UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of Report (Date of earliest event reported): August 8, 2016

Arrowhead Pharmaceuticals, Inc.

(Exact name of registrant as specified in its charter)

0-21898 (Commission File Number)

Delaware (State or other jurisdiction of incorporation) 46-0408024 (IRS Employer Identification No.)

225 South Lake Avenue, Suite 1050, Pasadena, CA 91101 (Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code (626) 304-3400

ck 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 isions:
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)

Item 1.01 Entry into a Material Definitive Agreement.

The disclosure set forth below under Item 3.02 is incorporated herein by reference.

Item 3.02 Unregistered Sales of Equity Securities.

On August 8, 2016, Arrowhead Pharmaceuticals, Inc. (the "Company") entered into a Securities Purchase Agreement (the "Purchase Agreement") with certain institutional investors (the "Purchasers"), pursuant to which the Company agreed to issue and sell to the Purchasers an aggregate of 7,627,119 shares of common stock, \$0.001 par value per share (the "Shares"), at a purchase price of \$5.90 per share (the "Offering"). The aggregate purchase price to be paid by the Purchasers for the Shares is approximately \$45,000,000, and the Company expects to receive net proceeds of approximately \$43,200,000, after deducting commissions and offering expenses. The closing of the Offering (the "Closing") is expected to occur on August 11, 2016.

The Purchase Agreement also requires the Company to register the Shares for resale. The Company is required to prepare and file a registration statement with the Securities and Exchange Commission within 30 days of the Closing and to use commercially reasonable efforts to have such registration statement declared effective as soon as practicable but no later than within 90 days after the Closing, if there is no review by the Securities and Exchange Commission, and within 120 days of the Closing in the event of such review.

The Shares were offered and sold without registration under the Securities Act of 1933, as amended (the "Securities Act"), or state securities laws, in reliance on the exemptions provided by Section 4(a)(2) of the Securities Act and Regulation D promulgated thereunder. The Shares may not be offered or sold in the United States without an effective registration statement or pursuant to an exemption from applicable registration requirements. Neither this Current Report on Form 8-K, nor the exhibits attached hereto is an offer to sell or the solicitation of an offer to buy the Shares.

The representations, warranties and covenants contained in the Purchase Agreement were made solely for the benefit of the parties to the Purchase Agreement. In addition, such representations, warranties and covenants (i) are intended as a way of allocating the risk between the parties to the Purchase Agreement and not as statements of fact, and (ii) may apply standards of materiality in a way that is different from what may be viewed as material by stockholders of, or other investors in, the Company. Accordingly, the Purchase Agreement is included with this filing only to provide investors with information regarding the terms of transaction and not to provide investors with any other factual information regarding the Company. Investors should not rely on the representations, warranties and covenants or any descriptions thereof as characterizations of the actual state of facts or condition of the Company or any of its subsidiaries or affiliates. Moreover, information concerning the subject matter of the representations and warranties may change after the date of the Purchase Agreement, which subsequent information may or may not be fully reflected in public disclosures.

The above description of the material terms of the Offering is qualified in its entirety by reference to the Purchase Agreement, which is attached hereto as Exhibit 10.1 and incorporated herein by reference.

Item 8.01 Other Events.

On August 9, 2016, the Company issued the press release attached hereto as Exhibit 99.1 regarding the Offering described in Item 3.02. A copy of the press release is attached hereto as Exhibit 99.1.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
10.1	$Securities\ Purchase\ Agreement,\ dated\ August\ 8,\ 2016,\ between\ the\ Company\ and\ the\ purchasers\ listed\ therein.$
99 1	Press Release dated August 9, 2016

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 thereunto duly authorized.

Date: August 10, 2016

ARROWHEAD RESEARCH CORPORATION

By: /s/ Kenneth Myszkowski

Kenneth Myszkowski Chief Financial Officer

EXHIBIT INDEX

Exhibit No.	Description
10.1	Securities Purchase Agreement, dated August 8, 2016, between the Company and the purchasers listed therein.
99.1	Press Release, dated August 9, 2016.

SECURITIES PURCHASE AGREEMENT

This SECURITIES PURCHASE AGREEMENT (this "Agreement") is made and entered into as of August 8, 2016 (the "Effective Date") by and among Arrowhead Pharmaceuticals, Inc., a Delaware corporation (the "Company"), and each of those persons and entities, severally and not jointly, listed as a Purchaser on the Schedule of Purchasers attached as Schedule I hereto (each a "Purchaser" and together the "Purchasers"). Certain terms used and not otherwise defined in the text of this Agreement are defined in Section 11 hereof.

RECITALS

WHEREAS, the Company and the Purchasers are executing and delivering this Agreement in reliance upon the exemption from securities registration afforded by Section 4(a)(2) of the Securities Act of 1933, as amended (the "Securities Act"), and Rule 506 of Regulation D as promulgated by the United States Securities and Exchange Commission (the "Commission") under the Securities Act;

WHEREAS, the Company desires to sell to the Purchasers, and the Purchasers desire to purchase from the Company, shares of common stock, \$0.001 par value per share (the "Common Stock") in accordance with the terms and provisions of this Agreement.

NOW, THEREFORE, in consideration of the foregoing and the mutual representations, warranties and covenants herein contained, the parties hereto hereby agree as follows:

<u>Section 1</u>. <u>Authorization of Shares</u>. The Company has authorized the sale and issuance of 7,627,119 shares of Common Stock on the terms and subject to the conditions set forth in this Agreement. The shares of Common Stock sold hereunder at the Closing (as defined below) shall be referred to as the "Shares."

Section 2. Sale and Purchase of the Shares.

2.1 Upon the terms and subject to the conditions herein contained, the Company agrees to sell to each Purchaser, and each Purchaser agrees to purchase from the Company at the Closing (as defined in Section 3), that number of Shares set forth opposite such Purchaser's name on Schedule I hereto (the "Schedule of Purchasers") for the purchase price set forth opposite such Purchaser's name, which amount represents the number of Shares purchased by such Purchaser multiplied by the price per Share of \$5.90. The purchase price to be paid by each Purchaser, as set forth on Schedule I, shall be referred to as the "Aggregate Purchase Price." Each Purchaser shall severally, and not jointly, be liable for only the purchase of the Shares that appear on the Schedule of Purchasers that relate to such Purchaser. The Company's agreement with each of the Purchasers, is a separate agreement, and the sale of Shares to each of the Purchasers is a separate sale. The obligations of each Purchaser hereunder are expressly not conditioned on the purchase by any or all of the other Purchasers of the Shares such other Purchasers have agreed to purchase.

2.2 At or prior to the Closing, each Purchaser will pay the purchase price set forth opposite such Purchaser's name on Schedule I by wire transfer of immediately available funds in accordance with wire instructions provided by the Company to the Purchasers prior to the Closing. On or before the Closing, the Company will instruct its transfer agent to either deliver stock certificates to the Purchasers or make book-entry notations representing the Shares, in each case against delivery of the Aggregate Purchase Price. The foregoing notwithstanding, if the Purchaser has indicated to the Company at the time of execution of this Agreement a need to settle on a "delivery versus payment" basis, then the Company shall either deliver to such Purchaser (or such Purchaser's designated custodian) the original stock certificates or make a book-entry notation reflecting ownership of the Shares whereupon following receipt of such certificate(s) or written confirmation from the Company's transfer agent that a book-entry notation has been made, then the Purchaser shall then promptly wire the Aggregate Purchase Price as provided in this Section 2.

<u>Section 3</u>. <u>Closing</u>. Subject to the satisfaction of the closing conditions set forth in Section 7, the closing with respect to the transactions contemplated in Section 2 hereof (the "*Closing*"), shall take place at the offices of Gibson, Dunn & Crutcher LLP, 555 Mission Street, Suite 3000, San Francisco, California on the third Business Day after the Effective Date (the "*Closing Date*") or at such other time and place as the Company and Purchasers may agree, including remotely via the exchange of documents and signatures.

- <u>Section 4</u>. <u>Representations and Warranties of the Purchasers</u>. Each Purchaser, severally but not jointly, represents and warrants to the Company that the statements contained in this Section 4 are true and correct as of the Effective Date, and will be true and correct as of the date of the Closing Date:
- 4.1 <u>Validity</u>. The execution, delivery and performance of this Agreement and the other instruments referred to herein, in each case to which the Purchaser is a party, and the consummation by the Purchaser of the transactions contemplated hereby, have been duly authorized by all necessary corporate, partnership, limited liability or similar actions, as applicable, on the part of such Purchaser. This Agreement has been duly executed and delivered by the Purchaser, and the other instruments referred to herein to which it is a party will be duly executed and delivered by the Purchaser, and each such agreement and other instruments constitutes or will constitute a valid and binding obligation of the Purchaser, enforceable against it in accordance with its terms, except as limited by applicable bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance, and any other laws of general application affecting enforcement of creditors' rights generally, and as limited by laws relating to the availability of specific performance, injunctive relief, or other equitable remedies.
- 4.2 <u>Brokers</u>. There is no broker, investment banker, financial advisor, finder or other Person which has been retained by or is authorized to act on behalf of the Purchaser who might be entitled to any fee or commission for which the Company will be liable in connection with the execution of this Agreement and the consummation of the transactions contemplated hereby.
- 4.3 <u>Investment Representations and Warranties</u>. The Purchaser understands and agrees that the offering and sale of the Shares has not been registered under the Securities Act or any applicable state securities laws and is being made in reliance upon federal and state exemptions for transactions not involving a public offering which depend upon, among other things, the bona fide nature of the investment intent and the accuracy of the Purchaser's representations as expressed herein.

- 4.4 <u>Investor Questionnaire</u>. In connection with the filing of a Registration Statement, the Company may require the Purchaser to furnish to the Company such information regarding the Purchaser and the Registrable Securities, as the Company may reasonably request in writing and as shall reasonably be required in connection with the filing of the Registration Statement. At least five Business Days prior to the first anticipated filing date of such Registration Statement, the Company shall notify the Purchaser of any information the Company reasonably requests from the Purchaser, to the extent related to the Registration Statement.
- 4.5 <u>Acquisition for Own Account; No Control Intent</u>. The Purchaser is acquiring the Shares for its own account for investment and not with a view toward distribution in a manner which would violate the Securities Act or any applicable state securities laws. Such Purchaser is not a broker or dealer registered pursuant to Section 15 of the Exchange Act (a "registered broker-dealer") and is not affiliated with a registered broker dealer. Purchaser is not party to any agreement providing for or contemplating the distribution of any of the Shares. The Purchaser has no present intent to effect a "change of control" of the Company as such term is understood under the rules promulgated pursuant to Section 13(d) of the Exchange Act.
- 4.6 <u>Ability to Protect Its Own Interests and Bear Economic Risks</u>. The Purchaser, by reason of the business and financial experience of its management, has the capacity to protect its own interests in connection with the transactions contemplated by this Agreement and is capable of evaluating the merits and risks of the investment in the Shares. The Purchaser is able to bear the economic risk of an investment in the Shares and is able to sustain a loss of all of its investment in the Shares without economic hardship, if such a loss should occur.
- 4.7 <u>Accredited Investor</u>; <u>No Bad Actor</u>. The Purchaser is an "accredited investor" as that term is defined in Rule 501(a) under the Securities Act. Such Purchaser has not taken any of the actions set forth in, and is not subject to, the disqualification provisions of Rule 506(d)(1) of the Securities Act.
- 4.8 Access to Information. The Purchaser has been given access to Company documents, records, and other information, and has had adequate opportunity to ask questions of, and receive answers from, the Company's officers, employees, agents, accountants, and representatives concerning the Company's business, operations, financial condition, assets, liabilities, and all other matters relevant to its investment in the Shares. Purchaser understands that an investment in the Shares bears significant risk and represents that it has reviewed the SEC Reports, which serve to qualify certain of the Company representations set forth below.
- 4.9 <u>Non-Reliance on Placement Agent</u>. The Purchaser has, in connection with its decision to purchase the Shares set forth on Schedule I attached hereto, relied solely upon the representations and warranties of the Company contained herein, and such Purchaser has not relied on any placement agent in negotiating the terms of its investment in the Shares. In making a decision to purchase the Shares, such Purchaser has not received or relied on any communication, investment advice or recommendation from any placement agent.

4.10 Restricted Shares.

- (a) The Purchaser understands that the Shares will be characterized as "restricted securities" under the federal securities laws inasmuch as they are being acquired from the Company in a private placement under Section 4(a)(2) of the Securities Act and that under such laws and applicable regulations such Shares may be resold without registration under the Securities Act only in certain limited circumstances.
- (b) The Purchaser acknowledges that the Shares must be held indefinitely unless subsequently registered under the Securities Act and under applicable state securities laws or an exemption from such registration is available. The Purchaser understands that the Company is under no obligation to register the Shares, except as provided in this Agreement.
- (c) The Purchaser is aware of the provisions of Rule 144 under the Securities Act, which permit limited resale of securities purchased in a private placement.
- 4.11 <u>Tax Advisors</u>. The Purchaser has had the opportunity to review with the Purchaser's own tax advisors the federal, state and local tax consequences of this investment, where applicable, and the transactions contemplated by this Agreement. The Purchaser is relying solely on the Purchaser's own determination as to tax consequences or the advice of such tax advisors and not on any statements or representations of the Company or any of its agents and understands that the Purchaser (and not the Company) shall be responsible for the Purchaser's own tax liability that may arise as a result of this investment or the transactions contemplated by this Agreement.
- 4.12 Short Sales. Between the time the Purchaser learned about the offering contemplated by this Agreement and the public announcement of the offering, the Purchaser has not engaged in any short sales (as defined in Rule 200 of Regulation SHO under the Exchange Act ("Short Sales")) or similar transactions with respect to the Common Stock, nor has the Purchaser, directly or indirectly, caused any Person to engage in any Short Sales or similar transactions with respect to the Common Stock. Notwithstanding the foregoing, in the case of a Purchaser that is a multi-managed investment vehicle whereby separate portfolio managers manage separate portions of such Purchaser's assets and the portfolio managers have no direct knowledge of the investment decisions made by the portfolio managers managing other portions of such Purchaser's assets, the representation set forth above shall apply only with respect to the portion of assets managed by the portfolio managers that have knowledge about the financing transaction contemplated by this Agreement.
- 4.13 No Interested Stockholder. After giving effect to the purchase of the Shares at Closing, the Purchaser will not be deemed to be an "interested stockholder" within the meaning of Section 203 of the Delaware General Corporation Law.

- <u>Section 5</u>. <u>Representations and Warranties by the Company.</u> Assuming the accuracy of the representations and warranties of the Purchasers set forth in Section 4 and except as set forth in the SEC Reports (defined below), which disclosures serve to qualify these representations and warranties in their entirety, the Company represents and warrants to the Purchasers that the statements contained in this Section 5 are true and correct as of the Effective Date, and will be true and correct as of the date of the Closing Date:
- 5.1 <u>Organization and Good Standing</u>. The Company and each Subsidiary: (a) is duly incorporated or otherwise organized, validly existing and in good standing under the laws of the jurisdiction of its formation, (b) is duly qualified to do business as a foreign entity and is in good standing in each jurisdiction where the nature of the property owned or leased by it or the nature of the business conducted by it makes such qualification necessary, except where the failure to be so qualified would not have a Material Adverse Effect, and (c) has all requisite corporate power and authority to own or lease and operate its assets and carry on its business as presently being conducted as disclosed in the SEC Reports.

5.2 Corporate Power and Authority; Valid Issuance of Shares.

- (a) The Company has all requisite corporate power and has taken all necessary corporate action required for the due authorization, execution, delivery and performance by the Company of this Agreement and the other Transaction Documents and the consummation of the transactions contemplated hereby and thereby. The execution, delivery and performance by the Company of this Agreement and the consummation by the Company of the transactions contemplated hereby, have been duly authorized by the Company's board of directors or a duly authorized committee thereof and no further consent or authorization of the Company, its board of directors or its stockholders is required. This Agreement has been duly executed and delivered by the Company, and the other instruments referred to herein to which it is a party will be duly executed and delivered by the Company, and each such agreement constitutes or will constitute a legal, valid and binding obligation of the Company enforceable against it in accordance with its terms, except to the extent that enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance, and any other laws of general application affecting enforcement of creditors' rights generally, and as limited by laws relating to the availability of specific performance, injunctive relief, or other equitable remedies.
- (b) The Shares have been duly and validly authorized and, when issued and paid for pursuant to this Agreement, the Shares will be validly issued, fully paid and non-assessable, and shall be free and clear of all encumbrances (other than restrictions on transfer under the Transaction Documents arising under applicable federal and state securities laws), and will not be subject to preemptive rights or other similar rights of stockholders of the Company
- 5.3 <u>Consents</u>. Neither the execution, delivery or performance of this Agreement by the Company, nor the consummation by it of the obligations and transactions contemplated hereby (including, without limitation, the issuance, the reservation for issuance and the delivery of the Shares and the provision to the Purchaser of the rights contemplated by the Transaction Documents) requires any consent of, authorization by, exemption from, filing with or notice to any Governmental Entity or any other Person, other than filings required under applicable U.S. federal and state securities laws.

5.4 No Conflicts.

- (a) The execution, delivery and performance of this Agreement and the consummation of the transactions contemplated hereby (including, without limitation, the issuance, the reservation for issuance and the delivery of the Shares and the provision to the Purchaser of the rights contemplated by the Transaction Documents) will not (a) result in a violation of the certificate of incorporation, as amended, the by-laws, as amended, or any equivalent organizational document of the Company or any Subsidiary (the "Charter Documents") or require the approval of the Company's stockholders, (b) violate, conflict with or result in the breach of the terms, conditions or provisions of or constitute a default (or an event which with notice or lapse of time or both would become a default) under, or give rise to any right of termination, acceleration or cancellation under, any material agreement, lease, mortgage, license, indenture, instrument or other contract to which the Company or any Subsidiary is a party, (c) result in a violation of any law, rule, regulation, order, judgment or decree (including, without limitation, U.S. federal and state securities laws and regulations and regulations of any self-regulatory organizations to which the Company or its securities are subject) applicable to the Company or any Subsidiary or by which any property or asset of the Company or any Subsidiary is bound or affected, (d) result in a violation of or require stockholder approval under any rule or regulation of The NASDAQ Stock Market, or (e) result in the creation of any encumbrance upon any of the Company's or any of its Subsidiary's assets.
- (b) Neither the Company nor any Subsidiary is (i) in violation of its Charter Documents, (ii) in default (and no event has occurred which, with notice or lapse of time or both, would cause the Company or any Subsidiary to be in default) under, nor has there occurred any event giving others (with notice or lapse of time or both) any rights of termination, amendment, acceleration or cancellation of, any material agreement, indenture or instrument to which the Company or any Subsidiary is a party, nor has the Company or any Subsidiary received written notice of a claim that it is in default under, or that it is in violation of, any Material Contract (whether or not such default or violation has been waived), (iii) in violation of, or in receipt of written notice that it is in violation of, any law, ordinance or regulation of any Governmental Entity, except where the violation would not result in a Material Adverse Effect, and (iv) in violation of any order of any Governmental Entity having jurisdictional over the Company or any Subsidiary or any of the Company's or any Subsidiary's properties or assets.

5.5 Capitalization.

(a) As of June 30, 2016, the authorized capital stock of the Company consists of 150,000,000 shares of capital stock, of which 145,000,000 are designated as Common Stock and 5,000,000 are designated as preferred stock, \$0.001 par value per share ("*Preferred Stock*"). As of June 30, 2016: (i) 60,429,405 shares of Common Stock were issued and outstanding; (ii) 6,718,056 shares of Common Stock were issuable (and such number was reserved for issuance) upon exercise of options to purchase Common Stock (the "*Options*") outstanding as of such date; (iii) 1,370,000 shares of Common Stock were issuable (and such number was reserved for issuance) upon vesting of restricted stock units for the issuance of Common Stock (the "*RSUs*") outstanding as of such date; (iv) 835,534 shares of Common Stock were issuable (and such number was reserved for issuance) upon exercise of warrants to purchase Common Stock (the "*Warrants*") outstanding as of such date; and (v) 15,652 shares of Series C Preferred Stock were issued and outstanding.

- (b) As of June 30, 2016, except for: (i) the Options, (ii) the RSUs (iii) the Warrants, (iv) the Preferred Stock, and (v) 5,000 shares of Common Stock issuable subject to outstanding exchange rights, there were no options, warrants or other rights to acquire capital stock or other equity interests from the Company, or securities convertible into or exchangeable for such capital stock or other equity interests.
- 5.6 Material Contracts. Each Material Contract is the legal, valid and binding obligation of the Company or a Subsidiary, as the case may be, enforceable against the Company or such Subsidiary, as the case may be, in accordance with its terms, except to the extent that enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance, and any other laws of general application affecting enforcement of creditors' rights generally, and as limited by laws relating to the availability of specific performance, injunctive relief, or other equitable remedies. The Company and each Subsidiary, as the case may be, is in compliance with all material terms of the Material Contracts to which it is party, and there has not occurred any breach, violation or default or any event that, with the lapse of time, the giving of notice or the election of any Person, or any combination thereof, would constitute a breach, violation or default by the Company or any Subsidiary under any such Material Contract or, to the knowledge of the Company and each Subsidiary, by any other Person to any such contract except where such breach, violation or default would not have a Material Adverse Effect. Neither the Company nor any Subsidiary has been notified that any party to any Material Contract intends to cancel, terminate, not renew or exercise an option under any Material Contract, whether in connection with the transactions contemplated hereby or otherwise.
- 5.7 <u>The Nasdaq Stock Market</u>. The Common Stock is listed on The Nasdaq Global Select Market. To the Company's knowledge, there are no proceedings to revoke or suspend such listing of the Shares. The Company is in compliance with the requirements of Nasdaq for continued listing of the Common Stock thereon and any other Nasdaq listing and maintenance requirements, and the execution, delivery and performance of this Agreement by the Company and the consummation by the Company of the transactions contemplated hereby (including the issuance of the Shares) will not result in any noncompliance by the Company with any such requirements.
- 5.8 No Integrated Offering. Neither the Company, any Subsidiary, nor any of the Company's or any Subsidiary's Affiliates or any other Person acting on the Company's or any Subsidiary's behalf, has directly or indirectly engaged in any form of general solicitation or general advertising with respect to the Shares, nor have any of such Persons made any offers or sales of any security of the Company, any Subsidiary or any of the Company's or any Subsidiary's Affiliates or solicited any offers to buy any security of the Company, any Subsidiary or any of the Company's or any Subsidiary's Affiliates under circumstances that would require registration of the Shares under the Securities Act or any other securities laws or cause this offering of Shares to be integrated with any prior offering of securities of the Company or any Subsidiary for purposes of the Securities Act in any manner that would affect the validity of the private placement exemption under the Securities Act for the offer and sale of the Shares hereunder.

5.9 SEC Reports; Financial Statements; Shell Company Status.

- (a) The Company's Common Stock is registered under Section 12 of the Exchange Act. The Company has filed all reports, schedules, forms, statements and other documents required to be filed by the Company under the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, since October 1, 2015 (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, being collectively referred to herein as the "SEC Reports") on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Reports prior to the expiration of any such extension. As of their respective dates, the SEC Reports complied in all material respects with the requirements of the Exchange Act and, in each case, to the rules promulgated thereunder, as applicable, and none of the SEC Reports, when filed, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.
- (b) The financial statements and the related notes of the Company included in the SEC Reports comply in all material respects with applicable accounting requirements and the rules and regulations of the Commission with respect thereto as in effect at the time of filing. Such financial statements have been prepared in accordance with GAAP, except as may be otherwise specified in such financial statements or the notes thereto and except that unaudited financial statements may not contain all footnotes required by GAAP, and fairly present the consolidated financial position of the Company as of and for the dates thereof and the consolidated results of operations and cash flows for the periods then ended, subject, in the case of unaudited statements, to normal, immaterial, year-end audit adjustments. There is no transaction, arrangement, or other relationship between the Company or any Subsidiary and an unconsolidated or other off balance sheet entity that is required to be disclosed by the Company in SEC Reports and is not so disclosed and would have or reasonably be expected to result in a Material Adverse Effect.
 - (c) The Company is not, and has never been, an issuer identified in Rule 144(i)(1) under the Securities Act.
 - 5.10 Disclosure Controls and Procedures; Internal Controls Over Financial Reporting.
- (a) The Company has established and maintains disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) that are effective in all material respects to ensure that material information relating to the Company, including any consolidated Subsidiaries, is made known to its principal executive officer and principal financial officer by others within those entities. The Company's certifying officers have evaluated the effectiveness of the Company's disclosure controls and procedures as of the end of the period covered by the most recently filed quarterly or annual periodic report under the Exchange Act (such date, the "Evaluation Date"). The Company presented in its most recently filed quarterly or annual periodic report under the Exchange Act the conclusions of the certifying officers about the effectiveness of the disclosure controls and procedures based on their evaluations as of the Evaluation Date.

- (b) The Company maintains internal control over financial reporting (as such term is defined in Exchange Act Rule 13a-15(f) and 15d-15(f)) designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP and such internal control over financial reporting is effective. The Company presented in its most recently filed annual report under the Exchange Act the conclusions of the certifying officers about the effectiveness of the Company's internal control over financial reporting based on their evaluations as of the end of the period covered by such report. Since the Evaluation Date, there have been no significant changes in the Company's internal control over financial reporting or, to the Company's knowledge, in other factors that could significantly affect the Company's internal control over financial reporting.
- 5.11 Absence of Litigation. There is no claim, action, suit, arbitration, investigation or other proceeding pending against, or to the knowledge of the Company and each Subsidiary, threatened against or affecting, the Company, any Subsidiary or any of the Company's or any Subsidiary's properties or, to the knowledge of the Company and each Subsidiary, any of its respective officers or directors before any Governmental Entity, in each case other than legal proceedings that are not reasonably expected to result in a Material Adverse Effect. Neither the Company nor any Subsidiary, nor any director or officer thereof, is or has been the subject of any action involving a claim of violation of or liability under federal or state securities laws or a claim of breach of fiduciary duty relating to the Company or any Subsidiary. There has not been, and to the knowledge of the Company and each Subsidiary, there is not pending or contemplated, any investigation by the Commission of the Company or any Subsidiary or any current or former director or officer of the Company or any Subsidiary. The Company has not received any stop order or other order suspending the effectiveness of any registration statement filed by the Company under the Exchange Act or the Securities Act and, to the Company's knowledge, the SEC has not issued any such order.
- 5.12 <u>Taxes</u>. The Company and each Subsidiary has properly filed all federal, foreign, state, local, and other tax returns and reports which are required to be filed by it, which returns and reports were properly completed and are true and correct in all material respects, and all taxes, interest, and penalties due and owing have been timely paid. There are no outstanding waivers or extensions of time with respect to the assessment or audit of any tax or tax return of the Company or any Subsidiary, or claims now pending or matters under discussion between the Company and any taxing authority in respect of any tax of the Company. The Company has no material uncertain tax positions pursuant to FASB Interpretation 48 (FIN 48), Accounting for Uncertainty in Income Taxes.

5.13 Employee Matters.

(a) The Company has disclosed in the SEC Reports any "employee benefit plan" subject to the Employee Retirement Income Security Act of 1974, as amended ("*ERISA*"), that it or any Subsidiary maintains for employees.

- (b) No director or officer or other employee of the Company or any Subsidiary will become entitled to any retirement, severance, change of control, or similar benefit or enhanced or accelerated benefit (including any acceleration of vesting) or lapse of repurchase rights or obligations with respect to any employee benefit plan subject to ERISA or other benefit under any compensation plan or arrangement of the Company (each, an "Employee Benefit Plan") as a result of the transactions contemplated in this Agreement.
- (c) No executive officer, to the knowledge of the Company and each Subsidiary, is, or is now reasonably expected to be, in violation of any term of any employment contract, confidentiality, disclosure or proprietary information agreement or non-competition agreement, or any other contract or agreement or any restrictive covenant with the Company or any Subsidiary, and, to the knowledge of the Company and each Subsidiary, the continued employment of each such executive officer does not subject the Company or any Subsidiary to any material liability with respect to any of the foregoing matters.
- (d) The Company and each Subsidiary is in compliance with all applicable federal, state, local and foreign statutes, laws (including, without limitation, common law), judicial decisions, regulations, ordinances, rules, judgments, orders and codes respecting employment, employment practices, labor, terms and conditions of employment and wages and hours, except where the failure to comply would not have a Material Adverse Effect, and no work stoppage or labor strike against the Company or any Subsidiary is pending or, to their knowledge, threatened, nor is the Company or any Subsidiary involved in or, to their knowledge, threatened with any labor dispute, grievance or litigation relating to labor matters involving any current or former employees of the Company, any Subsidiary or any independent contractors. There are no suits, actions, disputes, claims (other than routine claims for benefits), investigations or audits pending or, to the knowledge of the Company and each Subsidiary, threatened in connection with any Employee Benefit Plan, but excluding any of the foregoing which would not have a Material Adverse Effect.

5.14 Compliance with Laws.

(a) Except as would not result in a Material Adverse Effect: (i) the Company is and has been in compliance with statutes, laws, ordinances, rules and regulations applicable to the Company for the ownership, testing, development, manufacture, packaging, processing, use, labeling, storage, or disposal of any product manufactured by or on behalf of the Company or out-licensed by the Company (a "Company Product"), including without limitation, the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. § 301, et seq., the Public Health Service Act, 42 U.S.C. § 262, similar laws of other Governmental Entities and the regulations promulgated pursuant to such laws (collectively, "Applicable Laws"); (ii) the Company possesses all licenses, certificates, approvals, authorizations, permits and supplements or amendments thereto required by any such Applicable Laws and/or for the ownership of its properties or the conduct of its business as it relates to a Company Product and as described in the SEC Reports (collectively, "Authorizations") and such Authorizations are valid and in full

force and effect and the Company is not in violation of any term of any such Authorizations; (iii) the Company has not received any written notice of adverse finding, warning letter or other written correspondence or notice from the U.S. Food and Drug Administration (the "FDA") or any other Governmental Entity alleging or asserting noncompliance with any Applicable Laws or Authorizations relating to a Company Product; (iv) the Company has not received written notice of any ongoing claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any Governmental Entity or third party alleging that any Company Product, operation or activity related to a Company Product is in violation of any Applicable Laws or Authorizations or has any knowledge that any such Governmental Entity or third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding, nor, to the Company's knowledge, has there been any noncompliance with or violation of any Applicable Laws by the Company that would reasonably be expected to require the issuance of any such written notice or result in an investigation, corrective action, or enforcement action by the FDA or similar Governmental Entity with respect to a Company Product; (v) the Company has not received written notice that any Governmental Entity has taken, is taking or intends to take action to limit, suspend, modify or revoke any Authorizations or has any knowledge that any such Governmental Entity has threatened or is considering such action with respect to a Company Product; and (vi) the Company has filed, obtained, maintained or submitted all 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, correct and not misleading on the date filed (or were correcte

- (b) To the Company's knowledge, neither the Company nor any of its directors, officers, employees or agents, has made, or caused the making of, any false statements on, or material omissions from, any other records or documentation prepared or maintained to comply with the requirements of the FDA or any other Governmental Entity.
- (c) The clinical studies and tests conducted by the Company or on behalf of the Company, have been and, if still pending, are being conducted in all material respects pursuant to all Applicable Laws and Authorizations; the descriptions of the results of such clinical studies and tests contained in the SEC Reports are accurate and complete in all material respects and fairly present the data derived from such clinical studies and tests; the Company is not aware of any clinical studies or tests, the results of which the Company believes reasonably call into question the research, nonclinical or clinical study or test results described or referred to in the SEC Reports when viewed in the context in which such results are described; and the Company has not received any written notices or correspondence from any Governmental Entity requiring the termination, suspension or material modification of any clinical study or test conducted by or on behalf of the Company.
- 5.15 <u>Brokers</u>. Except for Cantor Fitzgerald & Co., there is no investment banker, broker, finder, financial advisor, placement agent or other Person that has been retained by or is authorized to act on behalf of the Company or any Subsidiary who might be entitled to any fee or commission in connection with the transactions contemplated by this Agreement.

5.16 Environmental Matters. 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, licenses or other approvals required of them under applicable Environmental Laws to conduct its business and (iii) has not received notice of any actual or potential liability under any environmental law, except where such noncompliance with Environmental Laws, failure to receive required permits, licenses or other approvals, or liability would not, individually or in the aggregate, have a Material Adverse Effect, whether or not arising from transactions in the ordinary course of business. The Company has not been named as a "potentially responsible party" under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended.

5.17 Intellectual Property Matters. 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 as now conducted or as proposed in the SEC Reports to be conducted (the "Company Intellectual Property"). To the knowledge of the Company, there are no rights of third parties to any Company Intellectual Property, other than as licensed by the Company's knowledge of the Company, there is no infringement by third parties of any Company Intellectual Property. 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 Company Intellectual Property. 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 Company Intellectual Property. There is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others that the Company infringes or otherwise violates any patent, trademark, copyright, trade secret or other proprietary rights of others. The Company is not aware of any facts required to be disclosed to the U.S. Patent and Trademark Office ("USPTO") which have not been disclosed to the USPTO and which would preclude the grant of a patent in connection with any patent application of the Company Intellectual Property or could form the basis of a finding of invalidity with respect to any issued patents of the Company Intellectual Property.

5.18 Absence of Changes. Since the Evaluation Date: (a) there has not been any Material Adverse Effect or any event or events that individually or in the aggregate would reasonably be expected to have a Material Adverse Effect; (b) there has not been any dividend or distribution of any kind declared, set aside for payment, paid or made by the Company on any class of capital stock, (c) neither the Company nor any Subsidiary has sustained any material loss or interference with the Company's or any Subsidiary's business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor disturbance or dispute or any action, order or decree of any court or arbitrator or governmental or regulatory authority, and (d) neither the Company nor any Subsidiary has incurred any material liabilities except in the ordinary course of business.

- 5.19 <u>Suppliers and Customers</u>. Neither the Company nor any Subsidiary has any knowledge of any termination, cancellation or threatened termination or cancellation or limitation of, or any material dissatisfaction with, the business relationship between the Company or any Subsidiary and any material supplier, customer, vendor, customer or client.
- 5.20 <u>Accountants</u>. Rose, Snyder & Jacobs ("**RS&J**"), who expressed their opinion with respect to the financial statements included in the SEC Reports, are independent accountants as required by the Securities Act and the rules and regulations promulgated thereunder. There are no disagreements of any kind presently existing, or reasonably anticipated by the Company to arise, between the Company and RS&J.
- 5.21 <u>Application of Takeover Protections</u>. The Company and its Board of Directors have taken all necessary action, if any, in order to render inapplicable any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or other similar antitakeover provision under the Company's Charter Documents or the laws of its state of incorporation (including Section 203 of the Delaware General Corporation Law) that is or could become applicable to each Purchaser as a result of such Purchaser and the Company fulfilling their obligations or exercising their rights under this Agreement, including without limitation as a result of the Company's issuance of the Shares and such Purchaser's ownership of the Shares.
- 5.22 <u>Foreign Corrupt Practices</u>. Since October 1, 2015, neither the Company, its Subsidiaries, nor to the Company's and each Subsidiary's knowledge, any director, officer, agent, employee or other person acting on behalf of the Company or any Subsidiary has, in the course of its actions for, or on behalf of, the Company or any Subsidiary (a) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expenses relating to political activity; (b) made any direct or indirect unlawful payment to any foreign or domestic government official or employee from corporate funds; (c) violated or is in violation of in any material respect any provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended; or (d) made any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment to any foreign or domestic government official or employee.
- 5.23 <u>Private Placement</u>. Neither the Company nor its Subsidiaries or any affiliates, nor any person acting on its or their behalf, has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under any circumstances that would require registration of the Shares under the Securities Act. Assuming the accuracy of the representations and warranties of the Purchasers contained in Section 4 hereof, the issuance of the Shares are exempt from registration under the Securities Act.
- 5.24 <u>Insurance</u>. The Company is insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as the Company believes are prudent and customary for a company: (a) in the businesses and location in which the Company is engaged, (b) with the resources of the Company, and (c) at a similar stage of development as the Company. The Company has not received any written notice that the Company will not be able to renew its existing insurance coverage as and when such coverage expires. The Company believes it will be able to obtain similar coverage at reasonable cost from similar insurers as may be necessary to continue its business.

- 5.25 No Manipulation of Stock. The Company has not taken, nor will it take, directly or indirectly, any action designed to stabilize or manipulate the price of the Common Stock or any security of the Company to facilitate the sale or resale of any of the Shares.
- 5.26 <u>Disclosure</u>. The Company understands and confirms that the Purchaser will rely on the foregoing representations in effecting transactions in securities of the Company. No representation or warranty by the Company contained in this Agreement contains any untrue statement of a material fact or omits to state any material fact necessary in order to make the statements made therein, in light of the circumstances under which they were made, not misleading. The Company acknowledges and agrees that the Purchaser does not make and has not made any representations or warranties with respect to the transactions contemplated hereby other than those specifically set forth in Section 4 hereof.

Section 6. Covenants.

- 6.1 <u>Reasonable Best Efforts</u>. Each party shall use its reasonable best efforts to timely satisfy each of the conditions to be satisfied by it as provided in Section 7 of this Agreement.
- 6.2 <u>Reporting Status</u>. During the Reporting Period, the Company shall use reasonable best efforts to: (a) timely file all reports required to be filed with the Commission pursuant to the Exchange Act or the rules and regulations thereunder, and (b) not take any action or file any document (whether or not permitted by the Securities Act or the rules promulgated thereunder) to terminate or suspend the Company's reporting and filing obligations under the Exchange Act or Securities Act.
- 6.3 <u>Use of Proceeds</u>. The Company will use the proceeds from the sale of the Shares for general corporate purposes, research and development, clinical trial studies and related preclinical studies and drug manufacture, business development, working capital and general and administrative expenses.
- 6.4 <u>Pledge of Shares</u>. The Company acknowledges and agrees that the Shares may be pledged by the Purchasers in connection with a bona fide margin agreement or other loan or financing arrangement that is secured by the Shares. The pledge of Shares shall not be deemed to be a transfer, sale or assignment of the Shares hereunder, and in effecting a pledge of Shares the Purchasers shall not be required to provide the Company with any notice thereof or otherwise make any delivery to the Company pursuant to this Agreement. The Company hereby agrees to execute and deliver such documentation as a pledgee of the Shares may reasonably request in connection with a pledge of the Shares to such pledgee by the Purchasers.
- 6.5 <u>Disclosure of Transactions and Other Material Information</u>. On or before 8:30 a.m., New York City time, on the second Business Day following the date of this Agreement, the Company shall issue a press release and file a Current Report on Form 8-K describing the terms and conditions of the transactions contemplated by the Transaction Documents in the form required by the Exchange Act and attaching the Agreement as an exhibit to such filing (including all attachments, the "8-K Filing"). The Company shall not publicly disclose the name of any Purchaser or any affiliate or investment adviser of the Purchaser, or

include the name of any Purchaser or any affiliate or investment adviser of the Purchaser in any filing with the Commission (other than in a Registration Statement and any exhibits to filings made in respect of this transaction in accordance with periodic report or current report filing requirements under the Exchange Act) or any regulatory agency, without the prior written consent of such Purchaser, except to the extent such disclosure is required by law or regulations, in which case the Company shall provide each Purchaser whose name is to be disclosed with prior notice of such disclosure and a reasonable opportunity to comment on the proposed disclosure insofar as it relates specifically to such Purchaser. Subject to the foregoing, neither the Company nor the Purchasers shall issue any press releases or any other public statements with respect to the transactions contemplated hereby; provided, however, that the Company shall be entitled, without the prior approval of the Purchasers, to make any press release or other public disclosure with respect to such transactions (a) in substantial conformity with the 8-K Filing and contemporaneously therewith and (b) as is required by Applicable Law.

6.6 Short Sales. Each Purchaser covenants that neither it nor any Affiliates acting on its behalf or pursuant to any understanding with it will execute any Short Sales during the period from the date hereof until the earlier of such time as: (a) after the transactions contemplated by this Agreement are first publicly announced, or (b) this Agreement is terminated in full. Except: (i) as required by Applicable Law or the listing rules of any applicable national or regional securities exchange, (ii) as required to be disclosed in filings or other submissions to any court, regulatory body, administrative agency, governmental body, arbitrator or other legal authority having jurisdiction over a party hereto made to obtain necessary consents, approvals or filings, or (iii) as provided by the terms and provisions of the existing confidentiality and non-use obligations of the parties hereto, each Purchaser covenants that until such time as the transactions contemplated by this Agreement are publicly disclosed by the Company, such Purchaser will maintain the confidentiality of all disclosures made to it in connection with this transaction (including the existence and terms of this transaction). Each Purchaser understands and acknowledges that the Commission currently takes the position that coverage of Short Sales of shares of the Common Stock "against the box" prior to effectiveness of a resale registration statement with securities included in such registration statement would be a violation of Section 5 of the Securities Act, as set forth in Item 239.10 of the Securities Act Rules Compliance and Disclosure Interpretations compiled by the Office of Chief Counsel, Division of Corporation Finance.

6.7 <u>Expenses</u>. The Company and each Purchaser is liable for, and will pay, its own expenses incurred in connection with the negotiation, preparation, execution and delivery of this Agreement, including, without limitation, attorneys' and consultants' fees and expenses.

Section 7. Conditions of Parties' Obligations.

7.1 <u>Conditions of the Purchasers' Obligations at the Closing</u>. The obligations of the Purchasers under Section 2 hereof are subject to the fulfillment, prior to the Closing, of all of the following applicable conditions, any of which may be waived in whole or in part by the Purchasers in their absolute discretion. If the following conditions are not satisfied on or before 5:00 p.m. (Eastern Time) on the tenth Business Day following the Effective Date (the "*Outside Date*"), then any Purchaser may terminate this Agreement with respect to that particular Purchaser upon providing written notice to the Company.

- (a) <u>Representations and Warranties</u>. The representations and warranties of the Company contained in this Agreement and in any certificate, if any, or other writing, if any, delivered by the Company pursuant hereto shall be true and correct on and as of the Closing Date with the same effect as though such representations and warranties had been made on and as of the Closing Date (except to the extent expressly made as of an earlier date in which case as of such earlier date).
- (b) <u>Performance</u>. The Company shall have performed and complied in all material respects with all covenants, agreements, obligations and conditions contained in this Agreement that are required to be performed or complied by it on or prior to the Closing Date.
 - (c) Delivery. The Company shall deliver this Agreement duly executed by the Company.
- (d) <u>Qualification under State Securities Laws</u>. All registrations, qualifications, permits and approvals, if any, required under applicable state securities laws shall have been obtained for the lawful execution, delivery and performance of this Agreement.
- (e) <u>Consents and Waivers</u>. The Company shall have obtained all consents or waivers necessary to execute and perform its obligations under this Agreement. All corporate and other action and governmental filings necessary for the Company to effectuate the terms of this Agreement and other agreements and instruments executed and delivered by the Company in connection herewith shall have been made or taken by the Company, and no Material Adverse Effect has occurred with respect to the operation of the Company's business.
- (f) <u>Transfer Agent Instructions</u>. The Company shall have delivered to its transfer agent irrevocable written instructions to issue to such Purchaser (or in such nominee's name(s) as designated by such Purchaser) one or more certificates representing such Shares set forth opposite such Purchaser's name on Schedule I hereto (or book-entry notations in lieu of such certificates); provided, however, that if such Purchaser has indicated to the Company at the time of execution of this Agreement a need to settle "delivery versus payment," the Company shall deliver to such Purchaser (or such Purchaser's designated custodian) such original stock certificates to be acquired by such Purchaser (or written confirmation that such Shares have been issued in the Purchaser's name via book-entry notation).
- (g) <u>Absence of Litigation</u>. No proceeding challenging this Agreement or the transactions contemplated hereby, or seeking to prohibit, alter, prevent or materially delay the Closing, shall have been instituted or be pending before any court, arbitrator, governmental body, agency or official. The sale of the Shares by the Company shall not be prohibited by any law or governmental order or regulation.

7.2 <u>Conditions of the Company's Obligations</u>. The obligations of the Company under Section 2 hereof are subject to the fulfillment prior to or on the Closing Date of all of the following conditions, any of which may be waived in whole or in part by the Company: (a) each Purchaser at the Closing shall have performed all of its obligations hereunder required to be performed by it at or prior to the Closing, and (b) the representations and warranties of the Purchasers at the Closing contained in this Agreement shall be true and correct at and as of the Closing as if made at and as of the Closing (except to the extent expressly made as of an earlier date, in which case as of such earlier date). If the foregoing conditions are not satisfied on or the Outside Date, then the Company may terminate this Agreement upon providing written notice to the Purchasers.

Section 8. Transfer Restrictions; Restrictive Legend.

8.1 Transfer Restrictions. The Purchasers understand that the Company may, as a condition to the transfer of any of the Shares, require that the request for transfer be accompanied by an opinion of counsel reasonably satisfactory to the Company, to the effect that the proposed transfer does not result in a violation of the Securities Act, unless such transfer is covered by an effective registration statement or by Rule 144 or Rule 144A under the Securities Act; provided, however, that an opinion of counsel shall not be required for a transfer by a Purchaser that is: (A) a partnership transferring to its partners or former partners in accordance with partnership interests, (B) a corporation transferring to a wholly owned subsidiary or a parent corporation that owns all of the capital stock of such Purchaser, (C) a limited liability company transferring to its members or former members in accordance with their interest in the limited liability company, (D) an individual transferring to such Purchaser's family member or trust for the benefit of an individual Purchaser, (E) transferring its Shares to any Affiliate of such Purchaser, in the case of an institutional investor, or other Person under common management with such Purchaser, or (F) a transfer that is made pursuant to a bona fide gift to a third party; provided, further, that (i) the transferee in each case agrees to be subject to the restrictions in this Section 8 and provides the Company with a representation letter containing customary investment representations under the Securities Act, (ii) the Company satisfies itself that the number of transferees is sufficiently limited and (iii) in the case of transferees that are partners or limited liability company members, the transfer is for no consideration. It is understood that the certificates evidencing the Shares may bear substantially the following legend:

"THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933 OR ANY APPLICABLE STATE SECURITIES LAWS. THEY MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF A REGISTRATION STATEMENT IN EFFECT WITH RESPECT TO THE SECURITIES UNDER SUCH ACT OR APPLICABLE STATE SECURITIES LAWS OR AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED OR UNLESS SOLD PURSUANT TO RULE 144 OR RULE 144A OF SUCH ACT."

8.2 <u>Unlegended Certificates</u>. The Company shall, at its sole expense, upon appropriate notice from any Purchaser stating that Registrable Securities have been sold pursuant to an effective Registration Statement, timely prepare and deliver certificates representing the Shares to be delivered to a transferee pursuant to the Registration Statement, which certificates shall be free of any restrictive legends and in such denominations and registered in such names as such Purchaser may request. Further, the Company shall, at its sole expense, cause its legal

counsel or other counsel satisfactory to the transfer agent: (i) while the Registration Statement is effective, to issue to the transfer agent a "blanket" legal opinion to allow sales without restriction pursuant to the effective Registration Statement, and (ii) provide all other opinions as may reasonably be required by the transfer agent in connection with the removal of legends. A Purchaser may request that the Company remove, and the Company agrees to authorize the removal of, any legend from such Shares, following the delivery by a Purchaser to the Company or the Company's transfer agent of a legended certificate representing such Shares: (i) following any sale of such Shares pursuant to Rule 144, (ii) if such Shares are eligible for sale under Rule 144(b)(1), or (iii) following the time a legend is no longer required with respect to such Shares. If a legend is no longer required pursuant to the foregoing, the Company will, no later than three Business Days following the delivery by a Purchaser to the Company or the Company's transfer agent of a legended certificate representing such Shares, deliver or cause to be delivered to such Purchaser a certificate representing such Shares that is free from all restrictive legends. Certificates for Shares free from all restrictive legends may be transmitted by the Company's transfer agent to the Purchasers by crediting the account of the Purchaser's prime broker with the Depository Trust Company ("DTC") as directed by such Purchaser. The Company warrants that the Shares shall otherwise be freely transferable on the books and records of the Company as and to the extent provided in this Agreement. If a Purchaser effects a transfer of the Shares in accordance with Section 8.1, the Company shall permit the transfer and shall promptly instruct its transfer agent to issue one or more certificates or credit shares to the applicable balance accounts at DTC in such name and in such denominations as specified by such Purchaser to effect such transfer. Each Purchaser hereby agrees that the removal of the restrictive legend pursuant to this Section 8.2 is predicated upon the Company's reliance that such Purchaser will sell any such Shares pursuant to either the registration requirements of the Securities Act, including any applicable prospectus delivery requirements, or an exemption therefrom.

Section 9. Registration, Transfer and Substitution of Certificates for Shares.

- 9.1 <u>Stock Register; Ownership of Shares</u>. The Company will keep at its principal office, or will cause its transfer agent to keep, a register in which the Company will provide for the registration of transfers of the Shares. The Company may treat the Person in whose name any of the Shares are registered on such register as the owner thereof and the Company shall not be affected by any notice to the contrary. All references in this Agreement to a "holder" of any Shares shall mean the Person in whose name such Shares are at the time registered on such register.
- 9.2 <u>Replacement of Certificates</u>. Upon receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of any certificate representing any of the Shares, and, in the case of any such loss, theft or destruction, upon delivery of an indemnity agreement and surety bond reasonably satisfactory to the Company or, in the case of any such mutilation, upon surrender of such certificate for cancellation at the office of the Company maintained pursuant to Section 9.1 hereof, the Company at its expense will execute and deliver, in lieu thereof, a new certificate representing such Shares, of like tenor.

Section 10. Registration Rights of Purchasers.

10.1 Mandatory Registration. The Company shall prepare, and, as soon as practicable but in no event later than 30 days after the Closing Date (the "Filing Deadline"), file with the Commission a Registration Statement under the Securities Act on appropriate form covering the resale of the full amount of the Shares (the "Registrable Securities"). The Company shall use its commercially reasonable efforts to have the Registration Statement declared effective by the Commission as soon as practicable, but in no event later than the date (the "Effectiveness Deadline"), which shall be either: (i) in the event that the Commission does not review the Registration Statement, 90 days after the Closing Date, or (ii) in the event that the Commission reviews the Registration Statement, 120 days after the Closing Date (but in any event, no later than three Business Days following the Commission indicating that it has no further comments on the Registration Statement). Subject to any comments from the staff of the Commission (the "Staff"), such Registration Statement shall include the plan of distribution attached hereto as Exhibit A; provided, however, that no Purchaser shall be named as an "underwriter" in the Registration Statement without the Purchaser's prior written consent. Such Registration Statement shall not include any shares of Common Stock or other securities for the account of any other holder without the prior written consent of the Required Holders.

10.2 Rule 415; Cutback. If at any time the Staff takes the position that the offering of some or all of the Registrable Securities in a Registration Statement is not eligible to be made on a delayed or continuous basis under the provisions of Rule 415 under the Securities Act or requires any Purchaser to be named as an "underwriter," the Company shall use its reasonable best efforts to persuade the Commission that the offering contemplated by the Registration Statement is a valid secondary offering and not an offering "by or on behalf of the issuer" as defined in Rule 415 and that none of the Purchasers is an "underwriter." In the event that, despite the Company's reasonable best efforts and compliance with the terms of this Section 10.2, the Staff refuses to alter its position, the Company shall (i) remove from the Registration Statement such portion of the Registrable Securities (the "Cut Back Shares") and/or (ii) agree to such restrictions and limitations on the registration and resale of the Registrable Securities as the Staff may require to assure the Company's compliance with the requirements of Rule 415 (collectively, the "SEC Restrictions"); provided, however, that the Company shall not agree to name any Purchaser as an "underwriter" in such Registration Statement without the prior written consent of such Purchaser. Any cutback imposed on the Purchasers pursuant to this Section 10.2 shall be allocated among the Purchasers on a pro rata basis, unless the SEC Restrictions otherwise require or provide or the Purchasers otherwise agree. No liquidated damages shall accrue as to any Cut Back Shares until such date as the Company is able to effect the registration of such Cut Back Shares in accordance with any SEC Restrictions (such date, the "Restriction Termination Date" of such Cut Back Shares). From and after the Restriction Termination Date applicable to any Cut Back Shares, all of the provisions of this Section 10 (including the liquidated damages provisions) shall again be applicable to such Cut Back Shares; provided, however, that (x) the Filing Deadline for the Registration Statement including such Cut Back Shares shall be ten Business Days after such Restriction Termination Date, and (y) the Effectiveness Deadline with respect to such Cut Back Shares shall be the 90th day immediately after the Restriction Termination Date or the 120th day if the Staff reviews such Registration Statement (but in any event no later than three Business Days from the Staff indicating it has no further comments on such Registration Statement).

10.3 Effect of Failure to File and Obtain and Maintain Effectiveness of Registration Statement. Subject to Section 10.2, if either: (a) a Registration Statement covering all of the Registrable Securities required to be covered thereby and required to be filed by the Company pursuant to this Agreement is: (i) not filed with the Commission on or before the Filing Deadline (a "Filing Failure"), or (ii) not declared effective by the Commission on or before the Effectiveness Deadline (an "Effectiveness Failure"), or (b) on any day during the Reporting Period and after the Effectiveness Date, sales of all of the Registrable Securities required to be included on such Registration Statement cannot be made (other than (i) during an Allowable Grace Period or (ii) if the Registration Statement is on Form S-1, for a period of 15 days following the date the Company files a post-effective amendment to incorporate the Company's Annual Report on Form 10-K) pursuant to such Registration Statement (including, without limitation, because of a failure to keep such Registration Statement effective, to disclose such information as is necessary for sales to be made pursuant to such Registration Statement or to register a sufficient number of shares of Common Stock) (a "Maintenance Failure"), then, in satisfaction of the damages to any holder of Registrable Securities by reason of any such delay in or reduction of its ability to sell the underlying shares of Common Stock, the Company shall pay to each holder of Registrable Securities relating to such Registration Statement an amount in cash equal to 1.0% of such holder's Pro Rata Interest in the Aggregate Purchase Price on each of the following dates: (x) the day of a Filing Failure and on every thirtieth day (prorated for periods totaling less than 30 days) thereafter until such Filing Failure is cured; (y) the day of an Effectiveness Failure and on every thirtieth day (prorated for periods totaling less than 30 days) thereafter until such Effectiveness Failure is cured; and (z) the initial day of a Maintenance Failure and on every thirtieth day (prorated for periods totaling less than 30 days) thereafter until such Maintenance Failure is cured. The payments to which a holder shall be entitled pursuant to this Section 10.3 are referred to herein as "Registration Delay Payments"; provided that no Registration Delay Payments shall be required following the termination of the Reporting Period, and provided further that in no event shall the aggregate Registration Delay Payments accruing under this Section 10.3 exceed 6% of a holder's Pro Rata Interest in the Aggregate Purchase Price (i.e., corresponding to a total delay of six months). The first such Registration Delay Payment shall be paid within three Business Days after the event or failure giving rise to such Registration Delay Payment occurred and all other Registration Delay Payments shall be paid on the earlier of (I) the last day of the calendar month during which such Registration Delay Payments are incurred and (II) the third Business Day after the event or failure giving rise to the Registration Delay Payments is cured.

10.4 <u>Related Obligations</u>. At such time as the Company is obligated to file a Registration Statement with the Commission pursuant to Section 10.1 hereof, the Company will use commercially reasonable efforts to effect the registration of the Registrable Securities in accordance with the intended method of disposition thereof and, pursuant thereto, the Company shall have the following obligations:

(a) The Company shall submit to the Commission, within two Business Days after the Company learns that no review of a particular Registration Statement will be made by the staff of the Commission or that the staff has no further comments on a particular Registration Statement, as the case may be, a request for acceleration of effectiveness of such Registration Statement to a time and date not later than two Business Days after the submission of such request. The Company shall keep

each Registration Statement effective pursuant to Rule 415 at all times with respect to each Purchaser's Registrable Securities until the expiration of the Reporting Period. The Company shall ensure that each Registration Statement (including any amendments or supplements thereto and prospectuses contained therein) shall 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 (in the case of prospectuses, in the light of the circumstances in which they were made) not misleading.

- (b) The Company shall prepare and file with the Commission such amendments (including post-effective amendments) and supplements to a Registration Statement and the prospectus used in connection with such Registration Statement, which prospectus is to be filed pursuant to Rule 424 promulgated under the Securities Act, as may be necessary to keep such Registration Statement effective at all times during the Reporting Period, and, during such period, comply with the provisions of the Securities Act with respect to the disposition of all Registrable Securities of the Company covered by such Registration Statement until such time as all of such Registrable Securities shall have been disposed of in accordance with the intended methods of disposition by the seller or sellers thereof as set forth in such Registration Statement.
- (c) Upon request of a Purchaser, the Company shall furnish to such Purchaser without charge, (i) promptly after the Registration Statement including such Purchaser's Registrable Securities is prepared and filed with the Commission, at least one copy of such Registration Statement and any amendment(s) thereto, including financial statements and schedules, all documents incorporated therein by reference, and if requested by the Purchaser, all exhibits and each preliminary prospectus, (ii) upon the effectiveness of any Registration Statement, 10 copies of the prospectus included in such Registration Statement and all amendments and supplements thereto (or such other number of copies as the Purchaser may reasonably request) and (iii) such other documents, including copies of any preliminary or final prospectus, as the Purchaser may reasonably request from time to time in order to facilitate the disposition of the Registrable Securities.
- (d) The Company shall notify the Purchasers in writing of the happening of any event, as promptly as practicable after becoming aware of such event, as a result of which the prospectus included in a Registration Statement, as then in effect, includes an untrue statement of a material fact or omission to state a 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 (provided that in no event shall such notice contain any material, nonpublic information), and promptly prepare a supplement or amendment to such Registration Statement to correct such untrue statement or omission, and upon request deliver 10 copies of such supplement or amendment to the Purchasers (or such other number of copies as the Purchasers may reasonably request). Unless such information is publicly available, the Company shall also promptly notify the Purchasers in writing (i) when a prospectus or any prospectus supplement or post-effective amendment has been filed, and when a Registration Statement or any post-effective amendment has become effective (notification of such effectiveness shall be delivered to the Purchasers by facsimile or email on the same day

of such effectiveness), (ii) of any request by the Commission for amendments or supplements to a Registration Statement or related prospectus or related information, and (iii) of the Company's reasonable determination that a post-effective amendment to a Registration Statement would be appropriate.

- (e) The Company shall use commercially reasonable efforts to prevent the issuance of any stop order or other suspension of effectiveness of a Registration Statement, or the suspension of the qualification of any of the Registrable Securities for sale in any jurisdiction and, if such an order or suspension is issued, to obtain the withdrawal of such order or suspension at the earliest possible moment and to notify the Purchaser who holds Registrable Securities being sold of the issuance of such order and the resolution thereof or its receipt of notice of the initiation or threat of any proceeding for such purpose.
- (f) If a Purchaser is required under applicable securities law to be described in the Registration Statement as an underwriter, at the reasonable request of the Purchaser, the Company shall furnish to the Purchaser, on the date of the effectiveness of the Registration Statement and thereafter from time to time on such dates as the Purchaser may reasonably request, (i) a letter, dated such date, from the Company's independent certified public accountants in form and substance as is customarily given by independent certified public accountants to underwriters in an underwritten public offering, addressed to the Purchaser, and (ii) an opinion, dated as of such date, of counsel representing the Company for purposes of such Registration Statement, in form, scope and substance as is customarily given in an underwritten public offering, addressed to the Purchaser.
- (g) If a Purchaser is required under applicable securities law to be described in the Registration Statement as an underwriter, upon the written request of the Purchaser in connection with the Purchaser's due diligence requirements, if any, the Company shall make available for inspection by (i) the Purchaser and its legal counsel and (ii) one firm of accountants or other agents retained by the Purchaser (collectively, the "Inspectors"), all pertinent financial and other records, and pertinent corporate documents and properties of the Company (collectively, the "Records"), as shall be reasonably deemed necessary by each Inspector solely for the purpose of establishing a due diligence defense under underwriter liability under the Securities Act, and cause the Company's officers, directors and employees to supply all information which any Inspector may reasonably request; provided, however, that each Inspector shall agree to hold in strict confidence and shall not make any disclosure (except to the Purchaser) or use of any Record or other information which the Company determines in good faith to be confidential, and of which determination the Inspectors are so notified, unless (a) the disclosure of such Records is necessary to avoid or correct a misstatement or omission in any Registration Statement or is otherwise required under the Securities Act, (b) the release of such Records is ordered pursuant to a final, non-appealable subpoena or order from a court or government body of competent jurisdiction, or (c) the information in such Records has been made generally available to the public other than by disclosure in violation of this Agreement or any other agreement. The Purchaser agrees that it shall, upon learning that disclosure of such Records is sought in or by a court or governmental

body of competent jurisdiction or through other means, give prompt notice to the Company and allow the Company, at its expense, to undertake appropriate action to prevent disclosure of, or to obtain a protective order preventing disclosure of, the Records deemed confidential. Nothing herein (or in any other confidentiality agreement between the Company and the Purchaser) shall be deemed to limit the Purchaser's ability to sell Registrable Securities in a manner which is otherwise consistent with Applicable Laws.

- (h) The Company shall hold in confidence and not make any disclosure of information concerning the Purchasers provided to the Company unless (i) disclosure of such information is necessary to comply with federal or state securities laws, (ii) the disclosure of such information is necessary to avoid or correct a misstatement or omission in any Registration Statement, (iii) the release of such information is ordered pursuant to a subpoena or other final, non-appealable order from a court or governmental body of competent jurisdiction or (iv) such information has been made generally available to the public other than by disclosure in violation of this Agreement or any other agreement. The Company agrees that it shall, upon learning that disclosure of such information concerning the Purchasers is sought in or by a court or governmental body of competent jurisdiction or through other means, give prompt written notice to the Purchasers and allow the Purchasers, at each Purchaser's expense, to undertake appropriate action to prevent disclosure of, or to obtain a protective order preventing disclosure of, such information.
- (i) The Company shall cooperate with the Purchasers and, to the extent applicable, facilitate the timely preparation and delivery of certificates (not bearing any restrictive legend) representing the Registrable Securities to be offered pursuant to a Registration Statement and enable such certificates to be in such denominations or amounts, as the case may be, as the Purchasers may reasonably request and registered in such names as the Purchasers may request.
- (j) If requested by a Purchaser, the Company shall, as soon as practicable, (i) incorporate in a prospectus supplement or post-effective amendment such information as the Purchaser reasonably requests to be included therein relating to the sale and distribution of Registrable Securities, including, without limitation, information with respect to the number of Registrable Securities being offered or sold, the purchase price being paid therefor and any other terms of the offering of the Registrable Securities to be sold in such offering; (ii) make all required filings of such prospectus supplement or post-effective amendment after being notified of the matters to be incorporated in such prospectus supplement or post-effective amendment; and (iii) supplement or make amendments to any Registration Statement if reasonably requested by the Purchaser.
- (k) The Company shall use commercially reasonable efforts to cause the Registrable Securities covered by a Registration Statement to be registered with or approved by such other governmental agencies or authorities as may be necessary to consummate the disposition of such Registrable Securities.

- (l) The Company shall otherwise use commercially reasonable efforts to comply with all applicable rules and regulations of the Commission in connection with any registration hereunder.
- (m) Within two Business Days after a Registration Statement that covers Registrable Securities is declared effective by the Commission, the Company shall deliver to the transfer agent for such Registrable Securities (with copies to the Purchasers) confirmation that such Registration Statement has been declared effective by the Commission.
- (n) Notwithstanding anything to the contrary herein, at any time after the Effectiveness Date, the Company may delay the disclosure of material, non-public information concerning the Company the disclosure of which at the time is not, in the good faith opinion of the Board of Directors and its counsel, in the best interest of the Company and, in the opinion of counsel to the Company, otherwise required (a "Grace Period"); provided, that the Company shall promptly (i) notify the Purchasers in writing of the existence of material, non-public information giving rise to a Grace Period (provided that in each notice the Company will not disclose the content of such material, non-public information to the Purchasers) and the date on which the Grace Period will begin, and (ii) notify the Purchasers in writing of the date on which the Grace Period ends; and, provided further, that the Grace Periods shall not exceed an aggregate of 30 Trading Days during any 365-day period and the first day of any Grace Period must be at least 15 days after the last day of any prior Grace Period (each, an "Allowable Grace Period"). For purposes of determining the length of a Grace Period above, the Grace Period shall begin on and include the date the Purchasers receive the notice referred to in clause (i) and shall end on and include the later of the date the Purchasers receive the notice referred to in clause (ii) and the date referred to in such notice. The provisions of Section 10.4(e) hereof shall not be applicable during the period of any Allowable Grace Period. Upon expiration of the Grace Period, the Company shall again be bound by the first sentence of Section 10.4(d) with respect to the information giving rise thereto unless such material, non-public information is no longer applicable. Notwithstanding anything to the contrary, the Company shall cause its transfer agent to deliver unlegended shares of Common Stock to a transferee of any Purchaser in accordance with the terms of this Agreement in connection with any sale of Registrable Securities with respect to which a Purchaser has entered into a contract for sale, and delivered a copy of the prospectus included as part of the applicable Registration Statement (unless an exemption from such prospectus delivery requirement exists), prior to the Purchaser's receipt of the notice of a Grace Period and for which the Purchaser has not yet settled.
- (o) Neither the Company nor any Subsidiary or affiliate thereof shall identify any Purchaser as an underwriter in any public disclosure or filing with the Commission or any applicable Trading Market without the prior written consent of such Purchaser, and any Purchaser being deemed an underwriter by the Commission shall not relieve the Company of any obligations it has under this Agreement.

10.5 Obligations of the Purchasers.

- (a) At least five Business Days prior to the first anticipated filing date of a Registration Statement, the Company shall notify each Purchaser in writing of any information the Company requires from such Purchaser in order to have that Purchaser's Registrable Securities included in such Registration Statement. It shall be a condition precedent to the obligations of the Company to complete the registration pursuant to this Agreement with respect to the Registrable Securities of a particular Purchaser that the Purchaser shall furnish to the Company such information regarding itself, the Registrable Securities held by it and the intended method of disposition of the Registrable Securities held by it as shall be reasonably required to effect the effectiveness of the registration of such Registrable Securities and shall execute such documents in connection with such registration as the Company may reasonably request.
- (b) Each Purchaser, by its acceptance of the Registrable Securities, agrees to cooperate with the Company as reasonably requested by the Company in connection with the preparation and filing of any Registration Statement hereunder, unless the Purchaser has notified the Company in writing of the Purchaser's Registrable Securities from such Registration Statement.
- (c) Each Purchaser agrees that, upon receipt of any notice from the Company of the happening of any event of the kind described in Section 10.4(e) or the first sentence of Section 10.4(d), the Purchaser will immediately discontinue disposition of Registrable Securities pursuant to any Registration Statement(s) covering such Registrable Securities until the Purchaser's receipt of the copies of the supplemented or amended prospectus contemplated by Section 10.4(e) or the first sentence of Section 10.4(d) or receipt of notice that no supplement or amendment is required. Notwithstanding anything to the contrary, the Company shall cause its transfer agent to deliver unlegended shares of Common Stock to a transferee of the Purchaser in accordance with the terms of this Agreement in connection with any sale of Registrable Securities with respect to which the Purchaser has entered into a contract for sale prior to the Purchaser's receipt of a notice from the Company of the happening of any event of the kind described in Section 10.4(e) or the first sentence of Section 10.4(d) and for which the Purchaser has not yet settled.
- (d) Each Purchaser covenants and agrees that it will comply with the prospectus delivery requirements of the Securities Act as applicable to it or an exemption therefrom in connection with sales of Registrable Securities pursuant to the Registration Statement.
- 10.6 Expenses of Registration. All reasonable expenses incurred in connection with registrations, filings or qualifications pursuant to this Section 10, including, without limitation, all registration, listing and qualifications fees, printers and accounting fees, and fees and disbursements of counsel for the Company, shall be paid by the Company. Notwithstanding the foregoing, in no event shall the Company be responsible for underwriting discounts, commissions, placement agent fees or other similar expenses payable with respect to Registrable Securities being sold or offered for sale by the Purchasers.

10.7 Reports under the Exchange Act. With a view to making available to the Purchasers the benefits of Rule 144 promulgated under the Securities Act or any other similar rule or regulation of the Commission that may at any time permit the Purchasers to sell securities of the Company to the public without registration ("Rule 144"), the Company agrees to:

- (a) make and keep public information available, as those terms are understood and defined in Rule 144, during the Reporting Period;
- (b) file with the Commission in a timely manner all reports and other documents required of the Company under the Exchange Act; and
- (c) furnish to the Purchasers, so long as any Purchaser owns Registrable Securities, promptly upon request during the Reporting Period: (i) a written statement by the Company, if true, that it has complied with the reporting requirements of Rule 144, the Securities Act and the Exchange Act, (ii) a copy of the most recent annual or quarterly report of the Company and such other reports and documents so filed by the Company, and (iii) such other information as may be reasonably requested to permit the Purchasers to sell such securities pursuant to Rule 144 without registration.

10.8 Assignment of Registration Rights. The rights under Section 10 shall be automatically assignable by a Purchaser to any transferee of all or any portion of the Purchaser's Registrable Securities if: (i) the Purchaser agrees in writing with the transferee or assignee to assign such rights and a copy of such agreement is furnished to the Company within a reasonable time after such assignment; (ii) the Company is, within a reasonable time after such transfer or assignment, furnished with written notice of (a) the name and address of such transferee or assignee and (b) the securities with respect to which such registration rights are being transferred or assigned; (iii) immediately following such transfer or assignment the further disposition of such securities by the transferee or assignee is restricted under the Securities Act or applicable state securities laws; (iv) at or before the time the Company receives the written notice contemplated by clause (ii) of this sentence the transferee or assignee agrees in writing with the Company to be bound by all of the provisions contained herein; and (v) such transfer shall have been made in accordance with the applicable requirements of this Agreement. Following any such transfer in accordance with this Section 10.8, the Company shall thereafter use commercially reasonable efforts to amend or supplement the selling stockholder table contained in the Registration Statement to reflect such change in beneficial ownership of the affected Registrable Securities.

10.9 Indemnification.

(a) <u>Company Indemnification</u>. The Company will indemnify each Purchaser who holds Registrable Securities (if Registrable Securities held by such Purchaser are included in the securities as to which such registration is being effected), each of its officers and directors, partners, members and each person controlling such Purchaser within the meaning of Section 15 of the Securities Act, against all expenses, claims, losses, damages or liabilities (or actions in respect thereof), including any of the foregoing incurred in settlement of any litigation, commenced or threatened, arising out of or based on (A) any untrue statement (or alleged untrue statement) of a material fact

contained in any Registration Statement, prospectus, offering circular or other document, or any amendment or supplement thereto, incident to any such Registration Statement, or based on any omission (or alleged omission) to state therein a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances in which they were made, not misleading, or (B) any violation by the Company of the Securities Act, the Exchange Act, state securities laws or any rule or regulation promulgated under such laws applicable to the Company in connection with any such registration; and in each case, the Company will reimburse each such Purchaser, each of its officers and directors, partners, members and each person controlling such Purchaser, for any legal and any other expenses reasonably incurred, as such expenses are incurred, in connection with investigating, preparing or defending any such claim, loss, damage, liability or action, provided that the Company will not be liable in any such case to the extent that any such claim, loss, damage, liability or expense arises out of or is based on (X) any untrue statement or omission or alleged untrue statement or omission made in reliance upon and in conformity with written information furnished to the Company by an instrument duly executed by such Purchaser or controlling person, and stated to be specifically for use therein, (Y) the use by a Purchaser of an outdated or defective prospectus after the Company has notified such Purchaser in writing that the prospectus is outdated or defective or (Z) a Purchaser's (or any other indemnified person's) failure to send or give a copy of the prospectus or supplement (as then amended or supplemented), if required, pursuant to Rule 172 under the Securities Act (or any successor rule) to the Persons asserting an untrue statement or alleged untrue statement or omission or alleged omission at or prior to the written confirmation of the sale of Registrable Securities to such person if such stat

(b) <u>Purchaser Indemnification</u>. Each Purchaser holding Registrable Securities will, if Registrable Securities held by such Purchaser are included in the securities as to which such registration is being effected, severally and not jointly, indemnify the Company, each of its directors and officers, other holders of the Company's securities covered by such Registration Statement, each person who controls the Company within the meaning of Section 15 of the Securities Act, and each such holder, each of its officers and directors and each person controlling such holder within the meaning of Section 15 of the Securities Act, against all claims, losses, damages and liabilities (or actions in respect thereof) arising out of or based on: (A) any untrue statement (or alleged untrue statement) of a material fact contained in any such Registration Statement, prospectus, offering circular or other document, or any omission (or alleged omission) to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, to the extent, and only to the extent, that such untrue statement (or alleged untrue statement) or omission (or alleged omission) is made in such Registration Statement, prospectus, offering circular or other document in reliance upon and in conformity with written information furnished to the Company by an instrument duly executed by such Purchaser and stated to be specifically for use therein, or (B) any violation by such Purchaser of the Securities Act, the Exchange Act, state securities laws or any rule or regulation promulgated under such laws applicable to such Purchaser, and in each case, such Purchaser will reimburse the Company, each other holder, and directors, officers, persons, underwriters or control

persons of the Company and the other holders for any legal or any other expenses reasonably incurred, as such expenses are incurred, in connection with investigating or defending any such claim, loss, damage, liability or action; provided, that the indemnity agreement contained in this Subsection 10.9(b) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability or action if such settlement is effected without the consent of such indemnifying Purchaser (which consent shall not be unreasonably withheld or delayed). The liability of any Purchaser for indemnification under this Subsection 10.9(b) in its capacity as a seller of Registrable Securities shall not exceed the amount of net proceeds to such Purchaser of the securities sold in any such registration.

- (c) Notice and Procedure. Each party entitled to indemnification under this Section 10.9 (each, an "Indemnified Party") shall give written notice to the party required to provide indemnification (the "Indemnifying Party") promptly after such Indemnified Party has actual knowledge of any claim as to which indemnity may be sought, and shall permit the Indemnifying Party to assume the defense of any such claim or any litigation resulting therefrom, provided that counsel for the Indemnifying Party who shall conduct the defense of such claim or litigation, shall be approved by the Indemnified Party (whose approval shall not unreasonably be withheld), and the Indemnified Party may participate in such defense at such party's expense, and provided further that the failure of any Indemnified Party to give notice as provided herein shall not relieve the Indemnifying Party of its obligations under this Agreement unless the failure to give such notice is materially prejudicial to an Indemnifying Party's ability to defend such action and provided further, that the Indemnifying Party shall not assume the defense for matters as to which there is a conflict of interest or there are separate and different defenses. No Indemnifying Party, in the defense of any such claim or litigation, shall, except with the consent of each Indemnified Party (whose consent shall not be unreasonably withheld), consent to entry of any judgment or enter into any settlement which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnified Party of a release from all liability in respect to such claim or litigation.
- (d) <u>Contribution</u>. If the indemnification provided for in this Section 10.9 is held by a court of competent jurisdiction to be unavailable to an Indemnified Party with respect to any losses, claims, damages or liabilities referred to herein, the Indemnifying Party, in lieu of indemnifying such Indemnified Party thereunder, shall to the extent permitted by applicable law contribute to the amount paid or payable by such Indemnified Party as a result of such loss, claim, damage or liability in such proportion as is appropriate to reflect the relative fault of the Indemnifying Party on the one hand and of the Indemnified Party on the other in connection with the untrue statement or omission that resulted in such loss, claim, damage or liability, as well as any other relevant equitable considerations. The relative fault of the Indemnifying Party and of the Indemnified Party shall be determined by a court of law by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission to state a material fact relates to information supplied by the Indemnifying Party or by the Indemnified Party and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission; provided, that in no event

shall any contribution by a Purchaser hereunder exceed the proceeds from the offering received by such Purchaser. The amount paid or payable by a party as a result of any loss, claim, damage or liability shall be deemed to include, subject to the limitations set forth in this Agreement, any reasonable attorneys' or other reasonable fees or expenses incurred by such party in connection with any proceeding to the extent such party would have been indemnified for such fees or expenses if the indemnification provided for in this Section 10.9 was available to such party in accordance with its terms.

(e) <u>Survival</u>. The obligations of the Company and the Purchasers under this Section 10.9 shall survive completion of any offering of Registrable Securities in a Registration Statement and the termination of this Agreement. The indemnity and contribution agreements contained in this Section 10.9 are in addition to any liability that the Indemnifying Parties may have to the Indemnified Parties and are not in diminution or limitation of other remedies or causes of action that the parties may have under this Agreement.

<u>Section 11</u>. <u>Definitions</u>. Unless the context otherwise requires, the terms defined in this Section 11 shall have the meanings specified for all purposes of this Agreement. All accounting terms used in this Agreement, whether or not defined in this Section 11, shall be construed in accordance with GAAP. If the Company has one or more Subsidiaries, such accounting terms shall be determined on a consolidated basis for the Company and each of its Subsidiaries, and the financial statements and other financial information to be furnished by the Company pursuant to this Agreement shall be consolidated and presented with consolidating financial statements of the Company and each of its Subsidiaries.

"Affiliate" shall have the meaning ascribed to such term in Rule 12b-2 of the General Rules and Regulations under the Exchange Act.

"Business Day" means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed.

"Effectiveness Date" means the date the Registration Statement pursuant to Section 11 has been declared effective by the Commission.

"Exchange Act" means the Securities Exchange Act of 1934, as amended.

"GAAP" means U.S. generally accepted accounting principles consistently applied.

"Governmental Entity" means any national, federal, state, municipal, local, territorial, foreign or other government or any department, commission, board, bureau, agency, regulatory authority, self-regulatory organization or instrumentality thereof, or any court, judicial, administrative or arbitral body or public or private tribunal.

"knowledge" by a Person of a particular fact or other matter means the following: (a) if the Person is an individual, that such individual is actually aware or reasonably should be aware, after due inquiry, by virtue of such person's office, of such fact or other matter; and (b) if the Person is an entity, that any executive officer of such Person is actually aware or reasonably should be aware, after due inquiry, of such fact or other matter.

- "*Material Adverse Effect*" means any (i) adverse effect on the reservation, issuance, delivery or validity of the Shares, as applicable, or the transactions contemplated hereby or on the ability of the Company to perform its obligations under this Agreement, or (ii) material adverse effect on the condition (financial or otherwise), prospects, properties, assets, liabilities, business or operations of the Company or any of its Subsidiaries.
- "Material Contract" means all written and oral contracts, agreements, deeds, mortgages, leases, subleases, licenses, instruments, notes, commitments, commissions, undertakings, arrangements and understandings: (i) which by their terms involve, or would reasonably be expected to involve, aggregate payments by or to the Company or any Subsidiary during any twelve month period in excess of \$1,000,000, (ii) the breach of which by the Company or any Subsidiary would reasonably be expected to have a Material Adverse Effect, or (iii) which are required to be filed as exhibits by the Company with the Commission since September 30, 2015 pursuant to Items 601(b)(1), 601(b)(2), 601(b)(4), 601(b)(9) or 601(b)(10) of Regulation S-K promulgated by the Commission.
- "Person" means and includes all natural persons, corporations, business trusts, associations, companies, partnerships, joint ventures, limited liability companies and other entities and governments and agencies and political subdivisions.
- "Pro Rata Interest" means the number of Shares purchased by each Purchaser, relative to the total number of Shares being sold hereunder, as reflected on Schedule I attached hereto.
- "Registration Statement" means a registration statement or registration statements of the Company filed under the Securities Act pursuant to Section 10 hereof.
- "Reporting Period" means the period commencing on the Closing Date and ending on the earliest of: (i) the date as of which the Purchasers may sell all of the Shares under Rule 144 without volume or manner-of-sale restrictions and without the requirement for the Company to be in compliance with the current public information requirements under Rule 144(c)(1) (or any successor thereto) promulgated under the Securities Act; (ii) the second anniversary of the Closing Date, or (iii) the date on which such Purchaser shall have sold all of the Shares pursuant to a Registration Statement.
- "Required Holders" means: (i) prior to the Closing, the Purchasers agreeing to invest at least 66% of the amount invested by all the Purchasers pursuant to this Agreement and (ii) from and after the Closing, the Purchasers beneficially owning (as determined pursuant to Rule 13d-3 under the Exchange Act) at least 66% of the Shares.
- "*Subsidiary*" means any corporation, association trust, limited liability company, partnership, joint venture or other business association or entity, at least 50% of the outstanding voting securities of which are at the time owned or controlled directly or indirectly by the Company.
- "Trading Day" means any day on which the Common Stock is traded on the Trading Market; provided that "Trading Day" shall not include any day on which the Common Stock is scheduled to trade on such exchange or market for less than 4.5 hours or any day that the Common Stock is suspended from trading during the final hour of trading on such exchange or market (or if such exchange or market does not designate in advance the closing time of trading on such exchange or market, then during the hour ending at 4:00:00 p.m., New York time).

"Trading Market" means the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question:

NYSE Amex Equities, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, the New York Stock Exchange or the OTC Markets Group Inc.

"*Transaction Documents*" means this Agreement and all exhibits and schedules thereto and hereto and any other documents or agreements executed in connection with the transactions contemplated hereunder.

Section 12. Miscellaneous.

12.1 <u>Waivers and Amendments</u>. Upon the approval of the Company and the written consent of the Required Holders, the obligations of the Company and the rights of the Purchasers under this Agreement may be waived (either generally or in a particular instance, either retroactively or prospectively and either for a specified period of time or indefinitely). Neither this Agreement, nor any provision hereof, may be changed, waived, discharged or terminated orally or by course of dealing, but only by an instrument in writing executed by the Company and the Required Holders.

12.2 <u>Notices</u>. All notices, requests, consents, and other communications under this Agreement shall be in writing and shall be deemed delivered: (a) when delivered, if delivered personally, (b) four Business Days after being sent by registered or certified mail, return receipt requested, postage prepaid, (c) one Business Day after being sent via a reputable nationwide overnight courier service guaranteeing next Business Day delivery, or (d) when receipt is acknowledged, in the case of email, in each case to the intended recipient as set forth below, with respect to the Company, and to the addresses set forth on the signature pages hereto, with respect to the Purchasers.

If to the Company:

Arrowhead Pharmaceuticals, Inc.
225 South Lake Avenue, Suite 1050
Pasadena, California 91101
Attn: Chief Executive Officer
Email: canzalone@arrowheadpharma.com

with copies to:

Arrowhead Pharmaceuticals, Inc.
225 South Lake Avenue, Suite 1050
Pasadena, California 91101
Attn: General Counsel
Email: pobrien@arrowheadpharma.com

Gibson, Dunn & Crutcher LLP 555 Mission Street, Suite 3000 San Francisco, California 94105 Attn: Ryan A. Murr

Email: rmurr@gibsondunn.com

or at such other address as the Company or each Purchaser may specify by written notice to the other parties hereto in accordance with this Section 12.2.

- 12.3 <u>Cumulative Remedies</u>. None of the rights, powers or remedies conferred upon the Purchasers on the one hand or the Company on the other hand shall be mutually exclusive, and each such right, power or remedy shall be cumulative and in addition to every other right, power or remedy, whether conferred by this Agreement or now or hereafter available at law, in equity, by statute or otherwise.
- 12.4 <u>Successors and Assigns</u>. All the terms and provisions of this Agreement shall be binding upon and inure to the benefit of and be enforceable by the respective parties hereto, the successors and permitted assigns of each Purchaser and the successors of the Company, whether so expressed or not. None of the parties hereto may assign its rights or obligations hereof without the prior written consent of the Company, except that a Purchaser may, without the prior consent of the Company, assign its rights to purchase the Shares hereunder to any of its Affiliates (provided each such Affiliate agrees to be bound by the terms of this Agreement and makes the same representations and warranties set forth in Section 4 hereof). This Agreement shall not inure to the benefit of or be enforceable by any other Person.
- 12.5 <u>Headings</u>. The headings of the Sections and paragraphs of this Agreement have been inserted for convenience of reference only and do not constitute a part of this Agreement.
- 12.6 Governing Law; Jurisdiction. This Agreement shall be governed by and construed in accordance with the laws of the State of New York without regard to its conflict of law principles. Any suit, action or proceeding seeking to enforce any provision of, or based on any matter arising out of or in connection with, this Agreement or the transactions contemplated hereby may be brought in any federal or state court located in the City of New York and State of New York, and each of the parties hereby consents to the jurisdiction of such courts (and of the appropriate appellate courts therefrom) in any such suit, action or proceeding and irrevocably waives, to the fullest extent permitted by law, any objection which it may now or hereafter have to the laying of the venue of any such suit, action or proceeding in any such court or that any such suit, action or proceeding which is brought in any such court has been brought in an inconvenient forum. Process in any such suit, action or proceeding may be served on any party anywhere in the world, whether within or without the jurisdiction of any such court.
- 12.7 <u>Counterparts; Effectiveness</u>. This Agreement may be executed in any number of counterparts and by different parties hereto in separate counterparts, with the same effect as if all parties had signed the same document. All such counterparts (including counterparts delivered by facsimile or other electronic format) shall be deemed an original, shall be construed together and shall constitute one and the same instrument. This Agreement shall become effective when each party hereto shall have received counterparts hereof signed by all of the other parties hereto.

12.8 <u>Waiver of Potential Conflicts of Interest</u>. Each of the Purchasers and the Company acknowledges that Gibson, Dunn & Crutcher LLP ("Gibson Dunn") may have represented and may currently represent certain of the Purchasers. In the course of such representation, Gibson Dunn may have come into possession of confidential information relating to such Purchasers. Each of the Purchasers and the Company acknowledges that Gibson Dunn is representing only the Company in this transaction. By executing this Agreement, each of the Purchasers and the Company hereby waives any actual or potential conflict of interest which has or may arise as a result of Gibson Dunn's representation of such persons and entities, and represents that it has had the opportunity to consult with independent counsel concerning the giving of this waiver.

12.9 Entire Agreement. This Agreement contains the entire agreement among the parties hereto with respect to the subject matter hereof and thereof and, except as set forth below, this agreement supersedes and replaces all other prior agreements, written or oral, among the parties hereto with respect to the subject matter hereof and thereof. Notwithstanding the foregoing, this Agreement shall not supersede any confidentiality or other non-disclosure agreements that may be in place between the Company and any Purchaser.

12.10 <u>Severability</u>. If any provision of this Agreement shall be found by any court of competent jurisdiction to be invalid or unenforceable, the parties hereby waive such provision to the extent that it is found to be invalid or unenforceable. Such provision shall, to the maximum extent allowable by law, be modified by such court so that it becomes enforceable, and, as modified, shall be enforced as any other provision hereof, all the other provisions hereof continuing in full force and effect.

IN WITNESS WHEREOF, the parties hereto have caused this Securities Purchase Agreement to be duly executed as of the Effective Date.

THE COMPANY:

ARROWHEAD PHARMACEUTICALS, INC.

By:			
Name:			
Title:			

IN WITNESS WHEREOF, the parties hereto have caused this Securities Purchase Agreement to be duly executed as of the Effective Date.

PURCHASERS:			
By:			
Name:			
Title:			
Address:			
Email:			

EXHIBIT A

PLAN OF DISTRIBUTION

The selling stockholders, which shall include donees, pledgees, transferees or other successors-in-interest selling shares of common stock or interests in shares of common stock received after the date of this prospectus from a selling stockholder as a gift, pledge, partnership distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The selling stockholders may use any one or more of the following methods when disposing of shares or interests therein:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its own account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- · short sales effected after the date the registration statement of which this prospectus is a part is declared effective by the SEC;
- · through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- through agreements between broker-dealers and the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- · a combination of any such methods of sale; and
- · any other method permitted by applicable law.

The selling stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock, from time to time, under this prospectus, or under an amendment to this prospectus under Rule 424(b) or other applicable provision of the Securities Act amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the pledgees, transferees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of our common stock or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of our common stock short and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into options or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to each such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the selling stockholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the selling stockholders reserves the right to accept and, together with its agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from this offering.

The selling stockholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act of 1933, provided that they meet the criteria and conform to the requirements of that rule.

The selling stockholders and any underwriters, broker-dealers or agents that participate in the sale of the common stock or interests therein may be "underwriters" within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of the shares may be underwriting discounts and commissions under the Securities Act. Selling stockholders who are "underwriters" within the meaning of Section 2(11) of the Securities Act will be subject to the prospectus delivery requirements of the Securities Act.

To the extent required, the shares of our common stock to be sold, the names of the selling stockholders, the respective purchase prices and public offering prices, the names of any agents, dealer or underwriter, and any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

In order to comply with the securities laws of some states, if applicable, the common stock may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the common stock may not be sold unless it has been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

We have advised the selling stockholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the selling stockholders and their affiliates. In addition, to the extent applicable we will make copies of this prospectus (as it may be supplemented or amended from time to time) available to the selling stockholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The selling stockholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

We have agreed to indemnify the selling stockholders against liabilities, including liabilities under the Securities Act and state securities laws, relating to the registration of the shares offered by this prospectus.

We have agreed with the selling stockholders to keep the registration statement of which this prospectus constitutes a part effective until the earlier of (1) such time as all of the shares covered by this prospectus have been disposed of pursuant to and in accordance with the registration statement or (2) the date on which all of the shares may be sold without restriction pursuant to Rule 144 of the Securities Act.

* * *



PRESS RELEASE

August 9, 2016

Arrowhead Pharmaceuticals Prices \$45 Million Private Offering

PASADENA, Calif., August 9, 2016 — Arrowhead Pharmaceuticals Inc. (NASDAQ: ARWR) today announced that it has priced a private offering of its common stock with gross proceeds expected to be \$45 million. The offering was priced at \$5.90 per share.

Cantor Fitzgerald & Co. acted as sole placement agent for the offering.

Approximately 7.63 million shares of common stock are expected to be issued at the closing of the offering. The offering is expected to close on or about August 12, 2016, subject to the satisfaction of customary closing conditions.

This press release shall not constitute an offer to sell or the solicitation of an offer to buy these securities, nor shall there be any offer, solicitation or sale of these securities in any jurisdiction in which such offer, solicitation or sale would be unlawful.

The securities to be sold in the private placement have not been registered under the Securities Act of 1933, as amended (the "Securities Act"), or any state or other jurisdiction's securities laws, and may not be offered or sold in the United States absent registration or an applicable exemption from the registration requirements of the Securities Act and applicable state or other jurisdictions' securities laws. The Company has agreed to file a registration statement with the Securities and Exchange Commission registering the resale of the shares of common stock to be issued and sold in the private placement.

About Arrowhead Pharmaceuticals

Arrowhead Pharmaceuticals develops medicines that treat intractable diseases by silencing the genes that cause them. Using a broad portfolio of RNA chemistries and efficient modes of delivery, Arrowhead therapies trigger the RNA interference mechanism to induce rapid, deep, and durable knockdown of target genes. RNA interference, or RNAi, is a mechanism present in living cells that inhibits the expression of a specific gene, thereby affecting the production of a specific protein. Arrowhead's RNAi-based therapeutics leverage this natural pathway of gene silencing. The company's pipeline includes ARC-520 and ARC-521 for chronic hepatitis B virus infection, ARC-AAT for liver disease associated with alpha-1 antitrypsin deficiency, ARC-F12 for hereditary angioedema and thromboembolic disorders, ARC-LPA for cardiovascular disease, and ARC-HIF2 for renal cell carcinoma.

For more information please visit <u>www.arrowheadpharma.com</u>, or follow us on Twitter <u>@ArrowheadPharma</u>. To be added to the Company's email list and receive news directly, please visit

http://ir.arrowheadpharma.com/alerts.cfm.

Safe Harbor Statement under the Private Securities Litigation Reform Act:

This news release contains forward-looking statements within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. These statements are based upon our current expectations and speak only as of the date hereof. Our actual results may differ materially and adversely from those expressed in any forward-looking statements as a result of various factors and uncertainties, including our ability to finance our operations, the future success of our scientific studies, our ability to successfully develop drug candidates, the timing for starting and completing clinical trials, rapid technological change in our markets, and the enforcement of our intellectual property rights. Our most recent Annual Report on Form 10-K and subsequent Quarterly Reports on Form 10-Q discuss some of the important risk factors that may affect our business, results of operations and financial condition. We assume no obligation to update or revise forward-looking statements to reflect new events or circumstances.

DYNAMIC POLYCONJUGATES is a trademark of Arrowhead Pharmaceuticals, Inc.

Contacts:

Arrowhead Pharmaceuticals, Inc. Vince Anzalone, CFA 626-304-3400 <u>ir@arrowheadpharma.com</u>

Investor Relations:

The Trout Group Chad Rubin 646-378-2947 ir@arrowheadpharma.com

Media:

Russo Partners Matt Middleman, M.D. 212-845-4272 matt.middleman@russopartnersllc.com

Source: Arrowhead Pharmaceuticals, Inc.