Prospectus and of each amendment and supplement thereto, (ii) the preparation, issuance, sale and delivery of the Placement Shares and any taxes payable in connection therewith, (iii) the qualification of the Placement Shares under securities laws in accordance with the provisions of **Section 7(d)** of this Agreement, including filing fees (provided, however, that any fees or disbursements of counsel for Leerink in connection therewith shall be paid by Leerink except as set forth in (vii) and (viii) below), (iv) the printing and delivery to Leerink of copies of the Prospectus and any amendments or supplements thereto, and of this Agreement, (v) the fees and expenses incurred in connection with the listing or qualification of the Placement Shares for trading on Nasdaq, (vi) the filing fees and expenses, if any, of the Commission, (vii) the filing fees and associated expenses of Leerink's outside legal counsel for filings with the FINRA

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Corporate Financing Department in an amount not to exceed \$8,000 (excluding filing fees), and (viii) the reasonable fees and disbursements of Leerink's counsel in an amount not to exceed \$50,000 (in addition to the fees and associated expenses referred to in (vii) above).

(h) Use of Proceeds. The Company will use the Net Proceeds as described in the Prospectus in the section entitled "Use of Proceeds."

(i) Notice of Other Sales. During the pendency of any Placement Notice given hereunder, and for five (5) Trading Days following the termination of any Placement Notice given hereunder, the Company shall provide Leerink notice as promptly as reasonably possible before it offers to sell, contracts to sell, sells, grants any option to sell or otherwise disposes of any shares of Common Stock (other than Placement Shares offered pursuant to the provisions of this Agreement) or securities convertible into or exchangeable for Common Stock, warrants or any rights to purchase or acquire Common Stock; *provided*, that such notice shall not be required in connection with the (i) issuance, grant or sale of Common Stock, options to purchase shares of Common Stock or Common Stock issuable upon the exercise of options or other equity awards pursuant to any stock option, stock bonus or other stock plan or arrangement described in the Prospectus, (ii) the issuance of securities in connection with an acquisition, merger or sale or purchase of assets, (iii) the issuance or sale of Common Stock pursuant to any dividend reinvestment plan that the Company may adopt from time to time provided the implementation of such is disclosed to Leerink in advance or (iv) any shares of Common Stock issuable upon the exchange, conversion or redemption of securities or the exercise of warrants, options or other rights in effect or outstanding.

(j) Change of Circumstances. The Company will, at any time during a fiscal quarter in which the Company intends to tender a Placement Notice or sell Placement Shares, advise Leerink promptly after it shall have received notice or obtained knowledge thereof, of any information or fact that would alter or affect in any material respect any opinion, certificate, letter or other document provided to Leerink pursuant to this Agreement.

(k) Due Diligence Cooperation. The Company will cooperate with any reasonable due diligence review conducted by Leerink or its agents from time to time in connection with the transactions contemplated hereby, including, without limitation, providing information and making available documents and senior corporate officers, during regular business hours and at the Company's principal offices, as Leerink may reasonably request.

(l) Required Filings Relating to Placement of Placement Shares. The Company agrees that on or prior to such dates as the Securities Act shall require, the Company will (i) file a prospectus supplement with the Commission under the applicable paragraph of Rule 424(b) under the Securities Act (each and every filing under Rule 424(b), a "**Filing Date**"), which prospectus supplement will set forth, within the relevant period, the amount of Placement Shares sold through Leerink, the Net Proceeds to the Company and the compensation payable by the Company to Leerink with respect to such Placement Shares, and (ii) deliver such number of copies of each such prospectus supplement to each exchange or market on which such sales were effected as may be required by the rules or regulations of such exchange or market.

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(m) Representation Dates; Certificate. On or prior to the date on which the Company first delivers a Placement Notice pursuant to this agreement (the “First Placement Notice Date”) and each time the Company:

- (i) amends or supplements the Registration Statement or the Prospectus relating to the Placement Shares (other than a prospectus supplement filed in accordance with Section 7(l) of this Agreement) by means of a post-effective amendment, sticker, or supplement but not by means of incorporation of document(s) by reference to the Registration Statement or the Prospectus relating to the Placement Shares;
- (ii) files an annual report on Form 10-K under the Exchange Act;
- (iii) files a quarterly report on Form 10-Q under the Exchange Act; or
- (iv) files a current report on Form 8-K containing amended financial information (other than an earnings release) under the Exchange Act (each date of filing of one or more of the documents referred to in clauses (i) through (iv) shall be a “Representation Date”);

the Company shall furnish Leerink (but in the case of clause (iv) above only if (1) a Placement Notice is pending, (2) Leerink reasonably determines that the information contained in such Form 8-K is material to a holder of Common Stock and (3) Leerink requests such certificate within three (3) days after the filing of such Form 8-K with the Commission) with a certificate, in the form attached hereto as Exhibit 7(m), within three (3) Trading Days of any Representation Date if requested by Leerink. The requirement to provide a certificate under this Section 7(m) shall be waived for any Representation Date occurring at a time at which no Placement Notice is pending, which waiver shall continue until the earlier to occur of the date the Company delivers a Placement Notice hereunder (which for such calendar quarter shall be considered a Representation Date) and the next occurring Representation Date; *provided, however*, that such waiver shall not apply for any Representation Date on which the Company files its annual report on Form 10-K. Notwithstanding the foregoing, if the Company subsequently decides to sell Placement Shares following a Representation Date when the Company relied on such waiver and did not provide Leerink with a certificate under this Section 7(m), then before the Company delivers the Placement Notice or Leerink sells any Placement Shares, the Company shall provide Leerink with a certificate, in the form attached hereto as Exhibit 7(m), dated the date of the Placement Notice.

(n) Legal Opinion. On or prior to the First Placement Notice Date and within three (3) Trading Days of each Representation Date with respect to which the Company is obligated to deliver a certificate in the form attached hereto as Exhibit 7(m) for which no waiver is applicable, the Company shall cause to be furnished to Leerink a written opinion and negative assurance letter of Goodwin Procter LLP (“Company Counsel”), or other counsel satisfactory to Leerink, each in form and substance satisfactory to Leerink and its counsel, dated the date that the opinion and negative assurance letter are required to be delivered, modified, as necessary, to relate to the Registration Statement and the Prospectus as then amended or supplemented; *provided, however*, that in lieu of such opinions and negative assurance letters for subsequent Representation Dates, counsel may furnish Leerink with a letter to the effect that Leerink may

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rely on a prior opinion or negative assurance letter delivered under this **Section 7(n)** to the same extent as if it were dated the date of such letter (except that statements in such prior opinion or negative assurance letter shall be deemed to relate to the Registration Statement and the Prospectus as amended or supplemented at such Representation Date).

(o) **Intellectual Property Opinion.** On or prior to the First Placement Notice Date and within three (3) Trading Days of each Representation Date with respect to which the Company is obligated to deliver a certificate pursuant to **Section 7(m)** and for which no waiver is applicable, the Company shall cause to be furnished to Leerink a written opinion of Goodwin Procter LLP in its capacity as the Company's intellectual property counsel ("**Intellectual Property Counsel**"), or other counsel satisfactory to Leerink, in form and substance satisfactory to Leerink and its counsel, substantially similar to the form previously provided to Leerink and its counsel, modified, as necessary, to relate to the Registration Statement and the Prospectus as then amended or supplemented; provided, however, that in lieu of such opinions for subsequent periodic filings under the Exchange Act, Intellectual Property Counsel may furnish Leerink with a letter to the effect that Leerink may rely on a prior opinion delivered under this **Section 7(o)** to the same extent as if it were dated the date of such letter (except that statements in such prior opinion shall be deemed to relate to the Registration Statement and the Prospectus as amended or supplemented at such Representation Date).

(p) **Comfort Letter.** On or prior to the First Placement Notice Date and within three (3) Trading Days of each Representation Date with respect to which the Company is obligated to deliver a certificate in the form attached hereto as **Exhibit 7(m)** for which no waiver is applicable, the Company shall cause its independent accountants to furnish Leerink letters (the "**Comfort Letters**"), dated the date the Comfort Letter is delivered, which shall meet the requirements set forth in this **Section 7(p)**; provided, that if requested by Leerink, the Company shall cause a Comfort Letter to be furnished to Leerink within ten (10) Trading Days of the date of occurrence of any material transaction or event that necessitates the filing of additional or revised financial statements, including the restatement of the Company's financial statements. The Comfort Letter from the Company's independent registered public accounting firm shall be in form and substance satisfactory to Leerink, (i) confirming that they are an independent registered public accounting firm within the meaning of the Securities Act and the PCAOB, (ii) stating, as of such date, the conclusions and findings of such firm with respect to the financial information and other matters ordinarily covered by accountants' "comfort letters" to Leerink in connection with registered public offerings (the first such letter, the "**Initial Comfort Letter**") and (iii) updating the Initial Comfort Letter with any information that would have been included in the Initial Comfort Letter had it been given on such date and modified as necessary to relate to the Registration Statement and the Prospectus, as amended and supplemented to the date of such letter.

(q) **Market Activities.** The Company will not, directly or indirectly, (i) take any action designed to cause or result in, or that constitutes or might reasonably be expected to constitute, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of Common Stock or (ii) sell, bid for, or purchase Common Stock in violation of Regulation M, or pay anyone any compensation for soliciting purchases of the Placement Shares other than Leerink; provided, however, that the Company may bid for and purchase Common Stock in accordance with Rule 10b-18 under the Exchange Act.

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(r) Insurance. The Company and its subsidiaries shall maintain, or cause to be maintained, insurance in such amounts and covering such risks as is reasonable and customary for the business for which it is engaged.

(s) Compliance with Laws. The Company and each of its subsidiaries shall maintain, or cause to be maintained, all material environmental permits, licenses and other authorizations required by federal, state and local law in order to conduct their businesses as described in the Prospectus, and the Company and each of its subsidiaries shall conduct their businesses, or cause their businesses to be conducted, in substantial compliance with such permits, licenses and authorizations and with applicable environmental laws, except where the failure to maintain or be in compliance with such permits, licenses and authorizations could not reasonably be expected to result in a Material Adverse Effect.

(t) Investment Company Act. The Company will conduct its affairs in such a manner so as to reasonably ensure that neither it nor its subsidiaries will be or become, at any time prior to the termination of this Agreement, an “investment company,” as such term is defined in the Investment Company Act, assuming no change in the Commission’s current interpretation as to entities that are not considered an investment company.

(u) Securities Act and Exchange Act. The Company will use its best efforts to comply with all requirements imposed upon it by the Securities Act and the Exchange Act as from time to time in force, so far as necessary to permit the continuance of sales of, or dealings in, the Placement Shares as contemplated by the provisions hereof and the Prospectus.

(v) No Offer to Sell. Other than a free writing prospectus (as defined in Rule 405 under the Securities Act) approved in advance by the Company and Leerink in its capacity as principal or agent hereunder, neither Leerink nor the Company (including its agents and representatives, other than Leerink in its capacity as such) will make, use, prepare, authorize, approve or refer to any written communication (as defined in Rule 405 under the Securities Act), required to be filed with the Commission, that constitutes an offer to sell or solicitation of an offer to buy Common Stock hereunder.

(w) Blue Sky and Other Qualifications. The Company will use its commercially reasonable efforts, in cooperation with Leerink, to qualify the Placement Shares for offering and sale, or to obtain an exemption for the Placement Shares to be offered and sold, under the applicable securities laws of such states and other domestic jurisdictions or, with the Company’s prior written consent, foreign jurisdictions as Leerink may designate and to maintain such qualifications and exemptions in effect for so long as required for the distribution of the Placement Shares (but in no event for less than one year from the date of this Agreement); provided, however, that the Company shall not be obligated to file any general consent to service of process or to qualify as a foreign corporation or as a dealer in securities in any jurisdiction in which it is not so qualified or to subject itself to taxation in respect of doing business in any jurisdiction in which it is not otherwise so subject. In each jurisdiction in which the Placement Shares have been so qualified or exempt, the Company will file such statements and reports as may be required by the laws of such jurisdiction to continue such qualification or exemption, as the case may be, in effect for so long as required for the distribution of the Placement Shares (but in no event for less than one year from the date of this Agreement).



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(x) Sarbanes-Oxley Act. The Company and its subsidiaries will use their best efforts to comply with all effective applicable provisions of the Sarbanes-Oxley Act.

(y) Emerging Growth Company. The Company will promptly notify Leerink if the company ceases to be an Emerging Growth company at any time prior to the completion of Leerink's distribution of the Placement Shares pursuant to this Agreement.

8. Conditions to Leerink's Obligations. The obligations of Leerink hereunder with respect to a Placement will be subject to the continuing accuracy and completeness of the representations and warranties made by the Company herein, to the due performance by the Company of its obligations hereunder, to the completion by Leerink of a due diligence review satisfactory to Leerink in its reasonable judgment, and to the continuing satisfaction (or waiver by Leerink in its sole discretion) of the following additional conditions:

(a) Registration Statement Effective. The Registration Statement shall be effective and shall be available for (i) all sales of Placement Shares issued pursuant to all prior Placement Notices and (ii) the sale of all Placement Shares contemplated to be issued by any Placement Notice.

(b) No Material Notices. None of the following events shall have occurred and be continuing: (i) receipt by the Company or any of its subsidiaries of any request for additional information from the Commission or any other federal or state governmental authority during the period of effectiveness of the Registration Statement, the response to which would require any post-effective amendments or supplements to the Registration Statement or the Prospectus; (ii) the issuance by the Commission or any other federal or state governmental authority of any stop order suspending the effectiveness of the Registration Statement or the initiation of any proceedings for that purpose; (iii) receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Placement Shares for sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose; or (iv) the occurrence of any event that makes any material statement made in the Registration Statement or the Prospectus or any material document incorporated or deemed to be incorporated therein by reference untrue in any material respect or that requires the making of any changes in the Registration Statement, the Prospectus or such documents so that, in the case of the Registration Statement, it will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading and, that in the case of the Prospectus, it will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(c) No Misstatement or Material Omission. Leerink shall not have advised the Company that the Registration Statement or Prospectus, or any amendment or supplement thereto, contains an untrue statement of fact that in Leerink's reasonable opinion is material, or omits to state a fact that in Leerink's reasonable opinion is material and is required to be stated therein or is necessary to make the statements therein not misleading.

(d) Material Changes. Except as contemplated in the Prospectus, or disclosed in the Company's reports filed with the Commission, there shall not have been any material adverse change, on a consolidated basis, in the authorized capital stock of the Company or any Material Adverse Effect or any development that could reasonably be expected to result in a Material Adverse Effect, or any downgrading in or withdrawal of the rating assigned to any of the Company's securities (other than asset backed securities), if any, by any rating organization or a public announcement by any rating organization that it has under surveillance or review its rating of any of the Company's securities (other than asset backed securities), if any, the effect of which, in the case of any such action by a rating organization described above, in the reasonable judgment of Leerink (without relieving the Company of any obligation or liability it may otherwise have), is so material as to make it impracticable or inadvisable to proceed with the offering of the Placement Shares on the terms and in the manner contemplated in the Prospectus.

(e) Company Counsel Legal Opinion. Leerink shall have received the opinions and negative assurance letters of Company Counsel required to be delivered pursuant to Section 7(n) and Section 7(o) on or before the date on which such delivery of such opinions and negative assurance letter are required pursuant to Section 7(m) and Section 7(o).

(f) Leerink Counsel Legal Opinion. Leerink shall have received from Ropes & Gray LLP, counsel for Leerink, such opinion or opinions, on or before the date on which the delivery of the Company Counsel legal opinion is required pursuant to Section 7(n), with respect to such matters as Leerink may reasonably require, and the Company shall have furnished to such counsel such documents as they request for enabling them to pass upon such matters.

(g) Comfort Letter. Leerink shall have received the Comfort Letter required to be delivered pursuant to Section 7(p) on or before the date on which such delivery of such Comfort Letter is required pursuant to Section 7(p).

(h) Representation Certificate. Leerink shall have received the certificate required to be delivered pursuant to Section 7(m) on or before the date on which delivery of such certificate is required pursuant to Section 7(m).

(i) Secretary's Certificate. On or prior to the First Placement Notice Date, Leerink shall have received a certificate, signed on behalf of the Company by its corporate Secretary, in form and substance satisfactory to Leerink and its counsel.

(j) No Suspension. Trading in the Common Stock shall not have been suspended on, and the Common Stock shall not have been delisted from, Nasdaq.

(k) Other Materials. On each date on which the Company is required to deliver a certificate pursuant to Section 7(m), the Company shall have furnished to Leerink such appropriate further information, certificates and documents as Leerink may have reasonably requested. All such opinions, certificates, letters and other documents shall have been in compliance with the provisions hereof. The Company will furnish Leerink with such conformed copies of such opinions, certificates, letters and other documents as Leerink shall have reasonably requested.

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(l) Securities Act Filings Made. All filings with the Commission required by Rule 424 under the Securities Act to have been filed prior to the issuance of any Placement Notice hereunder shall have been made within the applicable time period prescribed for such filing by Rule 424.

(m) Approval for Listing. The Placement Shares shall either have been (i) approved for listing on Nasdaq, subject only to notice of issuance, or (ii) the Company shall have filed an application for listing of the Placement Shares on Nasdaq at, or prior to, the issuance of any Placement Notice and Nasdaq shall have reviewed such application and not provided any objections thereto.

(n) FINRA. FINRA shall have raised no objection to the terms of this offering and the amount of compensation allowable or payable to Leerink as described in the Prospectus.

(o) No Termination Event. There shall not have occurred any event that would permit Leerink to terminate this Agreement pursuant to Section 11(a).

#### 9. Indemnification and Contribution.

(a) Company Indemnification. The Company agrees to indemnify and hold harmless Leerink, its affiliates and their respective partners, members, directors, officers, employees and agents of Leerink and each person, if any, who (i) controls Leerink within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, or (ii) is controlled by or is under common control with Leerink from and against any and all losses, claims, liabilities, expenses and damages (including, but not limited to, any and all reasonable investigative, legal and other expenses incurred in connection with, and any and all amounts paid in settlement (in accordance with Section 9(c)) of, any action, suit or proceeding between any of the indemnified parties and any indemnifying parties or between any indemnified party and any third party, or otherwise, or any claim asserted), as and when incurred, to which Leerink, or any such person, may become subject under the Securities Act, the Exchange Act or other federal or state statutory law or regulation, at common law or otherwise, insofar as such losses, claims, liabilities, expenses or damages arise out of or are based, directly or indirectly, on (x) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement or the Prospectus or any amendment or supplement to the Registration Statement or the Prospectus or in any free writing prospectus or in any application or other document executed by or on behalf of the Company or based on written information furnished by or on behalf of the Company filed in any jurisdiction in order to qualify the Common Stock under the securities laws thereof or filed with the Commission, (y) the omission or alleged omission to state in any such document a material fact required to be stated in it or necessary to make the statements in it not misleading or (z) any breach by any of the indemnifying parties of any of their respective representations, warranties and agreements contained in this Agreement; *provided, however*, that this indemnity agreement shall not apply to the extent that such loss, claim, liability, expense or damage arises from the sale of the Placement Shares pursuant to this Agreement and is caused, directly or indirectly, by an untrue statement or omission made in reliance upon and in conformity with the Agent's Information. This indemnity agreement will be in addition to any liability that the Company might otherwise have.

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(b) Leerink Indemnification. Leerink agrees to indemnify and hold harmless the Company and its directors and each officer of the Company that signed the Registration Statement, and each person, if any, who (i) controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act or (ii) is controlled by or is under common control with the Company (a “Company Affiliate”) against any and all loss, liability, claim, damage and expense described in the indemnity contained in Section 9(a), as incurred, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions, made in the Registration Statement (or any amendments thereto) or the Prospectus (or any amendment or supplement thereto) in reliance upon and in conformity with the Agent’s Information.

(c) Procedure. Any party that proposes to assert the right to be indemnified under this Section 9 will, promptly after receipt of notice of commencement of any action against such party in respect of which a claim is to be made against an indemnifying party or parties under this Section 9, notify each such indemnifying party of the commencement of such action, enclosing a copy of all papers served, but the omission so to notify such indemnifying party will not relieve the indemnifying party from (i) any liability that it might have to any indemnified party otherwise than under this Section 9 and (ii) any liability that it may have to any indemnified party under the foregoing provision of this Section 9 unless, and only to the extent that, such omission results in the forfeiture of substantive rights or defenses by the indemnifying party. If any such action is brought against any indemnified party and it notifies the indemnifying party of its commencement, the indemnifying party will be entitled to participate in and, to the extent that it elects by delivering written notice to the indemnified party promptly after receiving notice of the commencement of the action from the indemnified party, jointly with any other indemnifying party similarly notified, to assume the defense of the action, with counsel reasonably satisfactory to the indemnified party, and after notice from the indemnifying party to the indemnified party of its election to assume the defense, the indemnifying party will not be liable to the indemnified party for any legal or other expenses except as provided below and except for the reasonable costs of investigation subsequently incurred by the indemnified party in connection with the defense. The indemnified party will have the right to employ its own counsel in any such action, but the fees, expenses and other charges of such counsel will be at the expense of such indemnified party unless (1) the employment of counsel by the indemnified party has been authorized in writing by the indemnifying party, (2) the indemnified party has reasonably concluded (based on advice of counsel) that there may be legal defenses available to it or other indemnified parties that are different from or in addition to those available to the indemnifying party, (3) a conflict or potential conflict exists (based on advice of counsel to the indemnified party) between the indemnified party and the indemnifying party (in which case the indemnifying party will not have the right to direct the defense of such action on behalf of the indemnified party) or (4) the indemnifying party has not in fact employed counsel reasonably satisfactory to the indemnified party to assume the defense of such action, within a reasonable time after receiving notice of the commencement of the action, in each of which cases the reasonable fees, disbursements and other charges of counsel will be at the expense of the indemnifying party or parties. It is understood that the indemnifying party or parties shall not, in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the reasonable fees, disbursements and other charges of more than one separate firm admitted to practice in such jurisdiction at any one time for all such indemnified party or parties. All such fees, disbursements and other charges will be reimbursed by the indemnifying party promptly

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after the indemnifying party receives a written invoice relating to such fees, disbursements and other charges in reasonable detail. An indemnifying party will not, in any event, be liable for any settlement of any action or claim effected without its written consent. No indemnifying party shall, without the prior written consent of each indemnified party, settle or compromise or consent to the entry of any judgment in any pending or threatened claim, action or proceeding relating to the matters contemplated by this **Section 9** (whether or not any indemnified party is a party thereto), unless such settlement, compromise or consent (1) includes an unconditional release of each indemnified party, in form and substance reasonably satisfactory to such indemnified party, from all liability arising or that may arise out of such claim, action or proceeding and (2) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party.

(d) **Contribution.** In order to provide for just and equitable contribution in circumstances in which the indemnification provided for in the foregoing paragraphs of this **Section 9** is applicable in accordance with its terms but for any reason is held to be unavailable or insufficient from the Company or Leerink, the Company and Leerink will contribute to the total losses, claims, liabilities, expenses and damages (including any investigative, legal and other expenses reasonably incurred in connection with, and any amount paid in settlement of, any action, suit or proceeding or any claim asserted, but after deducting any contribution received by the Company from persons other than Leerink, such as persons who control the Company within the meaning of the Securities Act, officers of the Company who signed the Registration Statement and directors of the Company, who also may be liable for contribution) to which the Company and Leerink may be subject in such proportion as shall be appropriate to reflect the relative benefits received by the Company on the one hand and Leerink on the other. The relative benefits received by the Company on the one hand and Leerink on the other hand shall be deemed to be in the same proportion as the total Net Proceeds from the sale of the Placement Shares (before deducting expenses) received by the Company bear to the total compensation received by Leerink from the sale of Placement Shares on behalf of the Company. If, but only if, the allocation provided by the foregoing sentence is not permitted by applicable law, the allocation of contribution shall be made in such proportion as is appropriate to reflect not only the relative benefits referred to in the foregoing sentence but also the relative fault of the Company, on the one hand, and Leerink, on the other, with respect to the statements or omission that resulted in such loss, claim, liability, expense or damage, or action in respect thereof, as well as any other relevant equitable considerations with respect to such offering. Such relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company or Leerink, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and Leerink agree that it would not be just and equitable if contributions pursuant to this **Section 9(d)** were to be determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to herein. The amount paid or payable by an indemnified party as a result of the loss, claim, liability, expense, or damage, or action in respect thereof, referred to above in this **Section 9(d)** shall be deemed to include, for the purpose of this **Section 9(d)**, any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim to the extent consistent with **Section 9(c)** hereof. Notwithstanding the foregoing provisions of this **Section 9(d)**, Leerink shall not be required to contribute any amount

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in excess of the commissions received by it under this Agreement and no person found guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. For purposes of this **Section 9(d)**, any person who controls a party to this Agreement within the meaning of the Securities Act, and any officers, directors, partners, employees or agents of Leerink, will have the same rights to contribution as that party, and each officer of the Company who signed the Registration Statement will have the same rights to contribution as the Company, subject in each case to the provisions hereof. Any party entitled to contribution, promptly after receipt of notice of commencement of any action against such party in respect of which a claim for contribution may be made under this **Section 9(d)**, will notify any such party or parties from whom contribution may be sought, but the omission to so notify will not relieve that party or parties from whom contribution may be sought from any other obligation it or they may have under this **Section 9(d)** except to the extent that the failure to so notify such other party materially prejudiced the substantive rights or defenses of the party from whom contribution is sought. Except for a settlement entered into pursuant to the last sentence of **Section 9(c)** hereof, no party will be liable for contribution with respect to any action or claim settled without its written consent if such consent is required pursuant to **Section 9(c)** hereof.

10. **Representations and Agreements to Survive Delivery.** The indemnity and contribution agreements contained in **Section 9** of this Agreement and all representations and warranties of the Company herein or in certificates delivered pursuant hereto shall survive, as of their respective dates, regardless of (i) any investigation made by or on behalf of Leerink, any controlling persons, or the Company (or any of their respective officers, directors or controlling persons), (ii) delivery and acceptance of the Placement Shares and payment therefor or (iii) any termination of this Agreement.

#### 11. **Termination.**

(a) Leerink shall have the right by giving notice as hereinafter specified at any time to terminate this Agreement if (i) any Material Adverse Effect, or any development that could reasonably be expected to result in a Material Adverse Effect, has occurred that, in the reasonable judgment of Leerink, may materially impair the ability of Leerink to sell the Placement Shares hereunder, (ii) the Company shall have failed, refused or been unable to perform any agreement on its part to be performed hereunder; *provided, however*, in the case of any failure of the Company to deliver (or cause another person to deliver) any certification, opinion, or letter required under **Sections 7(m), 7(n), or 7(o)**, Leerink's right to terminate shall not arise unless such failure to deliver (or cause to be delivered) continues for more than thirty (30) days from the date such delivery was required, (iii) any other condition of Leerink's obligations hereunder is not fulfilled, or (iv) any suspension or limitation of trading in the Placement Shares or in securities generally on Nasdaq shall have occurred. Any such termination shall be without liability of any party to any other party except that the provisions of **Section 7(g)** (Expenses), **Section 9** (Indemnification and Contribution), **Section 10** (Representations and Agreements to Survive Delivery), **Section 16** (Applicable Law; Consent to Jurisdiction) and **Section 17** (Waiver of Jury Trial) hereof shall remain in full force and effect notwithstanding such termination. If Leerink elects to terminate this Agreement as provided in this **Section 11(a)**, Leerink shall provide the required notice as specified in **Section 12** (Notices).

(b) The Company shall have the right, by giving ten (10) days' notice as hereinafter specified to terminate this Agreement in its sole discretion at any time after the date of this Agreement. Any such termination shall be without liability of any party to any other party except that the provisions of **Section 7(g), Section 9, Section 10, Section 16** and **Section 17** hereof shall remain in full force and effect notwithstanding such termination.

(c) Leerink shall have the right, by giving ten (10) days' notice as hereinafter specified to terminate this Agreement in its sole discretion at any time after the date of this Agreement. Any such termination shall be without liability of any party to any other party except that the provisions of **Section 7(g), Section 9, Section 10, Section 16** and **Section 17** hereof shall remain in full force and effect notwithstanding such termination.

(d) Unless earlier terminated pursuant to this **Section 11**, this Agreement shall automatically terminate upon the issuance and sale of all of the Placement Shares through Leerink on the terms and subject to the conditions set forth herein; *provided* that the provisions of **Section 8(g), Section 9, Section 10, Section 16** and **Section 17** hereof shall remain in full force and effect notwithstanding such termination.

(e) This Agreement shall remain in full force and effect unless terminated pursuant to **Sections 11(a), (b), (c),** or **(d)** above or otherwise by mutual agreement of the parties; *provided, however*, that any such termination by mutual agreement shall in all cases be deemed to provide that **Section 7(g), Section 9, Section 10, Section 16** and **Section 17** shall remain in full force and effect.

(f) Any termination of this Agreement shall be effective on the date specified in such notice of termination; *provided, however*, that such termination shall not be effective until the close of business on the date of receipt of such notice by Leerink or the Company, as the case may be. If such termination shall occur prior to the Settlement Date for any sale of Placement Shares, such Placement Shares shall settle in accordance with the provisions of this Agreement. Upon termination of this Agreement, the Company shall not have any liability to Leerink for any compensation with respect to any Placement Shares not otherwise sold by Leerink under this Agreement.

12. **Notices.** All notices or other communications required or permitted to be given by any party to any other party pursuant to the terms of this Agreement shall be in writing, unless otherwise specified in this Agreement, and if sent to Leerink, shall be delivered to Leerink at Leerink Partners LLC, Attention: Stuart R. Nayman, Esq. and Eric Olson, 299 Park Avenue, 29<sup>th</sup> Floor, New York, NY 10171, with a copy to Ropes & Gray LLP, Attention: Patrick O'Brien, Prudential Tower, 800 Boylston Street, Boston, MA 02199; or if sent to the Company, shall be delivered to Proteostasis Therapeutics, Inc., Attention: President and Chief Executive Officer, 200 Technology Square, 4<sup>th</sup> Floor, Cambridge, MA, with a copy to Goodwin Procter LLP, John M. Mutkoski, 100 Northern Avenue, Boston, MA 02210. Each party to this Agreement may change such address for notices by sending to the parties to this Agreement written notice of a new address for such purpose. Each such notice or other communication shall be deemed given (i) when delivered personally or by verifiable facsimile transmission (with an original to follow) on or before 4:30 p.m., New York City time, on a Business Day (as defined below), or, if such day is not a Business Day on the next succeeding Business Day, (ii) on the next Business Day after timely delivery to a nationally-recognized overnight courier and (iii) on the Business Day actually received

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if deposited in the U.S. mail (certified or registered mail, return receipt requested, postage prepaid). For purposes of this Agreement, "**Business Day**" shall mean any day on which the Nasdaq and commercial banks in the City of New York are open for business.

An electronic communication ("**Electronic Notice**") shall be deemed written notice for purposes of this **Section 12** if sent to the electronic mail address specified by the receiving party under separate cover. Electronic Notice shall be deemed received at the time the party sending Electronic Notice receives verification of receipt by the receiving party. Any party receiving Electronic Notice may request and shall be entitled to receive the notice on paper, in a nonelectronic form ("**Nonelectronic Notice**") which shall be sent to the requesting party within ten (10) days of receipt of the written request for Nonelectronic Notice.

13. **Successors and Assigns.** This Agreement shall inure to the benefit of and be binding upon the Company and Leerink and their respective successors and the affiliates, controlling persons, officers and directors referred to in **Section 9** hereof. References to any of the parties contained in this Agreement shall be deemed to include the successors and permitted assigns of such party. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assigns any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement. Neither party may assign its rights or obligations under this Agreement without the prior written consent of the other party; *provided, however*, that Leerink may assign its rights and obligations hereunder to an affiliate of Leerink without obtaining the Company's consent.

14. **Adjustments for Share Splits.** The parties acknowledge and agree that all share-related numbers contained in this Agreement shall be adjusted to take into account any share split, share dividend or similar event effected with respect to the Common Stock.

15. **Entire Agreement; Amendment; Severability; Waiver.** This Agreement (including all schedules and exhibits attached hereto and Placement Notices issued pursuant hereto) constitutes the entire agreement and supersedes all other prior and contemporaneous agreements and undertakings, both written and oral, among the parties hereto with regard to the subject matter hereof. Neither this Agreement nor any term hereof may be amended except pursuant to a written instrument executed by the Company and Leerink. In the event that any one or more of the provisions contained herein, or the application thereof in any circumstance, is held invalid, illegal or unenforceable as written by a court of competent jurisdiction, then such provision shall be given full force and effect to the fullest possible extent that it is valid, legal and enforceable, and the remainder of the terms and provisions herein shall be construed as if such invalid, illegal or unenforceable term or provision was not contained herein, but only to the extent that giving effect to such provision and the remainder of the terms and provisions hereof shall be in accordance with the intent of the parties as reflected in this Agreement. No implied waiver by a party shall arise in the absence of a waiver in writing signed by such party. No failure or delay in exercising any right, power, or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any right, power, or privilege hereunder.

16. **Applicable Law; Consent to Jurisdiction.** This Agreement shall be governed by, and construed in accordance with, the internal laws of the State of New York without regard to the principles of conflicts of laws. Each party hereby irrevocably submits to the non-exclusive



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jurisdiction of the state and federal courts sitting in the City of New York, borough of Manhattan, for the adjudication of any dispute hereunder or in connection with any transaction contemplated hereby, 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 brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. 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 (certified or registered mail, return receipt requested) 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 manner permitted by law.

17. Waiver of Jury Trial. The Company and Leerink each hereby irrevocably waives any right it may have to a trial by jury in respect of any claim based upon or arising out of this Agreement or any transaction contemplated hereby.

18. Construction.

(a) The section and exhibit headings herein are for convenience only and shall not affect the construction hereof.

(b) Words defined in the singular shall have a comparable meaning when used in the plural, and vice versa;

(c) The words “hereof,” “hereto,” “herein” and “hereunder” and words of similar import, when used in this Agreement, shall refer to this Agreement as a whole and not to any particular provision of this Agreement;

(d) Wherever the word “include,” “includes” or “including” is used in this Agreement, it shall be deemed to be followed by the words “without limitation”;

(e) References herein to any gender shall include each other gender;

(f) References herein to any law, statute, ordinance, code, regulation, rule or other requirement of any governmental authority shall be deemed to refer to such law, statute, ordinance, code, regulation, rule or other requirement of any governmental authority as amended, reenacted, supplemented or superseded in whole or in part and in effect from time to time and also to all rules and regulation promulgated thereunder.

19. Permitted Free Writing Prospectuses. The Company represents, warrants and agrees that, unless it obtains the prior written consent of Leerink, which consent shall not be unreasonably withheld, conditioned or delayed, and Leerink represents, warrants and agrees that, unless it obtains the prior written consent of the Company, which consent shall not be unreasonably withheld, conditioned or delayed, it has not made and will not make any offer relating to the Placement Shares that would constitute an issuer free writing prospectus, or that would otherwise constitute a “free writing prospectus,” as defined in Rule 405, required to be filed with the Commission. Any such free writing prospectus consented to by Leerink or by the Company, as the case may be, is hereinafter referred to as a “**Permitted Free Writing**”

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**Prospectus.** The Company represents and warrants that it has treated and agrees that it will treat each Permitted Free Writing Prospectus as an “issuer free writing prospectus,” as defined in Rule 433, and has complied and will comply with the requirements of Rule 433 applicable to any Permitted Free Writing Prospectus, including timely filing with the Commission where required, legending and record keeping.

20. **Absence of Fiduciary Relationship.** The Company acknowledges and agrees that:

(a) Leerink has been retained solely to act as sales agent in connection with the sale of the Common Stock and that no fiduciary, advisory or agency relationship between the Company and Leerink has been created in respect of any of the transactions contemplated by this Agreement, irrespective of whether Leerink has advised or is advising the Company on other matters;

(b) the Company is capable of evaluating and understanding and understands and accepts the terms, risks and conditions of the transactions contemplated by this Agreement;

(c) Neither Leerink nor its affiliates have provided any legal, accounting, regulatory or tax advice with respect to the transactions contemplated by this Agreement and it has consulted its own legal, accounting, regulatory and tax advisors to the extent it has deemed appropriate;

(d) the Company has been advised that Leerink and its affiliates are engaged in a broad range of transactions which may involve interests that differ from those of the Company and that Leerink has no obligation to disclose such interests and transactions to the Company by virtue of any fiduciary, advisory or agency relationship; and

(e) the Company waives, to the fullest extent permitted by law, any claims it may have against Leerink, for breach of fiduciary duty or alleged breach of fiduciary duty and agrees that Leerink shall have no liability (whether direct or indirect) to the Company in respect of such a fiduciary claim or to any person asserting a fiduciary duty claim on behalf of or in right of the Company, including stockholders, partners, employees or creditors of the Company.

21. **Counterparts.** This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Delivery of an executed Agreement by one party to the other may be made by facsimile or electronic transmission.

22. **Agent’s Information.** As used in this Agreement, “**Agent’s Information**” means, solely the following information in the Prospectus: the fifth paragraph under the caption “Plan of Distribution” in the ATM Prospectus.

All references in this Agreement to financial statements and schedules and other information that is “contained,” “included” or “stated” in the Registration Statement or the Prospectus (and all other references of like import) shall be deemed to mean and include all such financial statements and schedules and other information that is incorporated by reference in the Registration Statement or the Prospectus, as the case may be.

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All references in this Agreement to “supplements” to the Prospectus shall include, without limitation, any supplements, “wrappers” or similar materials prepared in connection with any offering, sale or private placement of any Placement Shares by Leerink outside of the United States.

**[Remainder of Page Intentionally Blank]**

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If the foregoing correctly sets forth the understanding between the Company and Leerink, please so indicate in the space provided below for that purpose, whereupon this letter shall constitute a binding agreement between the Company and Leerink.

Very truly yours,

**LEERINK PARTNERS LLC**

By: /s/ John I. Fitzgerald, Esq.  
Name: John I. Fitzgerald, Esq.  
Title: Managing Director

**ACCEPTED as of the date  
first-above written:**

**PROTEOSTASIS THERAPEUTICS, INC.**

By: /s/ Meenu Chhabra  
Name: Meenu Chhabra  
Title: President and Chief Executive Officer

**FORM OF PLACEMENT NOTICE**

From: [ ]  
Cc: [ ]  
To: [ ]  
Subject: Leerink at the Market Offering—Placement Notice

Ladies and Gentlemen:

Pursuant to the terms and subject to the conditions contained in the Sales Agreement between Proteostasis Therapeutics, Inc. (the "Company"), and Leerink Partners LLC ("Leerink") dated [ ], 2018 (the "Agreement"), I hereby request on behalf of the Company that Leerink sell up to [ ] shares of the Company's common stock, par value \$0.001 per share ("Common Stock"), at a minimum market price of \$\_\_\_\_\_ per share[, provided that no more than [ ] shares of Common Stock shall be sold in any one Trading Day, as such term is defined in **Section 3** of the Agreement]. Sales should begin on the date of this Notice and shall continue until [DATE] [all shares are sold].

**The Company**

Meenu Chhabra

Helen Boudreau

Jeff Held

**Leerink Partners LLC**

Rahul Chaudhary

Jon Civitarese

Patrick Morley

**Compensation**

Leerink shall be paid compensation equal to 3% of the gross proceeds from the sales of Common Stock pursuant to the terms of this Agreement.

**OFFICER CERTIFICATE**

The undersigned, the duly qualified and elected \_\_\_\_\_, of Proteostasis Therapeutics, Inc. ("**Company**"), a Delaware corporation, does hereby certify in such capacity and on behalf of the Company, pursuant to **Section 7(m)** of the Sales Agreement dated \_\_\_\_\_, 2018 (the "**Sales Agreement**") between the Company and Leerink Partners LLC, that to the best of the knowledge of the undersigned.

(i) The representations and warranties of the Company in **Section 6** of the Sales Agreement (A) to the extent such representations and warranties are subject to qualifications and exceptions contained therein relating to materiality or Material Adverse Effect, are true and correct on and as of the date hereof with the same force and effect as if expressly made on and as of the date hereof, except for those representations and warranties that speak solely as of a specific date and which were true and correct as of such date, and (B) to the extent such representations and warranties are not subject to any qualifications or exceptions, are true and correct in all material respects as of the date hereof as if made on and as of the date hereof with the same force and effect as if expressly made on and as of the date hereof except for those representations and warranties that speak solely as of a specific date and which were true and correct as of such date; and

(ii) The Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied pursuant to the Sales Agreement at or prior to the date hereof.

By: \_\_\_\_\_  
Name:  
Title:

Date: \_\_\_\_\_



March 23, 2018

Proteostasis Therapeutics, Inc.  
200 Technology Square, 4<sup>th</sup> Floor  
Cambridge, Massachusetts 02139

Re: Securities Registered under Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel to you in connection with your filing of a Registration Statement on Form S-3 (as amended or supplemented, the "Registration Statement") filed on June 7, 2017 with the Securities and Exchange Commission (the "Commission") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), relating to the registration of the offering by Proteostasis Therapeutics, Inc., a Delaware corporation (the "Company") of up to \$125,000,000 of any combination of securities of the types specified therein. We are delivering this opinion letter in connection with the prospectus (the "Prospectus") contained in the Registration Statement which relates to the offering by the Company of up to \$50,000,000 in shares (the "Shares") of the Company's common stock, par value \$0.001 per share ("Common Stock") covered by the Registration Statement. The Shares are being offered and sold by the Company through the sales agent named in, and pursuant to, the Sales Agreement, dated March 23, 2018, between the Company and the sales agent.

We have reviewed such documents and made such examination of law as we have deemed appropriate to give the opinions set forth below. We have relied, without independent verification, on certificates of public officials and, as to matters of fact material to the opinions set forth below, on certificates of officers of the Company.

For purposes of the opinion set forth below, we have assumed that no future issuance or issuances of securities of the Company will cause the number of Shares to be issuable under the Sales Agreement to exceed the total number of authorized shares of Common Stock under the Company's certificate of incorporation, as amended and then in effect.

For purposes of the opinions set forth below, we refer to the following as "Future Approval and Issuance": (a) the approval by the Company's board of directors (or a duly authorized committee of the board of directors) of the issuance of the Shares (the "Approval") and (b) the issuance of the Shares in accordance with the Approval and the receipt by the Company of the consideration (which shall not be less than the par value of such Shares) to be paid in accordance with the Approval.

The opinion set forth below is limited to the Delaware General Corporation Law.

Based on the foregoing, we are of the opinion that the Shares have been duly authorized and, upon Future Approval and Issuance, will be validly issued, fully paid and nonassessable.

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement. In giving our consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

/s/ GOODWIN PROCTER LLP

GOODWIN PROCTER LLP