
**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): April 29, 2013

Arrowhead Research Corporation

(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

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

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

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 April 29, 2013, Arrowhead Research Corporation (the "Company") entered into a Securities Purchase Agreement with certain institutional investors (the "Purchasers"), as identified on Schedule I to the Securities Purchase Agreement filed herewith, pursuant to which the Company agreed to issue and sell an aggregate of 14,262,553 shares of common stock, \$0.001 par value per share (the "Shares"), at a purchase price of \$1.83 per share, and 9,900 shares of Series B Convertible Preferred Stock (the "Preferred Shares"), at a purchase price of \$1,000 per share. The Preferred Shares are convertible into shares of common stock at a conversion price of \$1.83 per share of common stock. The aggregate purchase price to be paid by the Purchasers for the Shares and Preferred Shares was \$36,000,472 and the Company expects to receive net proceeds of approximately \$35,350,000, after advisory fees and offering expenses. The closing of the sale of the Shares and Preferred Shares is expected to occur on May 3, 2013.

The Securities Purchase Agreement requires the Company to register the resale of the Shares and the Common Stock underlying the Preferred Shares (the "Conversion Shares"). The Company is required to prepare and file a registration statement with the Securities and Exchange Commission within 30 days of the closing of the offering, and to use commercially reasonable efforts to have the registration statement declared effective within 90 days if there is no review by the Securities and Exchange Commission, and within 120 days in the event of such review.

The Shares and Preferred 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(2) of the Securities Act and Regulation D promulgated thereunder. The Shares, Preferred Shares and Conversion Shares (collectively, the "Securities") 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 Securities.

The Preferred Shares are convertible at the option of the stockholder into the number of shares of common stock determined by dividing the value of the Preferred Shares being converted by the conversion price of \$1.83, subject to adjustment for stock splits, reverse stock splits and similar recapitalization events. The Company will not effect any conversion of the Preferred Shares, and a stockholder shall not have the right to convert any portion of the Preferred Shares, to the extent that, after giving effect to the conversion such stockholder would beneficially own in excess of the Beneficial Ownership Limitation. The "Beneficial Ownership Limitation" is 9.99% of the number of shares of the common stock outstanding immediately after giving effect to the issuance of shares of common stock issuable upon conversion of Preferred Shares held by the applicable stockholder. The Preferred Shares are eligible to vote with the common stock of the Company on an as-converted basis, but only to the extent that the Preferred Shares are eligible for conversion without exceeding the Beneficial Ownership Limitation. The Preferred Shares are entitled to receive dividends on a pari passu basis with the common stock, when, and if declared. In any liquidation or dissolution of the Company, the Preferred Shares are entitled to participate in the distribution of assets, to the extent legally available for distribution, on a pari passu basis with the common stock.

Trout Capital LLC ("Trout") acted as financial advisor to the Company in connection with the Offering. Pursuant to a financial advisory agreement (the "Advisory Agreement") between the Company and Trout filed herewith, the Company expects to pay to Trout an advisory fee of approximately \$540,000.

The above description of the material terms of the offering is qualified in its entirety by reference to the Securities Purchase Agreement attached hereto as Exhibit 10.1 and the Advisory Agreement attached hereto as Exhibit 10.2 and are incorporated herein by reference.

Item 5.03 Amendments to Articles of Incorporation or Bylaws; Change in Fiscal Year.

In connection with the private placement described in Item 3.02, the Company's board of directors approved the Certificate of Designation Preferences, Rights and Limitations of Series B Convertible Preferred Stock in the Form attached hereto as Exhibit 3.1, which designates 9,900 shares as Series B Convertible Preferred Stock. The material terms of the Series B Preferred Stock are described in Item 3.02 and are incorporated herein by reference. The Company expects to file the Certificate of Designation with the Secretary of State of Delaware on or about May 1, 2013.

Item 8.01 Other Events.

On April 29, 2013, the Company issued the press release attached hereto as Exhibit 99.1 regarding the private placement described in Item 3.02. A copy of the press release is attached as Exhibit 99.1.

Item 9.01. Financial Statements and Exhibits.**(d) Exhibits**

Exhibit No.	Description
3.1	Form of Certificate of Designation Preferences, Rights and Limitations of Series B Convertible Preferred Stock
10.1	Securities Purchase Agreement, dated April 29, 2013, between the Company and the purchasers listed thereon.
10.2	Agreement dated April 25, 2013 between the Company and Trout Capital LLC
99.1	Press Release, dated April 29, 2013

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: April 30, 2013

ARROWHEAD RESEARCH CORPORATION

By: /s/ Kenneth Myszowski
Kenneth Myszowski
Chief Financial Officer

Form of Certificate of Designation**ARROWHEAD RESEARCH CORPORATION
CERTIFICATE OF DESIGNATION OF PREFERENCES,
RIGHTS AND LIMITATIONS
OF
SERIES B CONVERTIBLE PREFERRED STOCK**

PURSUANT TO SECTION 151 OF THE
DELAWARE GENERAL CORPORATION LAW

The undersigned, and , do hereby certify that:

1. They are the President and Secretary, respectively, of Arrowhead Research Corporation, a Delaware corporation (the "Corporation").
2. The Corporation is authorized to issue 5,000,000 shares of preferred stock, none of which are issued and outstanding.
3. The following resolutions were duly adopted by the board of directors of the Corporation (the "Board of Directors"):

WHEREAS, the certificate of incorporation of the Corporation provides for a class of its authorized stock known as preferred stock, consisting of 5,000,000 shares, \$0.001 par value per share, issuable from time to time in one or more series;

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

WHEREAS, it is the desire of the Board of Directors, pursuant to its authority as aforesaid, to fix the rights, preferences, restrictions and other matters relating to a series of the preferred stock, which shall consist of, except as otherwise set forth in the Purchase Agreement, up to 9,900 shares of the preferred stock which the Corporation has the authority to issue, as follows:

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

TERMS OF PREFERRED STOCK

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

“Affiliate” means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 of the Securities Act.

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

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

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

“Buy-In” shall have the meaning set forth in Section 6(c)(iv).

“Commission” means the United States Securities and Exchange Commission.

“Common Stock” means the Corporation’s common stock, par value \$0.001 per share, and stock of any other class of securities into which such securities may hereafter be reclassified or changed.

“Common Stock Equivalents” means any securities of the Corporation or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, rights, options, warrants or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

“Conversion Amount” means the sum of the Stated Value at issue.

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

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

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

“Conversion Shares Registration Statement” means a registration statement that registers the resale of the Conversion Shares of the Holders, who shall be named as “selling stockholders” therein and meets the requirements of the Purchase Agreement.

“Effective Date” means the date that the Conversion Shares Registration Statement filed by the Corporation pursuant to the Purchase Agreement is first declared effective by the Commission.

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

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

“Holder” shall have the meaning given such term in Section 2.

“Junior Securities” means the Common Stock and all other Common Stock Equivalents of the Corporation other than those securities which are explicitly senior or pari passu to the Preferred Stock in dividend rights or liquidation preference.

“Liquidation” shall have the meaning set forth in Section 5.

“New York Courts” shall have the meaning set forth in Section 8(d).

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

“Original Issue Date” means the date of the first issuance of any shares of the Preferred Stock regardless of the number of transfers of any particular shares of Preferred Stock and regardless of the number of certificates which may be issued to evidence such Preferred Stock.

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

“Preferred Stock” shall have the meaning set forth in Section 2.

“Purchase Agreement” means the Securities Purchase Agreement, dated April 29, 2013, among the Corporation and the original Holders, as amended, modified or supplemented from time to time in accordance with its terms.

“Registration Statement” means a registration statement meeting the requirements set forth in the Purchase Agreement and covering the resale of the Underlying Shares by each Holder as provided for in the Purchase Agreement.

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

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

“Stated Value” shall have the meaning set forth in Section 2.

“Subsidiary” means any Subsidiary of the Corporation as defined in the Purchase Agreement and shall, where applicable, also include any direct or indirect subsidiary of the Corporation formed or acquired after the date of the Purchase Agreement.

“Successor Entity” shall have the meaning set forth in Section 7(d).

“Trading Day” means a day on which the principal Trading Market is open for business.

“Trading Market” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE MKT, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, the New York Stock Exchange or the OTC Bulletin Board (or any successors to any of the foregoing).

“Transaction Documents” means the Purchase Agreement, this Certificate of Designation and all exhibits and schedules thereto and hereto and any other documents or agreements executed in connection with the transactions contemplated hereunder

“Transfer Agent” means Computershare Limited, the current transfer agent for the Common Stock, and any successor transfer agent of the Corporation.

“Underlying Shares” means the shares of Common Stock issued and issuable upon conversion of the Preferred Stock.

Section 2. Designation, Amount and Par Value. The series of preferred stock shall be designated as its Series B Convertible Preferred Stock (the “Preferred Stock”) and the number of shares so designated shall be 9,900 (which shall not be subject to increase without the written consent of a majority of the holders of the Preferred Stock (each, a “Holder” and collectively, the “Holders”). Each share of Preferred Stock shall have a par value of \$0.001 per share and a stated value equal to \$1,000 (the “Stated Value”).

Section 3. Dividends.

a) Holders shall be entitled to receive, and the Corporation shall pay, dividends on shares of Preferred Stock equal (on an as-if-converted-to-Common-Stock basis) to and in the same form as dividends (other than dividends in the form of Common Stock) actually paid on shares of the Common Stock when, as and if such dividends (other than dividends in the form of Common Stock) are paid on shares of the Common Stock. Other than as set forth in the previous sentence, no other dividends shall be paid on shares of Preferred Stock; and the Corporation shall pay no dividends (other than dividends in the form of Common Stock) on shares of the Common Stock unless it simultaneously complies with the previous sentence.

b) Other Securities. So long as any Preferred Stock shall remain outstanding, the Corporation shall not redeem, purchase or otherwise acquire directly or indirectly more than a de minimis amount of any Junior Securities other than as to repurchases of Common Stock or Common Stock Equivalents from departing, officers, directors or employees of the Company or any Subsidiary, and provided that, while any of the Preferred Stock remains outstanding, such repurchases shall not exceed an aggregate of \$100,000 in any fiscal year.

Section 4. Voting Rights. In addition to the voting rights provided by applicable law, the Preferred Stock shall have the right to vote on any matter on which the Common Stock is eligible to vote on an as-if-converted-to-Common-Stock basis; provided that each Holder shall only have the right to vote such shares of Preferred Stock as are eligible for conversion without exceeding the Beneficial Ownership Limitation.

Section 5. Liquidation. Upon any liquidation, dissolution or winding-up of the Corporation, whether voluntary or involuntary (a "Liquidation"), after the satisfaction in full of the debts of the Corporation and the payment of any liquidation preference owed to the holders of shares of capital stock of the Corporation ranking prior to the Preferred Stock upon liquidation, the Holders of the Preferred Stock shall participate pari passu with the holders of the Common Stock (on an as-if-converted-to-Common-Stock basis without regard to any limitation in Section 6(d) on the conversion of this Preferred Stock) in the net assets of the Corporation. The Corporation shall mail written notice of any such Liquidation, not less than 45 days prior to the payment date stated therein, to each Holder.

Section 6. Conversion.

a) Conversions at Option of Holder. Each share of Preferred Stock shall be convertible, at any time and from time to time from and after the Original Issue Date at the option of the Holder thereof, into that number of shares of Common Stock (subject to the limitations set forth in Section 6(d)) determined by dividing the Stated Value of such share of Preferred Stock by the Conversion Price. Holders shall effect conversions by providing the Corporation with the form of conversion notice attached hereto as Annex A (a "Notice of Conversion"). Each Notice of Conversion shall specify the number of shares of Preferred Stock to be converted, the number of shares of Preferred Stock owned prior to the conversion at issue, the number of shares of Preferred Stock owned subsequent to the conversion at issue and the date on which such conversion is to be effected, which date may not be prior to the date the applicable Holder delivers by facsimile such Notice of Conversion to the Corporation (such date, the "Conversion Date"). If no Conversion Date is specified in a Notice of Conversion, the Conversion Date shall be the date that such Notice of Conversion to the Corporation is deemed delivered hereunder. The calculations and entries set forth in the Notice of Conversion shall control in the absence of manifest or mathematical error. No ink-original Notice of Conversion shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Conversion form be required. To effect conversions of shares of Preferred Stock, a Holder shall not be required to surrender the certificate(s) representing the shares of Preferred Stock to the Corporation unless all of

the shares of Preferred Stock represented thereby are so converted, in which case such Holder shall deliver the certificate representing such shares of Preferred Stock promptly following the Conversion Date at issue. Shares of Preferred Stock converted into Common Stock or redeemed in accordance with the terms hereof shall be canceled and shall not be reissued.

b) Conversion Price. The conversion price for the Preferred Stock shall equal \$1.83, subject to adjustment herein (the "Conversion Price").

c) Mechanics of Conversion

i. Delivery of Certificate Upon Conversion. Not later than three (3) Trading Days after each Conversion Date (the "Share Delivery Date"), the Corporation shall deliver, or cause to be delivered, to the converting Holder (A) a certificate or certificates representing the Conversion Shares which, on or after the earlier of (i) the six month anniversary of the Original Issue Date or (ii) the Effective Date, shall be free of restrictive legends and trading restrictions (other than those which may then be required by the Purchase Agreement) representing the number of Conversion Shares being acquired upon the conversion of the Preferred Stock (including, if the Corporation has given continuous notice pursuant to Section 3(b) for payment of dividends in shares of Common Stock at least 20 Trading Days prior to the date on which the Notice of Conversion is delivered to the Corporation, shares of Common Stock representing the payment of accrued dividends otherwise determined pursuant to Section 3(a) but assuming that the Dividend Notice Period is the 20 Trading Days period immediately prior to the date on which the Notice of Conversion is delivered to the Corporation and excluding for such issuance the condition that the Corporation deliver the Dividend Share Amount as to such dividend payment prior to the commencement of the Dividend Notice Period), and (B) a bank check in the amount of accrued and unpaid dividends (if the Corporation has elected or is required to pay accrued dividends in cash). On or after the earlier of (i) the six month anniversary of the Original Issue Date or (ii) the Effective Date, the Corporation shall use its best efforts to deliver any certificate or certificates required to be delivered by the Corporation under this Section 6 electronically through the Depository Trust Company or another established clearing corporation performing similar functions.

ii. Failure to Deliver Certificates. If, in the case of any Notice of Conversion, such certificate or certificates are not delivered to or as directed by the applicable Holder by the Share Delivery Date, the Holder shall be entitled to elect by written notice to the Corporation at any time on or before its receipt of such certificate or certificates, to rescind such Conversion, in which event the Corporation shall promptly return to the Holder any original Preferred Stock certificate delivered to the Corporation and the Holder shall promptly return to the Corporation the Common Stock certificates issued to such Holder pursuant to the rescinded Conversion Notice.

iii. Obligation Absolute. The Corporation's obligation to issue and deliver the Conversion Shares upon conversion of Preferred Stock in accordance with the terms hereof are absolute and unconditional, irrespective of any action or inaction by a Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by such Holder or any other Person of any obligation to the Corporation or any violation or alleged violation of law by such Holder or any other person, and irrespective of any other circumstance which might otherwise limit such obligation of the Corporation to such Holder in connection with the issuance of such Conversion Shares; provided, however, that such delivery shall not operate as a waiver by the Corporation of any such action that the Corporation may have against such Holder. In the event a Holder shall elect to convert any or all of the Stated Value of its Preferred Stock, the Corporation may not refuse conversion based on any claim that such Holder or any one associated or affiliated with such Holder has been engaged in any violation of law, agreement or for any other reason, unless an injunction from a court, on notice to Holder, restraining and/or enjoining conversion of all or part of the Preferred Stock of such Holder shall have been sought and obtained, and the Corporation posts a surety bond for the benefit of such Holder in the amount of 150% of the Stated Value of Preferred Stock which is subject to the injunction, which bond shall remain in effect until the completion of arbitration/litigation of the underlying dispute and the proceeds of which shall be payable to such Holder to the extent it obtains judgment. In the absence of such injunction, the Corporation shall issue Conversion Shares and, if applicable, cash, upon a properly noticed conversion. Nothing herein shall limit a Holder's right to pursue all remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief. The exercise of any such rights shall not prohibit a Holder from seeking to enforce damages pursuant to any other Section hereof or under applicable law.

iv. Compensation for Buy-In on Failure to Timely Deliver Certificates Upon Conversion. In addition to any other rights available to the Holder, if the Corporation fails for any reason to deliver to a Holder the applicable certificate or certificates by the Share Delivery Date pursuant to Section 6(c)(i), and if after such Share Delivery Date such Holder is required by its brokerage firm to purchase (in an open market transaction or otherwise), or the Holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by such Holder of the Conversion Shares which such Holder was entitled to receive upon the conversion relating to such Share Delivery Date (a "Buy-In"), then the Corporation shall (A) pay in cash to such Holder (in addition to any other remedies available to or elected by such Holder) the amount, if any, by which (x) such Holder's total purchase price (including any brokerage commissions) for the Common Stock so purchased exceeds (y) the product of (1) the aggregate number of shares of Common Stock that such Holder was entitled to receive from the

conversion at issue multiplied by (2) the actual sale price at which the sell order giving rise to such purchase obligation was executed (including any brokerage commissions) and (B) at the option of such Holder, either reissue (if surrendered) the shares of Preferred Stock equal to the number of shares of Preferred Stock submitted for conversion (in which case, such conversion shall be deemed rescinded) or deliver to such Holder the number of shares of Common Stock that would have been issued if the Corporation had timely complied with its delivery requirements under Section 6(c)(i). For example, if a Holder purchases shares of Common Stock having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted conversion of shares of Preferred Stock with respect to which the actual sale price of the Conversion Shares (including any brokerage commissions) giving rise to such purchase obligation was a total of \$10,000 under clause (A) of the immediately preceding sentence, the Corporation shall be required to pay such Holder \$1,000. The Holder shall provide the Corporation written notice indicating the amounts payable to such Holder in respect of the Buy-In and, upon request of the Corporation, evidence of the amount of such loss. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Corporation's failure to timely deliver certificates representing shares of Common Stock upon conversion of the shares of Preferred Stock as required pursuant to the terms hereof.

v. Reservation of Shares Issuable Upon Conversion. The Corporation covenants that it will at all times reserve and keep available out of its authorized and unissued shares of Common Stock for the sole purpose of issuance upon conversion of the Preferred Stock and payment of dividends on the Preferred Stock, each as herein provided, free from preemptive rights or any other actual contingent purchase rights of Persons other than the Holder (and the other holders of the Preferred Stock), not less than such aggregate number of shares of the Common Stock as shall (subject to the terms and conditions set forth in the Purchase Agreement) be issuable (taking into account the adjustments and restrictions of Section 7) upon the conversion of the then outstanding shares of Preferred Stock and payment of dividends hereunder. The Corporation covenants that all shares of Common Stock that shall be so issuable shall, upon issue, be duly authorized, validly issued, fully paid and nonassessable and, if the Conversion Shares Registration Statement is then effective under the Securities Act, shall be registered for public resale in accordance with such Conversion Shares Registration Statement (subject to such Holder's compliance with its obligations under the Registration Rights Agreement).

vi. Fractional Shares. No fractional shares or scrip representing fractional shares shall be issued upon the conversion of the Preferred Stock. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such conversion, the Corporation shall at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Conversion Price or round up to the next whole share.

vii. Transfer Taxes and Expenses. The issuance of certificates for shares of the Common Stock on conversion of this Preferred Stock shall be made without charge to any Holder for any documentary stamp or similar taxes that may be payable in respect of the issue or delivery of such certificates, provided that the Corporation shall not be required to pay any tax that may be payable in respect of any transfer involved in the issuance and delivery of any such certificate upon conversion in a name other than that of the Holders of such shares of Preferred Stock and the Corporation shall not be required to issue or deliver such certificates unless or until the Person or Persons requesting the issuance thereof shall have paid to the Corporation the amount of such tax or shall have established to the satisfaction of the Corporation that such tax has been paid. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Conversion.

d) Beneficial Ownership Limitation. The Corporation shall not effect any conversion of the Preferred Stock, and a Holder shall not have the right to convert any portion of the Preferred Stock, to the extent that, after giving effect to the conversion set forth on the applicable Notice of Conversion, such Holder (together with such Holder's Affiliates, and any Persons acting as a group together with such Holder or any of such Holder's Affiliates) would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by such Holder and its Affiliates shall include the number of shares of Common Stock issuable upon conversion of the Preferred Stock with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which are issuable upon (i) conversion of the remaining, unconverted Stated Value of Preferred Stock beneficially owned by such Holder or any of its Affiliates and (ii) exercise or conversion of the unexercised or unconverted portion of any other securities of the Corporation subject to a limitation on conversion or exercise analogous to the limitation contained herein (including, without limitation, the Preferred Stock) beneficially owned by such Holder or any of its Affiliates. Except as set forth in the preceding sentence, for purposes of this Section 6(d), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. To the extent that the limitation contained in this Section 6(d) applies, the determination of whether the Preferred Stock is convertible (in relation to other securities owned by such Holder together with any Affiliates) and of how many shares of Preferred Stock are convertible shall be in the sole discretion of such Holder, and the submission of a Notice of Conversion shall be deemed to be such Holder's determination of whether the shares of Preferred Stock may be converted (in relation to other securities owned by such Holder together with any Affiliates) and how many shares of the Preferred Stock are convertible, in each case subject to the Beneficial Ownership Limitation. To ensure compliance with this restriction, each Holder will be deemed to represent to the Corporation each time it delivers a Notice of Conversion that such Notice of Conversion has not violated the

restrictions set forth in this paragraph and the Corporation shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 6(d), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as stated in the most recent of the following: (i) the Corporation's most recent periodic or annual report filed with the Commission, as the case may be, (ii) a more recent public announcement by the Corporation or (iii) a more recent written notice by the Corporation or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Corporation shall within two Trading Days confirm orally and in writing to such Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Corporation, including the Preferred Stock, by such Holder or its Affiliates since the date as of which such number of outstanding shares of Common Stock was reported. The "Beneficial Ownership Limitation" shall be 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon conversion of Preferred Stock held by the applicable Holder. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 6(d) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation contained herein or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of Preferred Stock.

Section 7. Certain Adjustments.

a) Stock Dividends and Stock Splits. If the Corporation, at any time while this Preferred Stock is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions payable in shares of Common Stock on shares of Common Stock or any other Common Stock Equivalents (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Corporation upon conversion of, or payment of a dividend on, this Preferred Stock), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of a reverse stock split) outstanding shares of Common Stock into a smaller number of shares, or (iv) issues, in the event of a reclassification of shares of the Common Stock, any shares of capital stock of the Corporation, then the Conversion Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding any treasury shares of the Corporation) outstanding immediately before such event, and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to this Section 7(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

b) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 7(a) above, if at any time the Corporation grants, issues or sells any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the "Purchase Rights"), then the Holder of will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete conversion of such Holder's Preferred Stock (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such shares of Common Stock as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

c) Pro Rata Distributions. During such time as this Preferred Stock is outstanding, if the Corporation declares or makes any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "Distribution"), at any time after the issuance of this Preferred Stock, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete Conversion of this Preferred Stock (without regard to any limitations on Conversion hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided, however, to the extent that the Holder's right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any shares of Common Stock as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

d) Fundamental Transaction. If, at any time while this Preferred Stock is outstanding, (i) the Corporation, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Corporation with or into another Person, (ii) the Corporation, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Corporation or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Corporation, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Corporation, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person whereby such other Person acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination) (each a "Fundamental Transaction"), then, upon any subsequent conversion of this Preferred Stock, the Holder shall have the right to receive, for each Conversion Share that would have been issuable upon such conversion immediately prior to the occurrence of such Fundamental Transaction (without regard to any limitation in Section 6(d) on the conversion of this Preferred Stock), the number of shares of Common Stock of the successor or acquiring corporation or of the Corporation, if it is the surviving corporation, and any additional consideration (the "Alternate Consideration") receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Preferred Stock is convertible immediately prior to such Fundamental Transaction (without regard to any limitation in Section 6(d) on the conversion of this Preferred Stock). For purposes of any such conversion, the determination of the Conversion Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Corporation shall apportion the Conversion Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any conversion of this Preferred Stock following such Fundamental Transaction. To the extent necessary to effectuate the foregoing provisions, any successor to the Corporation or surviving entity in such Fundamental Transaction shall file a new Certificate of Designation with the same terms and conditions and issue to the Holders new preferred stock consistent with the foregoing provisions and evidencing the Holders' right to convert such preferred stock into Alternate Consideration. The Corporation shall cause any successor entity in a Fundamental Transaction in which the Corporation is not the

survivor (the “Successor Entity”) to assume in writing all of the obligations of the Corporation under this Certificate of Designation and the other Transaction Documents (as defined in the Purchase Agreement) in accordance with the provisions of this Section 7(d) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the holder of this Preferred Stock, deliver to the Holder in exchange for this Preferred Stock a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Preferred Stock which is convertible for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon conversion of this Preferred Stock (without regard to any limitations on the conversion of this Preferred Stock) prior to such Fundamental Transaction, and with a conversion price which applies the conversion price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such conversion price being for the purpose of protecting the economic value of this Preferred Stock immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Certificate of Designation and the other Transaction Documents referring to the “Corporation” shall refer instead to the Successor Entity), and may exercise every right and power of the Corporation and shall assume all of the obligations of the Corporation under this Certificate of Designation and the other Transaction Documents with the same effect as if such Successor Entity had been named as the Corporation herein.

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

f) Notice to the Holders.

i. Adjustment to Conversion Price. Whenever the Conversion Price is adjusted pursuant to any provision of this Section 7, the Corporation shall promptly deliver to each Holder a notice setting forth the Conversion Price after such adjustment and setting forth a brief statement of the facts requiring such adjustment.

ii. Notice to Allow Conversion by Holder. If (A) the Corporation shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Corporation shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Corporation shall authorize the granting to all holders of the Common Stock of rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights,

(D) the approval of any stockholders of the Corporation shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Corporation is a party, any sale or transfer of all or substantially all of the assets of the Corporation, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property or (E) the Corporation shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Corporation, then, in each case, the Corporation shall cause to be filed at each office or agency maintained for the purpose of conversion of this Preferred Stock, and shall cause to be delivered to each Holder at its last address as it shall appear upon the stock books of the Corporation, at least twenty (20) calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange, provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Corporation or any of the Subsidiaries, the Corporation shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to convert the Conversion Amount of this Preferred Stock (or any part hereof) during the 20-day period commencing on the date of such notice through the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

Section 8. Miscellaneous.

a) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Conversion, shall be in writing and delivered personally, by facsimile, or sent by a nationally recognized overnight courier service, addressed to the Corporation, at the address set forth above **Attention:** [], facsimile number [], or such other facsimile number or address as the Corporation may specify for such purposes by notice to the Holders delivered in accordance with this Section 8. Any and all notices or other communications or deliveries to be provided by the Corporation hereunder shall be in writing and delivered personally, by facsimile, or sent by a nationally recognized overnight courier service addressed to each Holder at the facsimile number or address of such Holder appearing on the books of the Corporation, or if no such facsimile number or address appears on the books of the Corporation, at the

principal place of business of such Holder, as set forth in the Purchase Agreement. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number set forth in this Section prior to 5:30 p.m. (New York City time) on any date, (ii) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number set forth in this Section on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (iii) the second Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given.

b) Absolute Obligation. Except as expressly provided herein, no provision of this Certificate of Designation shall alter or impair the obligation of the Corporation, which is absolute and unconditional, to pay liquidated damages, accrued dividends and accrued interest, as applicable, on the shares of Preferred Stock at the time, place, and rate, and in the coin or currency, herein prescribed.

c) Lost or Mutilated Preferred Stock Certificate. If a Holder's Preferred Stock certificate shall be mutilated, lost, stolen or destroyed, the Corporation shall execute and deliver, in exchange and substitution for and upon cancellation of a mutilated certificate, or in lieu of or in substitution for a lost, stolen or destroyed certificate, a new certificate for the shares of Preferred Stock so mutilated, lost, stolen or destroyed, but only upon receipt of evidence of such loss, theft or destruction of such certificate, and of the ownership hereof reasonably satisfactory to the Corporation.

d) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Certificate of Designation shall be governed by and construed and enforced in accordance with the internal laws of the State of Delaware, without regard to the principles of conflict of laws thereof. Each party agrees that all legal proceedings concerning the interpretation, enforcement and defense of the transactions contemplated by any of the Transaction Documents (whether brought against a party hereto or its respective Affiliates, directors, officers, shareholders, employees or agents) shall be commenced in the state and federal courts sitting in the City of New York, Borough of Manhattan (the "New York Courts"). Each party hereto hereby irrevocably submits to the exclusive jurisdiction of the New York Courts for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of such New York Courts, or such New York Courts are improper or inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Certificate of Designation and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be

deemed to limit in any way any right to serve process in any other manner permitted by applicable law. Each party hereto hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Certificate of Designation or the transactions contemplated hereby. If any party shall commence an action or proceeding to enforce any provisions of this Certificate of Designation, then the prevailing party in such action or proceeding shall be reimbursed by the other party for its attorneys' fees and other costs and expenses incurred in the investigation, preparation and prosecution of such action or proceeding.

e) Waiver. Any waiver by the Corporation or a Holder of a breach of any provision of this Certificate of Designation shall not operate as or be construed to be a waiver of any other breach of such provision or of any breach of any other provision of this Certificate of Designation or a waiver by any other Holders. The failure of the Corporation or a Holder to insist upon strict adherence to any term of this Certificate of Designation on one or more occasions shall not be considered a waiver or deprive that party (or any other Holder) of the right thereafter to insist upon strict adherence to that term or any other term of this Certificate of Designation on any other occasion. Any waiver by the Corporation or a Holder must be in writing.

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

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

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

i) Status of Converted or Redeemed Preferred Stock. Shares of Preferred Stock may only be issued pursuant to the Purchase Agreement. If any shares of Preferred Stock shall be converted, redeemed or reacquired by the Corporation, such shares shall resume the status of authorized but unissued shares of preferred stock and shall no longer be designated as Series A Convertible Preferred Stock.

RESOLVED, FURTHER, that the Chairman, the president or any vice-president, and the secretary or any assistant secretary, of the Corporation be and they hereby are authorized and directed to prepare and file this Certificate of Designation of Preferences, Rights and Limitations in accordance with the foregoing resolution and the provisions of Delaware law.

IN WITNESS WHEREOF, the undersigned have executed this Certificate this day of May 2013.

Name:
Title:

Name:
Title:

ANNEX A

NOTICE OF CONVERSION

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

The undersigned hereby elects to convert the number of shares of Series B Convertible Preferred Stock indicated below into shares of common stock, par value \$0.001 per share (the "Common Stock"), of Arrowhead Research Corporation, a Delaware corporation (the "Corporation"), according to the conditions hereof, as of the date written below. If shares of Common Stock are to be issued in the name of a Person other than the undersigned, the undersigned will pay all transfer taxes payable with respect thereto and is delivering herewith such certificates and opinions as may be required by the Corporation in accordance with the Purchase Agreement. No fee will be charged to the Holders for any conversion, except for any such transfer taxes.

Conversion calculations:

Date to Effect Conversion: _____

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

Number of shares of Preferred Stock to be Converted: _____

Stated Value of shares of Preferred Stock to be Converted: _____

Number of shares of Common Stock to be Issued: _____

Applicable Conversion Price: _____

Number of shares of Preferred Stock subsequent to Conversion: _____

Address for Delivery: _____

or

DWAC Instructions:

Broker no: _____

Account no: _____

[HOLDER]

By: _____

Name:

Title:

SECURITIES PURCHASE AGREEMENT

This SECURITIES PURCHASE AGREEMENT (this "**Agreement**") is made and entered into as of April 29, 2013 by and among Arrowhead Research Corporation, a Delaware corporation (the "**Company**"), and the purchasers listed on 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(2) of the Securities Act of 1933, as amended (the "**Securities Act**"), and Rule 506 of Regulation D ("**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 (i) shares of common stock, \$0.001 par value per share (the "**Common Stock**") and (ii) shares of Preferred Stock, each 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:

1. **Authorization of Shares.** The Company has authorized the issuance and sale of Common Stock and Preferred Stock in an aggregate principal amount of up to \$40,000,000. The shares of Common Stock issuable at Closing are referred to herein as the "**Common Shares**" and the shares of Preferred Stock issuable at Closing are referred to herein as the "**Preferred Shares**". The shares of Common Stock into which the Preferred Stock is convertible are referred to herein as the "**Underlying Shares**" and, together with the Common Shares and the Preferred Shares, as the "**Shares**".

2. **Sale and Purchase of the Shares.** 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): (i) that number of Common Shares set forth opposite such Purchaser's name on Schedule I hereto for the purchase price set forth opposite such Purchaser's name, which amount represents the number of Common Shares purchased by such Purchaser multiplied by the price per Common Share of \$1.83 (the "**Per Share Price**") and (ii) that number of Preferred Shares set forth opposite such Purchaser's name on Schedule I hereto for the purchase price set forth opposite such Purchaser's name, which amount represents the number of Preferred Shares purchased by such Purchaser multiplied by the Stated Value (as defined herein). The aggregate price paid by all Purchasers, as set forth on Schedule I, shall be referred to as the "**Total Purchase Price**." At or prior to the Closing, each Purchaser will pay the Aggregate 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 deliver stock certificates to the Purchasers

representing the Common Shares and the Preferred Shares set forth on Schedule I against delivery of the Total 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 "delivery versus payment", the Company shall deliver to such Purchaser or such Purchaser's designated custodian the original stock certificates on or prior to the Closing and, upon receipt the Purchaser shall wire the Total Purchase Price as provided in the first sentence of this Section 2.

3. Closing. Subject to the satisfaction of the closing conditions set forth in Section 7, the closing (the "**Closing**"), with respect to the transaction contemplated in Section 2 hereof, shall take place at the offices of Ropes & Gray LLP, Three Embarcadero Center, San Francisco, California on May 3, 2013 or at such other time and place as the Company and Purchasers may agree, including remotely via the exchange of documents and signatures (the "**Closing Date**").

4. Representations and Warranties of the Purchasers. Each Purchaser, severally but not jointly, represents and warrants to the Company that the statements contained in this Section 4 are true and complete as of the date of this Agreement and will be true and complete as of the date of the Closing:

4.1. Validity. 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. Brokers. 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. Investment Representations and Warranties. 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. Investor Questionnaire. 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 (5) Business Days prior to the first anticipated filing date of such Registration Statement, the Company shall notify the Purchaser of any information the Company requests from the Purchaser.

4.5. Acquisition for Own Account. 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.

4.6. Ability to Protect Its Own Interests and Bear Economic Risks. 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. Accredited Investor. The Purchaser is an “accredited investor” as that term is defined in Regulation D promulgated under 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. 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(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.

4.10. Tax Advisors. 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.

4.11. 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 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.

5. Representations and Warranties by the Company. The Company represents and warrants to the Purchasers that the statements contained in this Section 5 are true and complete as of the date of this Agreement and will be true and complete as of the date of the Closing, as the case may be.

5.1. Capitalization. As of the date hereof, without giving effect to the Closing, the authorized capital stock of the Company consists of 145,000,000 shares of Common Stock, par value \$0.001 per share, and 5,000,000 shares of preferred stock, par value \$0.001 per share. As of the date hereof, there are: (i) 17,042,764 shares of Common Stock issued and outstanding, (ii) no shares of preferred stock issued or outstanding, and (iii) 7,960,329 shares of Common Stock reserved for issuance upon exercise of options, warrants and other convertible securities outstanding as of the date hereof. The Company's certificate of incorporation, as in effect on the date hereof, and the Company's bylaws, as in effect on the date hereof, are each filed as exhibits to the SEC Reports.

5.2. Due Issuance and Authorization of Capital Stock. All of the outstanding shares of capital stock of the Company and each Subsidiary have been duly authorized, validly issued and are fully paid and non-assessable.

5.3. Organization. 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.

5.4. Subsidiaries. The Subsidiaries of the Company are Calando Pharmaceuticals, Inc., Arrowhead Madison Inc., Alvos Therapeutics, Inc., Ablaris Therapeutics, Inc., Agonn Systems, Inc., and Tego Biosciences Corporation. Except as set forth in the SEC Reports, the Company owns beneficially and of record 100% of the outstanding capital stock of each Subsidiary.

5.5. Consents. 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.

5.6. Authorization; Enforcement. 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 (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). The execution, delivery and performance by the Company of this Agreement and the consummation by the Company of the transactions contemplated hereby (including, without limitation, the issuance of the Shares and the provision to the Purchaser of the rights contemplated by the Transaction Documents), 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.

5.7. Valid Issuance of Shares. 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, and will not be subject to preemptive rights or other similar rights of stockholders of the Company.

5.8. No Conflicts. 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. 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 Agreement (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.

5.9. The Nasdaq Capital Market. The Common Stock is listed on The Nasdaq Capital Market, and, except as disclosed in the SEC Reports, to the Company's knowledge, there are no proceedings to revoke or suspend such listing or the 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 Securities) will not result in any noncompliance by the Company with any such requirements.

5.10. 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.

5.11. Right of First Refusal; Stockholders Agreement; Voting and Registration Rights. Except with respect to options and warrants listed above in Section 5.1 or as provided in this Agreement and for the options granted under the Company's stock option plans disclosed in the SEC Reports, the Company does not have any outstanding options to purchase, or, any right of first refusal, right of first offer, right of co-sale, no shareholder rights plan, preemptive right or other right to subscribe for or to purchase any securities or obligations convertible into, or any contracts or commitments to issue or sell, shares of its capital stock or any such options, rights, convertible securities or obligations, or any registration right regarding the securities of the Company. There are no provisions of the Charter Documents, and no Material Contracts, other than this Agreement, that (a) may affect or restrict the voting rights of the Purchaser with respect to the Shares in its capacity as a stockholder of the Company, (b) restrict the ability of the Purchaser, or any successor thereto or assignee or transferee thereof, to transfer the Shares, (c) would adversely affect the Company's or the Purchaser's right or ability to consummate the transactions contemplated by this Agreement or comply with the terms of this Agreement and the transactions contemplated hereby, (d) require the vote of more than a majority of the Company's issued and outstanding Common Stock, voting together as a single class, to take or prevent any corporate action, other than those matters requiring a different vote under Delaware law, or (e) entitle any party to nominate or elect any director of the Company or require any of the Company's stockholders to vote for any such nominee or other person as a director of the Company in each case. Except as set forth in Schedule 5.11, there are no securities or instruments issued by or to which the Company is a party containing anti-dilution or similar provisions that will be triggered by the issuance of the Shares and there are no registration rights that will be triggered by the issuance of the Shares.

5.12. Previous Issuances. All shares of capital stock and other securities previously issued by the Company and each Subsidiary have been issued in transactions registered under or exempt from the registration requirements under the Securities Act and all applicable state securities or "blue sky" laws, and in compliance with all applicable corporate laws. The Company and each Subsidiary has not violated the Securities Act or any applicable state securities or "blue sky" laws in connection with the previous issuance of any shares of capital stock or other securities.

5.13. 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 Act for the offer and sale of the Shares hereunder.

5.14. SEC Reports; Financial Statements.

(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 Securities Act and the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, since October 1, 2011 (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 Securities Act and 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. The Company has delivered to each Purchaser, or each Purchaser has had access to, true and complete copies of the SEC Reports and all agreements to which the Company or any Subsidiary is a party or to which the property or assets of the Company or any Subsidiary are subject, which are required to be described in or filed as exhibits to an SEC Report, have been so described or filed.

(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.

5.15. Disclosure Controls and Procedures. 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 chief executive

officer and chief 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. 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 (as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) or, to the Company's knowledge, in other factors that could significantly affect the Company's internal control over financial reporting.

5.16. Accounting Controls. The Company maintains a system of internal accounting controls sufficient to provide reasonable assurances that (i) transactions are executed in accordance with management's general or specific authorization, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles as applied in the United States and to maintain accountability for assets, (iii) access to assets is permitted only in accordance with management's general or specific authorization, and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

5.17. 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. 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.

5.18. Taxes. 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*.

5.19. 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.

5.20. Compliance with Laws.

(a) The Company and each Subsidiary possess, and has been and is in material compliance with the terms of, all franchises, permits, licenses and other rights and privileges necessary to conduct the Company's and each Subsidiary's business and is in compliance with and has not violated, in any material respect, (i) any judgments, orders, decrees, injunctions or writs applicable to the Company or any Subsidiary, or (ii) any laws, statutes, ordinances, rules or regulations applicable to the conduct of the Company's or any Subsidiary's business, including, without limitation, the ownership, testing, development, manufacture, packaging, processing, use, distribution, marketing, labeling, promotion, sale, offer for sale, storage, import, export or disposal of any drug or drug candidate under development, manufactured or distributed by the Company or any Subsidiary (collectively, "**Applicable Laws**"). Neither the Company nor any Subsidiary has received any actual notice of any proceeding relating to revocation or modification of any such franchise, permit, license or other right or privilege except where such revocation or modification would not reasonably be expected to have a Material Adverse Effect.

(b) The Company and each Subsidiary:

(i) has not received any FDA Form 483, notice of adverse finding, warning letter, untitled letter or other correspondence or notice from the U.S. Food and Drug Administration (the "**FDA**") or any other federal, state, local or foreign governmental or regulatory authority alleging or asserting material noncompliance with any Applicable Laws or any licenses, certificates, approvals, clearances, authorizations, permits and supplements or amendments thereto required by any such Applicable Laws ("**Authorizations**");

(ii) possesses all material Authorizations and such Authorizations are valid and in full force and effect and the Company is not in material violation of any term of any such Authorizations;

(iii) has not received notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from the FDA or any other federal, state, local or foreign governmental or regulatory authority or third party alleging that any study, clinical trial, operation or activity related to any product or product under development by the Company is in material violation of any Applicable Laws or Authorizations and has no knowledge that the FDA or any other federal, state, local or foreign governmental or regulatory authority or third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding;

(iv) has not received notice that the FDA or any other federal, state, local or foreign governmental or regulatory authority has taken, is

taking or intends to take action to limit, suspend, modify or revoke any material Authorizations and has no knowledge that the FDA or any other federal, state, local or foreign governmental or regulatory authority is considering such action;

(v) has filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Applicable Laws or Authorizations and that all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were materially complete and correct on the date filed (or were corrected or supplemented by a subsequent submission); and

(vi) has not, either voluntarily or involuntarily, initiated, conducted, or issued or caused to be initiated, conducted or issued, any recall, market withdrawal or replacement, safety alert, "dear doctor" letter, or other notice or action relating to the alleged lack of safety or efficacy of any product or any alleged product defect or violation and, to the Company's knowledge, no third party has initiated, conducted or intends to initiate any such notice or action.

(c) The studies, tests and preclinical and clinical trials conducted by or on behalf of the Company or any Subsidiary were and, if still pending, are being conducted in accordance with experimental protocols, procedures and controls pursuant to accepted professional scientific standards and all Applicable Laws and Authorizations, including, without limitation, the Federal Food, Drug and Cosmetic Act and the rules and regulations promulgated thereunder (collectively, "**FDCA**"); the descriptions of the results of such studies, tests and trials contained in the SEC Reports are accurate and complete and fairly present the data derived from such studies, tests and trials; the Company and each Subsidiary is not aware of any studies, tests or trials, the results of which the Company or any Subsidiary believes reasonably call into question the study, test, or trial results described or referred to in the SEC Reports when viewed in the context in which such results are described and the clinical state of development; and, since January 1, 2011, the Company and each Subsidiary has not received any notices or correspondence from the FDA or any other federal, state, local or foreign governmental or regulatory authority requiring the termination, suspension or material modification of any studies, tests or preclinical or clinical trials conducted by or on behalf of the Company or any Subsidiary.

5.21. Brokers. Except for the Financial Advisor, there is no investment banker, broker, finder, financial advisor 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. The Financial Advisor is receiving a financial advisory fee of up to \$800,000 payable by the Company.

5.22. Environmental Matters.

(a) (i) No written notice, notification, demand, request for information, citation, summons, complaint or order has been received by, and no investigation, action, claim, suit, proceeding or review is pending or, to the knowledge of the Company and each Subsidiary, threatened by any Person against the Company or any Subsidiary and no penalty has been assessed against the Company or any Subsidiary with respect to any matters relating to or arising out of any Environmental Law; (ii) the Company and each Subsidiary is in compliance with all Environmental Laws except where the failure to comply would not have a Material Adverse Effect; and (iii) to the knowledge of the Company and each Subsidiary there are no liabilities of or relating to the Company or any Subsidiary relating to or arising out of any Environmental Law except such as would not have a Material Adverse Effect, and, to the knowledge of the Company and each Subsidiary, there is no existing condition, situation or set of circumstances which could reasonably be expected to result in such a liability.

(b) For purposes of this Agreement, the term “Environmental Laws” means federal, state, local and foreign statutes, laws, judicial decisions, regulations, ordinances, rules, judgments, orders, codes, injunctions, permits and governmental agreements relating to human health and the environment, including, but not limited to, Hazardous Materials; and the term “**Hazardous Material**” means all substances or materials regulated as hazardous, toxic, explosive, dangerous, flammable or radioactive under any Environmental Law including, but not limited to: (i) petroleum, asbestos, or polychlorinated biphenyls and (ii) in the United States, all substances defined as Hazardous Substances, Oils, Pollutants or Contaminants in the National Oil and Hazardous Substances Pollution Contingency Plan.

5.23. Intellectual Property Matters.

(a) “**Intellectual Property**” means any and all of the following arising under the laws of the United States, any other jurisdiction or any treaty regime: (i) all inventions (whether patentable or unpatentable and whether or not reduced to practice), all improvements thereon, and all patents, patent applications and patent disclosures, together with all reissuances, continuations, continuations-in-part, revisions, extensions and reexaminations thereof, (ii) all trademarks, service marks, trade dress, logos, trade names and corporate names, together with all translations, adaptations, derivations and combinations thereof and including all goodwill associated therewith, and all applications, registrations and renewals in connection therewith, (iii) all copyrightable works, all copyrights and all applications, registrations and renewals in connection therewith, (iv) all trade secrets and confidential business information (including, without limitation, ideas, research and development, know-how, formulas, compositions, manufacturing and production processes and techniques, technical data, designs, drawings, specifications, customer and supplier lists, pricing and cost information and business and marketing plans and proposals), (v) all computer software

(including, without limitation, data and related documentation and except for any commercial “shrink-wrapped” software) and source codes (other than open source codes), (vi) all other proprietary rights, (vii) all copies and tangible embodiments of the foregoing (in whatever form or medium) and (viii) all licenses or agreements in connection with the foregoing. “**Company Intellectual Property**” means all Intellectual Property which is used in connection with, and is material to, the business of the Company or any Subsidiary and all Intellectual Property owned by the Company or any Subsidiary, provided that any Intellectual Property that is licensed by the Company and each Subsidiary shall be included within the meaning of Company Intellectual Property only within the scope of use by the Company or in connection with the Company’s and each Subsidiary’s business.

(b) With respect to each item of Company Intellectual Property that is material to the Company’s and each Subsidiary’s business:

(i) The Company and each Subsidiary possess all rights, titles and interests in and to the item if owned by the Company or any Subsidiary, as applicable, free and clear of any Encumbrance, license or other restriction, and possess all rights necessary in the case of a licensed item to use such item in the manner in which it presently uses the item or reasonably contemplates using such item, and the Company and each Subsidiary has taken or caused to be taken reasonable and prudent steps to protect its rights in and to, and the validity and enforceability of, the item owned by the Company or any Subsidiary;

(ii) the item if owned by the Company or any Subsidiary is not, and if licensed, to the knowledge of the Company and each Subsidiary is not, subject to any outstanding injunction, judgment, order, decree, ruling or charge naming the Company or any Subsidiary;

(iii) no action, suit, proceeding, hearing, investigation, charge, complaint, claim or demand is pending that challenges the legality, validity, enforceability, use or ownership of the item;

(iv) to the knowledge of the Company and each Subsidiary, the item does not infringe upon any valid and enforceable Intellectual Property right or other right of any third party;

(v) to the knowledge of the Company and each Subsidiary, no third party has infringed upon or misappropriated the Company’s or any Subsidiary’s intellectual property rights in the item;

(vi) the Company and each Subsidiary is not party to any option, license, sublicense or agreement of any kind covering the item that it is in breach or default thereunder, and to the knowledge of the Company and each Subsidiary no event has occurred which, with notice or lapse of time, would constitute such a breach or default or permit termination, modification or acceleration thereunder; and

(vii) each option, license, sublicense or agreement of any kind covering the item is legal, valid, binding, enforceable and in full force and effect.

(c) All registered patents, copyrights, trademarks and service marks included in the Company Intellectual Property: (x) if owned by the Company and (y) if licensed, to the knowledge of the Company and each Subsidiary, are valid and subsisting and are not subject to any claims, Encumbrances, taxes or other fees except for periodic filing, annuity and maintenance fees and Permitted Liens.

(d) None of the Key Employees are obligated under any contract (including, without limitation, licenses, covenants, or commitments of any nature) or other agreement, or subject to any judgment, decree, or order of any court or administrative agency, that would interfere with the use of his or her reasonable diligence to promote the interests of the Company or any Subsidiary or that would conflict with the Company's or any Subsidiary's business as presently conducted. Neither the execution, delivery or performance of this Agreement, nor the carrying on of the Company's or any Subsidiary's business by the employees of the Company or any Subsidiary, nor the conduct of the Company's or any Subsidiary's businesses as presently conducted, will violate or result in a breach of the terms, conditions or provisions of, or constitute a default under, any contract, covenant, or instrument under which any such Key Employee is obligated, and which violation, breach or default would be materially adverse to the Company or any Subsidiary.

(e) The Company has entered into confidentiality and proprietary information and assignment of inventions agreements, substantially in the form previously provided to the Purchaser, with the executive officers of the Company and each Subsidiary. Neither the Company nor any Subsidiary is aware of any violation by any such executive officers of such agreements.

(f) No stockholder, member, director, officer or employee of the Company or any Subsidiary has any right, title or interest in any of the Company Intellectual Property.

(g) To the knowledge of the Company and each Subsidiary, it is not, nor will it be, necessary to utilize any inventions, trade secrets or proprietary information of any of the Company's or any Subsidiary's employees made prior to their employment by the Company or any Subsidiary, except for valid and enforceable inventions, trade secrets or proprietary information that have been assigned to the Company or any Subsidiary.

(h) The Company and each Subsidiary maintains policies and procedures regarding data security, privacy and data use that are commercially

reasonable and, in any event, comply with the Company's and each Subsidiary's obligations to its customers and applicable laws, rules and regulations. To the knowledge of the Company and each Subsidiary, there have not been, and the transaction contemplated under this Agreement will not result in, any security breaches of any security policy, data use restriction or privacy breach under any such policies or any applicable laws, rules or regulations.

(i) To the knowledge of the Company, the Company's and each of the Company Subsidiary's businesses as currently conducted and proposed to be conducted does not and will not infringe, misappropriate or violate any Intellectual Property of any third party.

5.24. Related-Party Transactions. Except as disclosed in the SEC Reports or as set forth on Schedule 5.24 attached hereto, no stockholder who is known by the Company to beneficially own 5% or more (on a fully-diluted basis) of any class of equity securities and no officer or director of the Company or any Subsidiary, or member of the foregoing's immediate family, is currently indebted to the Company or any Subsidiary, nor is the Company or any Subsidiary indebted (or committed to make loans or extend or guarantee credit) to any of such individuals. Except as set forth in the SEC Reports, as of the date hereof, no stockholder known by the Company to beneficially own 5% or more (on a fully-diluted basis) of any class of equity securities and no officer or director of the Company or any Subsidiary, or member of the foregoing's immediate family, is a party to any contract or agreement with the Company or any Subsidiary. All transactions that have occurred between or among the Company and any Subsidiary, on the one hand, and any of the Company's or any Subsidiary's officers or directors, or any affiliate or affiliates of any such officer or director, on the other hand, prior to the date hereof have been disclosed in the SEC Reports.

5.25. Title to Property and Assets. Neither the Company nor any Subsidiary owns any real property. The Company and each Subsidiary own or have legally enforceable rights to use or hold for use its personal property and assets free and clear of all Encumbrances except: (i) Permitted Liens and (ii) such other Encumbrances, if any, that individually or in the aggregate, do not and would not detract from the value of any asset or property of the Company or any Subsidiary or interfere with the use or contemplated use of any personal property of the Company or any Subsidiary. With respect to any real property, the Company and each Subsidiary is not in violation in any material respect of any of its leases. All machinery, equipment, furniture, fixtures and other personal property that is material to the Company's and each Subsidiary's business and all buildings, structures and other facilities, if any, including, without limitation, office or other space used by the Company or any Subsidiary in the conduct of its business and material to its business, are in good operating condition and fit for operation in the ordinary course of business (subject to normal wear and tear) except for any defects which will not interfere with the conduct of normal operations of the Company or any Subsidiary, as the case may be.

5.26. Disclosure. 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. The Company confirms that neither it nor any of its officers or directors nor any other Person acting on its or their behalf has provided, and it has not authorized any other Person to provide, any Purchaser or its respective agents or counsel with any information that it believes constitutes material non-public information except insofar as the existence, provisions and terms of the Transaction Documents and the proposed transactions thereunder may constitute such information, all of which will be disclosed by the Company in the press release or 8-K Filing, as contemplated by Section 6.7 hereof.

5.27. Absence of Changes. Since December 31, 2012, 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. Since December 31, 2012, (i) 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, (ii) 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 (iii) neither the Company nor any Subsidiary has incurred any material liabilities except in the ordinary course of business.

5.28. Suppliers and Customers. 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.

5.29. Regulatory Permits. The Company and each Subsidiary possess all material certificates, authorizations and permits issued by the appropriate federal, state, local or foreign regulatory authorities necessary to conduct the Company's or any Subsidiary's business, as they are currently being conducted ("**Material Permits**"), and neither the Company nor any Subsidiary has received any notice of proceedings relating to the revocation or modification of any Material Permit.

5.30. Indebtedness. Other than Permitted Indebtedness, neither the Company nor any Subsidiary (i) has any outstanding Indebtedness, (ii) is a party to any contract, agreement or instrument, the violation of which, or default under which, by any other party to such contract, agreement or instrument could reasonably be expected to result in a Material Adverse Effect, (iii) is in violation of any term of or in default under any contract, agreement or instrument relating to any Indebtedness, except where such violations and defaults would not result, individually or in the aggregate, in a Material Adverse Effect or potential future violations relating to the inability to honor conversions of indebtedness into Common Stock due to having an insufficient number of shares of Common Stock authorized and available for issuance, or (iv) is a party to any contract, agreement or instrument relating to any Indebtedness, the performance of which, in the judgment of the Company's or such Subsidiary's officers, as applicable, has or is expected to have a Material Adverse Effect.

5.31. Investment Company. The Company is not, and is not an Affiliate of, and immediately after receipt of payment for the Shares, will not be or be an Affiliate of, an “investment company” within the meaning of the Investment Company Act of 1940, as amended.

5.32. Accountants. 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.

5.33. Application of Takeover Protections. 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 anti-takeover 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.

5.34. Foreign Corrupt Practices. Since January 1, 2012, 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 (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expenses relating to political activity; (ii) made any direct or indirect unlawful payment to any foreign or domestic government official or employee from corporate funds; (iii) 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 (iv) made any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment to any foreign or domestic government official or employee.

5.35. Private Placement. 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 Securities 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.

5.36. Acknowledgment Regarding Purchasers’ Purchase of Securities. The Company acknowledges and agrees that each of the Purchasers is acting solely in the capacity of an arm’s length purchaser with respect to this Agreement and the transactions contemplated hereby. The Company further acknowledges that no Purchaser is acting as a financial advisor or fiduciary of the Company (or in any similar capacity with respect to the Company) with respect to this Agreement and the transactions contemplated hereby and any advice given by any Purchaser or any of their respective representatives or agents to the Company in connection with this Agreement and the transactions contemplated hereby is merely incidental to such

Purchaser's purchase of the Securities. The Company further represents to each Purchaser that the Company's decision to enter into this Agreement has been based on the independent evaluation of the transactions contemplated hereby by the Company and its representatives.

5.37. No Registration Rights. No person has the right to (i) prohibit the Company from filing a Registration Statement or (ii) require the Company to register any securities for sale under the Securities Act by reason of the filing of a Registration Statement except in the case of clause (ii) for rights which have been properly waived. The granting and performance of the registration rights under this Agreement will not violate or conflict with, or result in a breach of any provision of, or constitute a default under, any agreement, indenture, or instrument to which the Company is a party.

5.38. Insurance. 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 (i) in the businesses and location in which the Company is engaged, (ii) with the resources of the Company, and (iii) 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.

5.39. 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.

5.40. No Additional Agreements. The Company has no other agreements or understandings (including, without limitation, side letters) with any Purchaser to purchase Securities on terms other than as set forth herein.

5.41. Shell Company Status. The Company is not, and has never been, an issuer identified in Rule 144(i)(1) under the Securities Act.

6. Covenants.

6.1. Best Efforts. Each party shall use its best efforts to timely satisfy each of the conditions to be satisfied by it as provided in Section 7 of this Agreement.

6.2. Reporting Status. During the Reporting Period, the Company shall (i) timely file all reports required to be filed with the Commission pursuant to the Exchange Act or the rules and regulations thereunder and (ii) 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. Use of Proceeds. 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. Financial Information. The financial statements of the Company and the notes related thereto to be included in any documents filed with the Commission will be prepared in accordance with GAAP, consistently applied (except (i) as may be otherwise indicated in such financial statements or the notes thereto, or (ii) in the case of unaudited interim statements, to the extent they may not include footnotes, may be condensed or summary statements or may conform to the Commission's rules and instructions for quarterly reports on Form 10-Q), and will fairly present in all material respects the consolidated financial position of the Company and consolidated results of its operations and cash flows as of, and for the periods covered by, such financial statements (subject, in the case of unaudited statements, to normal and recurring year-end audit adjustments). So long as any Shares are held by a Purchaser, the Company agrees to send the following to such Purchaser during the Reporting Period (except to the extent that the following are publicly available, in which case the Company shall have no obligations under this Section 6.4 with respect to such publicly available information): (i) within one (1) Business Day after the filing thereof with the Commission, a copy of its Annual Reports and Quarterly Reports on Form 10-K or 10-Q, any interim reports or any consolidated balance sheets, income statements, stockholders' equity statements and/or cash flow statements for any period other than annual, any Current Reports on Form 8-K and any registration statements (other than on Form S-8) or amendments filed pursuant to the Securities Act, (ii) on the same day as the release thereof, facsimile or e-mailed copies of all press releases issued by the Company, and (iii) copies of any notices and other information made available or given to the stockholders of the Company generally, contemporaneously with the making available or giving thereof to the stockholders. As used herein, "**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.

6.5. Conduct of Business. The business of the Company shall not be conducted in violation of any law, ordinance or regulation of any governmental entity, except where such violations would not result, either individually or in the aggregate, in a Material Adverse Effect.

6.6. Pledge of Shares. 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.

6.7. Disclosure of Transactions and Other Material Information. 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 (i) in substantial conformity with the 8-K Filing and contemporaneously therewith and (ii) as is required by applicable law and regulations.

6.8. Expenses. The Company shall pay the reasonable legal fees and expenses of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., counsel to certain Purchasers ("**Mintz Levin**"), incurred by such Purchasers in connection with the transactions contemplated by this Agreement, not to exceed \$50,000, which amount shall be paid directly by the Company to Mintz Levin at the Closing or paid by the Company to Mintz Levin upon termination of this Agreement. Except as set forth above, 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.

6.9 Underlying Shares; Conversion Procedures. The Company shall reserve and keep available at all times during which the Preferred Shares remain outstanding, free of preemptive rights, a sufficient number of shares of Common Stock for the purpose of enabling the Company to issue the Underlying Shares upon conversion of the Preferred Shares pursuant to the Certificate of Designation. The form of Notice of Conversion included in the Certificate of Designation set forth the totality of the procedures required of the Purchasers in order to convert the Preferred Shares. No additional legal opinion, other information or instructions shall be required of the Purchasers to their Preferred Shares. The Company shall honor conversions of the Preferred Shares and shall deliver Underlying Shares in accordance with the terms, conditions and time periods set forth in the Transaction Documents.

7. Conditions of Parties' Obligations.

7.1. Conditions of the Purchasers' Obligations at the Closing. 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 May 10, 2013, then any Purchaser may terminate this Agreement with respect to that particular Purchaser upon providing written notice to the Company.

(a) Representations and Warranties. 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) Performance. 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 and evidence of the filing and acceptance of the Certificate of Designation from the Secretary of State of Delaware;

(d) Qualification Under State Securities Laws. 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) Consents and Waivers. 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) No Material Adverse Effect. Since the date of the latest audited balance sheet of the Company included in the SEC Reports, no event or series of events shall have occurred that has had or would reasonably be expected to have a Material Adverse Effect.

(g) Legal Opinion. The Company shall have delivered to such Purchaser an opinion, dated as of the Closing Date, from Ropes & Gray LLP, counsel to the Company, in a form reasonably acceptable to the Purchasers.

(h) Transfer Agent Instructions. The Company shall have delivered to its transfer agent irrevocable instructions to issue to such Purchaser or in such nominee name(s) as designated by such Purchaser in writing (i) one or more certificates representing such Common Shares set forth opposite such Purchaser's name on Schedule I hereto and (ii) one or more certificates representing such Preferred Shares set forth opposite such Purchaser's name on Schedule I hereto; 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.

(i) Officer's Certificate. The Company shall have delivered to each Purchaser a certificate, dated as of the Closing Date and signed by its Chief Executive Officer or its Chief Financial Officer, certifying to the fulfillment of the conditions specified in Sections 7.1(a), (b) and (f).

(j) Secretary's Certificate. The Company shall have delivered to each Purchaser a certificate of the Secretary of the Company, dated as of the Closing Date, (a) certifying the resolutions adopted by the board of directors of the Company or a duly authorized committee thereof approving the transactions contemplated by this Agreement and the other Transaction Documents and the issuance of the Shares, (b) certifying the current versions of the certificate or articles of incorporation, as amended, and by-laws of the Company and (c) certifying as to the signatures and authority of persons signing the Transaction Documents and related documents on behalf of the Company.

(k) Absence of Litigation. 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.

(l) No Governmental Prohibition. The sale of the Shares by the Company shall not be prohibited by any law or governmental order or regulation.

(m) Minimum Aggregate Investment. The Company shall have received at the Closing at least \$35 million of aggregate gross proceeds from the sale of the Shares hereunder.

7.2. Conditions of the Company's Obligations. 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: (i) 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 (ii) 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 before May 10, 2013, then the Company may terminate this Agreement upon providing written notice to the Purchasers.

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 substantially the same representations and warranties in Sections 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8 and 4.9 hereof, (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. Unlegended Certificates. The Company shall, at its sole expense, upon appropriate notice from any Purchaser stating that Registerable 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 (3) 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 no instruction other than the Irrevocable Transfer Agent Instructions referred to in this Section 8.2 will be given by the Company to its transfer agent and

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.

At any time when the Company is required to cause an unlegended certificate to replace a previously issued legended certificate, if: (1) the unlegended certificate is not delivered to a Purchaser within three (3) Business Days of submission by that Purchaser of a legended certificate and supporting documentation to the transfer agent as provided above and (2) prior to the time such unlegended certificate is received by the Purchaser, the Purchaser, or any third party on behalf of such Purchaser or for the Purchaser's account, purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Purchaser of shares represented by such certificate (a "Buy-In"), then the Company shall pay in cash to the Purchaser (for costs incurred either directly by such Purchaser or on behalf of a third party) the amount by which the total purchase price paid for Common Stock as a result of the Buy-In (including brokerage commissions, if any) exceeds the proceeds received by such Purchaser as a result of the sale to which such Buy-In relates. The Purchaser shall provide the Company written notice indicating the amounts payable to the Purchaser in respect of the Buy-In.

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

9.1. Stock Register; Ownership of Shares. The Company will keep at its principal office, or 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. Replacement of Certificates. 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 Common Share, of like tenor.

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 Act on appropriate form covering the resale of the full amount of the Common Shares and the Underlying 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 from 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 also shall cover pursuant to Rule 416 such indeterminate number of additional shares of Common Stock due to changes in the number of shares of Common Stock issuable upon conversion of the Preferred Shares resulting from changes in the Conversion Price pursuant to the terms of the Certificate of Designation. 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 Act or requires any Purchaser to be named as an “underwriter”, the Company shall use its 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”. The Major Purchasers shall have the right to participate or have their counsel participate in any meetings or discussions with the Staff regarding the Staff’s position and to comment or have their counsel comment on any written submission made to the Staff respect thereto. No such written submission shall be made to the Staff to which a Major Purchaser’s counsel reasonably objects. In the event that, despite the Company’s best efforts and compliance with the terms of this Section 11.2, 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 cut-back imposed on the Purchasers pursuant to this Section 11.2 shall be allocated among the Purchasers on a pro rata basis (after giving effect to the conversion in full of the Preferred Shares notwithstanding any limitation on conversion contained in the Certificate of Designation), 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 11 (including the liquidated damages provisions) shall again be applicable to such Cut Back Shares; provided, however, that (i) the Filing Deadline for the Registration Statement including such Cut Back Shares shall be ten (10) Business Days after such Restriction Termination Date, and (ii) 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 (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 Registration Period and after the Effective 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 one percent (1.0%) of such holder’s Pro Rata Interest in the Total Purchase Price on each of the following dates: (i) the day of a Filing Failure and on every thirtieth day (pro rated for periods totaling less than 30 days) thereafter until such Filing Failure is cured; (ii) the day of an Effectiveness Failure and on every thirtieth day (pro rated for periods totaling less than 30 days) thereafter until such Effectiveness Failure is cured; and (iii) the initial day of a Maintenance Failure and on every thirtieth day (pro rated 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 Registration Period, and provided further that in no event shall the aggregate Registration Delay Payments accruing under this Section 10.3 exceed ten percent (10%) of a holder’s Pro Rata Interest in the Total Purchase Price. 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. In the event the Company fails to make Registration Delay Payments in a timely manner, such Registration Delay Payments shall bear interest at the rate of one percent (1.0%) per month (prorated for partial months) until paid in full.

10.4. Related Obligations. 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 earlier of (i) the date as of which such Purchaser may sell all of the Registrable Securities covered by such Registration Statement 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 or (ii) the date on which the such Purchaser shall have sold all of the Registrable Securities covered by such Registration Statement (the "**Registration 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 Registration 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, 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 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 for, 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 and regulations.

(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 for, 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 (i) as soon as practicable 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) as soon as practicable 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) as soon as practicable, 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 ordered 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 Effective 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 (5) 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 election to exclude all 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 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 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 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 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.

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.

10.9. Indemnification.

(a) Company Indemnification. 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 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 statement or omission was corrected in such prospectus or supplement.

(b) Purchaser Indemnification. 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 Section 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 (the “**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) Contribution. 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) Survival. 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.

11. Definitions. Unless the context otherwise requires, the terms defined in this Section 11 shall have the meanings specified for all purposes of this Agreement; provided however, that capitalized terms that are not otherwise defined herein shall have the meanings given to such terms in the Certificate of Designation. 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.

"Certificate of Designation" means the Certificate of Designation to be filed prior to the Closing by the Company with the Secretary of State of Delaware, in the form of Exhibit B attached hereto.

"Code" means the Internal Revenue Code of 1986, as amended.

"Commission" means the Securities and Exchange Commission.

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

“Encumbrances” means a lien, claim, judgment, charge, mortgage, security interest, pledge, escrow, equity or other encumbrance other than restrictions pursuant to any applicable state or federal securities laws.

“Exchange Act” means the Securities Exchange Act of 1934, as amended.

“Financial Advisor” means Trout Capital LLC.

“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.

“Indebtedness” means (1) all indebtedness for borrowed money, (2) all obligations issued, undertaken or assumed as the deferred purchase price of property or services (including, without limitation, “capital leases” in accordance with GAAP) (other than trade payables entered into in the ordinary course of business), (3) all reimbursement or payment obligations with respect to letters of credit, surety bonds and other similar instruments, (4) all obligations evidenced by notes, bonds, debentures or similar instruments, including obligations so evidenced incurred in connection with the acquisition of property, assets or businesses, (5) all indebtedness created or arising under any conditional sale or other title retention agreement, or incurred as financing, in either case with respect to any property or assets acquired with the proceeds of such indebtedness (even though the rights and remedies of the seller or bank under such agreement in the event of default are limited to repossession or sale of such property), (6) all monetary obligations under any leasing or similar arrangement which, in connection with GAAP, consistently applied for the periods covered thereby, is classified as a capital lease, (7) all indebtedness referred to in clauses (1) through (6) above secured by (or for which the holder of such Indebtedness has an existing right, contingent or otherwise, to be secured by) any mortgage, lien, pledge, charge, security interest or other encumbrance upon or in any property or assets (including accounts and contract rights) owned by any Person, even though the Person which owns such assets or property has not assumed or become liable for the payment of such indebtedness, and (8) all Contingent Obligations in respect of indebtedness or obligations of others of the kinds referred to in clauses (1) through (7) above.

“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, any executive officer of such Person is actually aware or reasonably should be aware, after due inquiry, of such fact or other matter.

“Lien” means any mortgage, lien, pledge, charge, security interest or other similar encumbrance upon or in any property or assets (including accounts and contract rights).

“Major Purchaser” means (i) prior to Closing any Purchaser who, together with its Affiliates, has agreed to invest at least \$5,000,000 pursuant to this Agreement and (ii) from and after Closing, any Purchaser who, together with its Affiliates, beneficially owns (as determined

pursuant to Rule 13d-3 under the Exchange Act but without giving effect to any limitation on the conversion of the Preferred Shares included in the Certificate of Designation) at least 2,500,000 shares of Common Stock (appropriately adjusted for any stock split, reverse stock split, stock dividend or other reclassification or combination of the Common Stock occurring after the date hereof).

“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 \$250,000, (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 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.

“Permitted Indebtedness” means (1) Indebtedness existing on the Closing Date and disclosed in the SEC Reports, (2) Purchase Money Indebtedness, (3) Indebtedness to trade creditors incurred in the ordinary course of business, and (4) extensions, refinancings and renewals of any items of Permitted Indebtedness in clauses (1) and (2) hereof, provided that the principal amount is not increased, other than by their existing terms, or the terms modified to impose more burdensome terms upon Company and such Indebtedness shall not be secured by any additional collateral.

“Permitted Liens” means any Lien disclosed in an SEC Report and: (1) any Lien for taxes not yet due or delinquent or being contested in good faith by appropriate proceedings for which adequate reserves have been established in accordance with GAAP, (2) any statutory Lien arising in the ordinary course of business by operation of law with respect to a liability that is not yet due or delinquent, (3) any Lien created by operation of law, such as materialmen’s liens, mechanics’ liens and other similar liens, arising in the ordinary course of business with respect to a liability that is not yet due or delinquent or that are being contested in good faith by appropriate proceedings, (4) Liens (a) upon or in any equipment acquired or held by the Company or any of its Subsidiaries to secure the purchase price of such equipment or indebtedness incurred solely for the purpose of financing the acquisition or lease of such equipment, or (b) existing on such equipment at the time of its acquisition, provided that the Lien is confined solely to the property so acquired and improvements thereon, and the proceeds of such equipment, (5) Liens incurred in connection with the extension, renewal or refinancing of the indebtedness secured by Liens of

the type described in clauses (1) through (4) above, provided that any extension, renewal or replacement Lien shall be limited to the property encumbered by the existing Lien and the principal amount of the Indebtedness being extended, renewed or refinanced does not increase, (7) leases, subleases, licenses and sublicenses granted to others in the ordinary course of the Company's business, not interfering in any material respect with the business of the Company and its Subsidiaries taken as a whole, and (8) Liens in favor of customs and revenue authorities arising as a matter of law to secure payments of custom duties in connection with the importation of goods.

"Preferred Stock" means the up to 9,900 shares of the Company's Series B Convertible Preferred Stock, \$0.001 par value, issued hereunder having the rights, preferences and privileges set forth in the Certificate of Designation, in the form of Exhibit B hereto.

"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.

"Purchase Money Indebtedness" means Indebtedness, incurred at the time of, or within 30 days after, the acquisition of any fixed assets for the purpose of financing all or any part of the acquisition cost thereof.

"Purchaser" has the meaning assigned to it in the introductory paragraph of this Agreement and shall include any Affiliates of the Purchaser.

"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 earlier 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 and (ii) 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, (A) each Major Purchaser and (B) 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, (B) each Major Purchaser and (B) the Purchasers beneficially owning (as determined pursuant to Rule 13d-3 under the Exchange Act but without giving effect to any limitation on the conversion of the Preferred Shares included in the Certificate of Designation) at least 66% of the Shares.

"Subsidiary" means any corporation, association trust, limited liability company, partnership, joint venture or other business association or entity (i) at least 50% of the outstanding voting securities of which are at the time owned or controlled directly or indirectly by the Company or (ii) with respect to which the Company possesses, directly or indirectly, the power to direct or cause the direction of the affairs or management of such Person.

"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, the Certificate of Designation and all exhibits and schedules thereto and hereto and any other documents or agreements executed in connection with the transactions contemplated hereunder.

12. Enforcement.

12.1. Cumulative Remedies. 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.

12.2. No Implied Waiver. Except as expressly provided in this Agreement, no course of dealing between the Company and the Purchasers or any other holder of shares of Common Stock and no delay in exercising any such right, power or remedy conferred hereby or now or hereafter existing at law in equity, by statute or otherwise, shall operate as a waiver of, or otherwise prejudice, any such right, power or remedy.

13. Non-Public Information. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents, which shall be publicly disclosed by the Company in the press release to be issued, or 8-K Filing to be filed, pursuant to Section 6.7 herein, the Company covenants and agrees that neither it, nor any other Person acting on its behalf, will provide any Purchaser or its agents or counsel with any information that the Company believes constitutes material non-public information, unless prior thereto such Purchaser shall have entered into a written agreement with the Company regarding the confidentiality and use of such information. The Company understands and confirms that each Purchaser shall be relying on the foregoing covenant in effecting transactions in securities of the Company.

14. Miscellaneous.

14.1. Waivers and Amendments. 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, maybe 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.

14.2. Notices. 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 facsimile or 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 Research Corporation
225 South Lake Avenue, Suite 1050
Pasadena, California 91101
Attention: Chief Executive Officer
Facsimile No.: (626) 304-3401
Email: canzalone@arrowres.com

with a copy to:

Ropes & Gray LLP
Three Embarcadero Center
San Francisco, CA 94111
Attention: Ryan Murr, Esq.
Facsimile No.: (415) 315-6026
Email: ryan.murr@ropesgray.com

or at such other address as the Company or each Purchaser each may specify by written notice to the other parties hereto in accordance with this Section 14.2.

14.3. No Waivers. No failure or delay by any party in exercising any right, power or privilege hereunder shall operate as a waiver thereof nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege. The rights and remedies herein provided shall be cumulative and not exclusive of any rights or remedies provided by law.

14.4. Successors and Assigns. 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 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.

14.5. Headings. 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.

14.6. Governing Law. 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.

14.7. Jurisdiction. 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. Without limiting the foregoing, each party agrees that service of process on such party as provided in Section 14.2 shall be deemed effective service of process on such party.

14.8. Counterparts; Effectiveness. 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.

14.9. 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, such agreements supersede and replace 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.

14.10. Severability. 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 day and year first written above.

THE COMPANY

Arrowhead Research Corporation

By: /s/ Kenneth Myszkowski

Name: Kenneth Myszkowski

Title: Chief Financial Officer

[PURCHASER'S SIGNATURE PAGE SEPARATELY ATTACHED]

SCHEDULE I

Purchaser	No. of Common Shares Purchased	No. of Preferred Shares Purchased	Total Purchase Price
Alta Bioequities, L.P.	163,934	—	\$ 299,999.22
Aquilo Capital, L.P.	1,475,410	—	\$ 2,700,000.30
Arnold J. Remillard Jr. Trust	132,377	55 (convertible into 30,055 shares of Common Stock)	\$ 297,249.91
Blackwell Partners, LLC	622,951	1,260 (convertible into 688,525 shares of Common Stock)	\$ 2,400,000.33
Camber Capital Fund II, LP	23,049	10 (convertible into 5464 shares of Common Stock)	\$ 52,179.67
Camber Capital Master Fund, LP	2,959,328	1,235 (convertible into 674,863 shares of Common Stock)	\$ 6,650,570.24
Galloway Limited	245,902	—	\$ 450,000.66
James Mellon	245,902	—	\$ 450,000.66
Port Erin Biopharma Investments Limited	54,902	—	\$ 100,470.66
RA Capital Healthcare Fund, LP	2,491,804	5,040 (convertible into 2,754,098 shares of Common Stock)	\$ 9,600,001.32
Sabby Healthcare Volatility Master Fund, Ltd.	2,185,792	—	\$ 3,999,999.36
Special Situations Cayman Fund, L.P.	486,680	359 (convertible into 196,175 shares of Common Stock)	\$ 1,249,624.40
Special Situations Fund III QP, L.P.	1,615,778	1,193 (convertible into 651,912 shares of Common Stock)	\$ 4,149,873.74
Special Situations Life Sciences Fund, L.P.	778,689	575 (convertible into 314,208 shares of Common Stock)	\$ 2,000,000.87
Special Situations Private Equity Fund, L.P.	233,607	173 (convertible into 94,536 shares of Common Stock)	\$ 600,500.81
Sphera Global Healthcare Master Fund	546,448	—	\$ 999,999.84
Total	14,262,553	9,900	\$36,000,471.99

Sch.-I

DISCLOSURE SCHEDULE

This Disclosure Schedule (the “**Disclosure Schedule**”) is being delivered by Arrowhead Research Corporation., a Delaware corporation (the “**Company**”), to the Purchasers, pursuant to that certain Stock Purchase Agreement, dated as of April 29, 2012, between the Company and the each Purchasers thereto (the “**Agreement**”). Capitalized terms used herein and not otherwise defined shall have the meanings given to them in the Agreement.

Section 5.11

1. The Company has a commitment to issue 131,579 shares of Common Stock to Galloway Limited as compensation pursuant to a services agreement dated December 31, 2011.
2. The Company has a commitment to issue 20,250 shares of Common Stock issuable upon exchange of exchange rights sold to certain stockholders of Ablaris Therapeutics, Inc., a majority owned subsidiary of the Company, in connection with the financing of Ablaris Therapeutics, Inc.
3. 912,543 warrants issued in a public offering in December 2012 and 833,530 warrants issued in a public offering in January 2013 include a re-pricing provision whereby the strike price of the warrants will be adjusted from \$2.12 and 2.14, respectively, to the per share purchase price of the Offering.

Section 5.14

Since the filing of the Company’s last quarterly report on Form 10-Q for the three months ended December 31, 2012, the collection of certain receivables recorded on the Company’s balance sheet at that time have become uncertain, as follows:

1. At December 31, 2012, the Company had a Note Receivable (the “Wisepower Note”) in the amount of \$2,491,450 which consisted of a Convertible Note Receivable from Wisepower, a Korean company. Subsequent to December 31, 2012, the Company sold the Wisepower Note to Convex, a Korean company, for an upfront payment in shares of Wisepower common stock with a value of \$1.6 million at the date of the sale, and a subsequent payment in cash or stock due March 29, 2013 for a total payment of \$2.5 million. Pursuant to the sale agreement, the Company sold \$1.2 million of Wisepower common stock before the trading of Wisepower common stock was suspended from KOSDAQ. The balance owed from Convex is past due and collection from Convex is uncertain. Because efforts to collect the past due balance have thus far been unsuccessful, the Company felt it prudent to record a reserve for the balance of the Wisepower Note of \$1.3 million.
2. Subscriptions Receivable of \$1,500,000 at December 31, 2012 consisted of the balance owed on stock purchased, but not paid for as of December 31, 2012. Subsequent to December 31, 2012, \$500,000 has been collected. The balance of \$1,000,000 related to

an offering from October 2011, and was a subscription for shares at a purchase price of \$3.80 per share. The collection of the balance of \$1,000,000 is unlikely and the Company intends to cancel the subscription and return 268,445 shares of Arrowhead common stock to authorized, unissued shares.

Section 5.24

The Subscription Receivable referenced above is due from M. Robert Ching, a greater than 5% holder of the Company's stock.

Plan of Distribution

The selling stockholders, which as used herein includes 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 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;
- broker-dealers may agree with 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)(3) 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 transferees, pledgees 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 option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to 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 their 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, 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.

Form of Certificate of Designation**ARROWHEAD RESEARCH CORPORATION
CERTIFICATE OF DESIGNATION OF PREFERENCES,
RIGHTS AND LIMITATIONS
OF
SERIES B CONVERTIBLE PREFERRED STOCK**

PURSUANT TO SECTION 151 OF THE
DELAWARE GENERAL CORPORATION LAW

The undersigned, and , do hereby certify that:

1. They are the President and Secretary, respectively, of Arrowhead Research Corporation, a Delaware corporation (the "Corporation").
2. The Corporation is authorized to issue 5,000,000 shares of preferred stock, none of which are issued and outstanding.
3. The following resolutions were duly adopted by the board of directors of the Corporation (the "Board of Directors"):

WHEREAS, the certificate of incorporation of the Corporation provides for a class of its authorized stock known as preferred stock, consisting of 5,000,000 shares, \$0.001 par value per share, issuable from time to time in one or more series;

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

WHEREAS, it is the desire of the Board of Directors, pursuant to its authority as aforesaid, to fix the rights, preferences, restrictions and other matters relating to a series of the preferred stock, which shall consist of, except as otherwise set forth in the Purchase Agreement, up to 9,900 shares of the preferred stock which the Corporation has the authority to issue, as follows:

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

TERMS OF PREFERRED STOCK

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

“Affiliate” means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 of the Securities Act.

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

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

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

“Buy-In” shall have the meaning set forth in Section 6(c)(iv).

“Commission” means the United States Securities and Exchange Commission.

“Common Stock” means the Corporation’s common stock, par value \$0.001 per share, and stock of any other class of securities into which such securities may hereafter be reclassified or changed.

“Common Stock Equivalents” means any securities of the Corporation or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, rights, options, warrants or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

“Conversion Amount” means the sum of the Stated Value at issue.

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

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

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

“Conversion Shares Registration Statement” means a registration statement that registers the resale of the Conversion Shares of the Holders, who shall be named as “selling stockholders” therein and meets the requirements of the Purchase Agreement.

“Effective Date” means the date that the Conversion Shares Registration Statement filed by the Corporation pursuant to the Purchase Agreement is first declared effective by the Commission.

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

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

“Holder” shall have the meaning given such term in Section 2.

“Junior Securities” means the Common Stock and all other Common Stock Equivalents of the Corporation other than those securities which are explicitly senior or pari passu to the Preferred Stock in dividend rights or liquidation preference.

“Liquidation” shall have the meaning set forth in Section 5.

“New York Courts” shall have the meaning set forth in Section 8(d).

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

“Original Issue Date” means the date of the first issuance of any shares of the Preferred Stock regardless of the number of transfers of any particular shares of Preferred Stock and regardless of the number of certificates which may be issued to evidence such Preferred Stock.

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

“Preferred Stock” shall have the meaning set forth in Section 2.

“Purchase Agreement” means the Securities Purchase Agreement, dated April 29, 2013, among the Corporation and the original Holders, as amended, modified or supplemented from time to time in accordance with its terms.

“Registration Statement” means a registration statement meeting the requirements set forth in the Purchase Agreement and covering the resale of the Underlying Shares by each Holder as provided for in the Purchase Agreement.

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

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

“Stated Value” shall have the meaning set forth in Section 2.

“Subsidiary” means any Subsidiary of the Corporation as defined in the Purchase Agreement and shall, where applicable, also include any direct or indirect subsidiary of the Corporation formed or acquired after the date of the Purchase Agreement.

“Successor Entity” shall have the meaning set forth in Section 7(d).

“Trading Day” means a day on which the principal Trading Market is open for business.

“Trading Market” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE MKT, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, the New York Stock Exchange or the OTC Bulletin Board (or any successors to any of the foregoing).

“Transaction Documents” means the Purchase Agreement, this Certificate of Designation and all exhibits and schedules thereto and hereto and any other documents or agreements executed in connection with the transactions contemplated hereunder

“Transfer Agent” means Computershare Limited, the current transfer agent for the Common Stock, and any successor transfer agent of the Corporation.

“Underlying Shares” means the shares of Common Stock issued and issuable upon conversion of the Preferred Stock.

Section 2. Designation, Amount and Par Value. The series of preferred stock shall be designated as its Series B Convertible Preferred Stock (the “Preferred Stock”) and the number of shares so designated shall be 9,900 (which shall not be subject to increase without the written consent of a majority of the holders of the Preferred Stock (each, a “Holder” and collectively, the “Holders”). Each share of Preferred Stock shall have a par value of \$0.001 per share and a stated value equal to \$1,000 (the “Stated Value”).

Section 3. Dividends.

a) Holders shall be entitled to receive, and the Corporation shall pay, dividends on shares of Preferred Stock equal (on an as-if-converted-to-Common-Stock basis) to and in the same form as dividends (other than dividends in the form of Common Stock) actually paid on shares of the Common Stock when, as and if such dividends (other than dividends in the form of Common Stock) are paid on shares of the Common Stock. Other than as set forth in the previous sentence, no other dividends shall be paid on shares of Preferred Stock; and the Corporation shall pay no dividends (other than dividends in the form of Common Stock) on shares of the Common Stock unless it simultaneously complies with the previous sentence.

b) Other Securities. So long as any Preferred Stock shall remain outstanding, the Corporation shall not redeem, purchase or otherwise acquire directly or indirectly more than a de minimis amount of any Junior Securities other than as to repurchases of Common Stock or Common Stock Equivalents from departing, officers, directors or employees of the Company or any Subsidiary, and provided that, while any of the Preferred Stock remains outstanding, such repurchases shall not exceed an aggregate of \$100,000 in any fiscal year.

Section 4. Voting Rights. In addition to the voting rights provided by applicable law, the Preferred Stock shall have the right to vote on any matter on which the Common Stock is eligible to vote on an as-if-converted-to-Common-Stock basis; provided that each Holder shall only have the right to vote such shares of Preferred Stock as are eligible for conversion without exceeding the Beneficial Ownership Limitation.

Section 5. Liquidation. Upon any liquidation, dissolution or winding-up of the Corporation, whether voluntary or involuntary (a "Liquidation"), after the satisfaction in full of the debts of the Corporation and the payment of any liquidation preference owed to the holders of shares of capital stock of the Corporation ranking prior to the Preferred Stock upon liquidation, the Holders of the Preferred Stock shall participate pari passu with the holders of the Common Stock (on an as-if-converted-to-Common-Stock basis without regard to any limitation in Section 6(d) on the conversion of this Preferred Stock) in the net assets of the Corporation. The Corporation shall mail written notice of any such Liquidation, not less than 45 days prior to the payment date stated therein, to each Holder.

Section 6. Conversion.

a) Conversions at Option of Holder. Each share of Preferred Stock shall be convertible, at any time and from time to time from and after the Original Issue Date at the option of the Holder thereof, into that number of shares of Common Stock (subject to the limitations set forth in Section 6(d)) determined by dividing the Stated Value of such share of Preferred Stock by the Conversion Price. Holders shall effect conversions by providing the Corporation with the form of conversion notice attached hereto as Annex A (a "Notice of Conversion"). Each Notice of Conversion shall specify the number of shares of Preferred Stock to be converted, the number of shares of Preferred Stock owned prior to the conversion at issue, the number of shares of Preferred Stock owned subsequent to the conversion at issue and the date on which such conversion is to be effected, which date may not be prior to the date the applicable Holder delivers by facsimile such Notice of Conversion to the Corporation (such date, the "Conversion Date"). If no Conversion Date is specified in a Notice of Conversion, the Conversion Date shall be the date that such Notice of Conversion to the Corporation is deemed delivered hereunder. The calculations and entries set forth in the Notice of Conversion shall control in the absence of manifest or mathematical error. No ink-original Notice of Conversion shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Conversion form be required. To effect conversions of shares of Preferred Stock, a Holder shall not be required to surrender the certificate(s) representing the shares of Preferred Stock to the Corporation unless all of

the shares of Preferred Stock represented thereby are so converted, in which case such Holder shall deliver the certificate representing such shares of Preferred Stock promptly following the Conversion Date at issue. Shares of Preferred Stock converted into Common Stock or redeemed in accordance with the terms hereof shall be canceled and shall not be reissued.

b) Conversion Price. The conversion price for the Preferred Stock shall equal \$1.83, subject to adjustment herein (the "Conversion Price").

c) Mechanics of Conversion

i. Delivery of Certificate Upon Conversion. Not later than three (3) Trading Days after each Conversion Date (the "Share Delivery Date"), the Corporation shall deliver, or cause to be delivered, to the converting Holder (A) a certificate or certificates representing the Conversion Shares which, on or after the earlier of (i) the six month anniversary of the Original Issue Date or (ii) the Effective Date, shall be free of restrictive legends and trading restrictions (other than those which may then be required by the Purchase Agreement) representing the number of Conversion Shares being acquired upon the conversion of the Preferred Stock (including, if the Corporation has given continuous notice pursuant to Section 3(b) for payment of dividends in shares of Common Stock at least 20 Trading Days prior to the date on which the Notice of Conversion is delivered to the Corporation, shares of Common Stock representing the payment of accrued dividends otherwise determined pursuant to Section 3(a) but assuming that the Dividend Notice Period is the 20 Trading Days period immediately prior to the date on which the Notice of Conversion is delivered to the Corporation and excluding for such issuance the condition that the Corporation deliver the Dividend Share Amount as to such dividend payment prior to the commencement of the Dividend Notice Period), and (B) a bank check in the amount of accrued and unpaid dividends (if the Corporation has elected or is required to pay accrued dividends in cash). On or after the earlier of (i) the six month anniversary of the Original Issue Date or (ii) the Effective Date, the Corporation shall use its best efforts to deliver any certificate or certificates required to be delivered by the Corporation under this Section 6 electronically through the Depository Trust Company or another established clearing corporation performing similar functions.

ii. Failure to Deliver Certificates. If, in the case of any Notice of Conversion, such certificate or certificates are not delivered to or as directed by the applicable Holder by the Share Delivery Date, the Holder shall be entitled to elect by written notice to the Corporation at any time on or before its receipt of such certificate or certificates, to rescind such Conversion, in which event the Corporation shall promptly return to the Holder any original Preferred Stock certificate delivered to the Corporation and the Holder shall promptly return to the Corporation the Common Stock certificates issued to such Holder pursuant to the rescinded Conversion Notice.

iii. Obligation Absolute. The Corporation's obligation to issue and deliver the Conversion Shares upon conversion of Preferred Stock in accordance with the terms hereof are absolute and unconditional, irrespective of any action or inaction by a Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by such Holder or any other Person of any obligation to the Corporation or any violation or alleged violation of law by such Holder or any other person, and irrespective of any other circumstance which might otherwise limit such obligation of the Corporation to such Holder in connection with the issuance of such Conversion Shares; provided, however, that such delivery shall not operate as a waiver by the Corporation of any such action that the Corporation may have against such Holder. In the event a Holder shall elect to convert any or all of the Stated Value of its Preferred Stock, the Corporation may not refuse conversion based on any claim that such Holder or any one associated or affiliated with such Holder has been engaged in any violation of law, agreement or for any other reason, unless an injunction from a court, on notice to Holder, restraining and/or enjoining conversion of all or part of the Preferred Stock of such Holder shall have been sought and obtained, and the Corporation posts a surety bond for the benefit of such Holder in the amount of 150% of the Stated Value of Preferred Stock which is subject to the injunction, which bond shall remain in effect until the completion of arbitration/litigation of the underlying dispute and the proceeds of which shall be payable to such Holder to the extent it obtains judgment. In the absence of such injunction, the Corporation shall issue Conversion Shares and, if applicable, cash, upon a properly noticed conversion. Nothing herein shall limit a Holder's right to pursue all remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief. The exercise of any such rights shall not prohibit a Holder from seeking to enforce damages pursuant to any other Section hereof or under applicable law.

iv. Compensation for Buy-In on Failure to Timely Deliver Certificates Upon Conversion. In addition to any other rights available to the Holder, if the Corporation fails for any reason to deliver to a Holder the applicable certificate or certificates by the Share Delivery Date pursuant to Section 6(c)(i), and if after such Share Delivery Date such Holder is required by its brokerage firm to purchase (in an open market transaction or otherwise), or the Holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by such Holder of the Conversion Shares which such Holder was entitled to receive upon the conversion relating to such Share Delivery Date (a "Buy-In"), then the Corporation shall (A) pay in cash to such Holder (in addition to any other remedies available to or elected by such Holder) the amount, if any, by which (x) such Holder's total purchase price (including any brokerage commissions) for the Common Stock so purchased exceeds (y) the product of (1) the aggregate number of shares of Common Stock that such Holder was entitled to receive from the

conversion at issue multiplied by (2) the actual sale price at which the sell order giving rise to such purchase obligation was executed (including any brokerage commissions) and (B) at the option of such Holder, either reissue (if surrendered) the shares of Preferred Stock equal to the number of shares of Preferred Stock submitted for conversion (in which case, such conversion shall be deemed rescinded) or deliver to such Holder the number of shares of Common Stock that would have been issued if the Corporation had timely complied with its delivery requirements under Section 6(c)(i). For example, if a Holder purchases shares of Common Stock having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted conversion of shares of Preferred Stock with respect to which the actual sale price of the Conversion Shares (including any brokerage commissions) giving rise to such purchase obligation was a total of \$10,000 under clause (A) of the immediately preceding sentence, the Corporation shall be required to pay such Holder \$1,000. The Holder shall provide the Corporation written notice indicating the amounts payable to such Holder in respect of the Buy-In and, upon request of the Corporation, evidence of the amount of such loss. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Corporation's failure to timely deliver certificates representing shares of Common Stock upon conversion of the shares of Preferred Stock as required pursuant to the terms hereof.

v. Reservation of Shares Issuable Upon Conversion. The Corporation covenants that it will at all times reserve and keep available out of its authorized and unissued shares of Common Stock for the sole purpose of issuance upon conversion of the Preferred Stock and payment of dividends on the Preferred Stock, each as herein provided, free from preemptive rights or any other actual contingent purchase rights of Persons other than the Holder (and the other holders of the Preferred Stock), not less than such aggregate number of shares of the Common Stock as shall (subject to the terms and conditions set forth in the Purchase Agreement) be issuable (taking into account the adjustments and restrictions of Section 7) upon the conversion of the then outstanding shares of Preferred Stock and payment of dividends hereunder. The Corporation covenants that all shares of Common Stock that shall be so issuable shall, upon issue, be duly authorized, validly issued, fully paid and nonassessable and, if the Conversion Shares Registration Statement is then effective under the Securities Act, shall be registered for public resale in accordance with such Conversion Shares Registration Statement (subject to such Holder's compliance with its obligations under the Registration Rights Agreement).

vi. Fractional Shares. No fractional shares or scrip representing fractional shares shall be issued upon the conversion of the Preferred Stock. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such conversion, the Corporation shall at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Conversion Price or round up to the next whole share.

vii. Transfer Taxes and Expenses. The issuance of certificates for shares of the Common Stock on conversion of this Preferred Stock shall be made without charge to any Holder for any documentary stamp or similar taxes that may be payable in respect of the issue or delivery of such certificates, provided that the Corporation shall not be required to pay any tax that may be payable in respect of any transfer involved in the issuance and delivery of any such certificate upon conversion in a name other than that of the Holders of such shares of Preferred Stock and the Corporation shall not be required to issue or deliver such certificates unless or until the Person or Persons requesting the issuance thereof shall have paid to the Corporation the amount of such tax or shall have established to the satisfaction of the Corporation that such tax has been paid. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Conversion.

d) Beneficial Ownership Limitation. The Corporation shall not effect any conversion of the Preferred Stock, and a Holder shall not have the right to convert any portion of the Preferred Stock, to the extent that, after giving effect to the conversion set forth on the applicable Notice of Conversion, such Holder (together with such Holder's Affiliates, and any Persons acting as a group together with such Holder or any of such Holder's Affiliates) would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by such Holder and its Affiliates shall include the number of shares of Common Stock issuable upon conversion of the Preferred Stock with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which are issuable upon (i) conversion of the remaining, unconverted Stated Value of Preferred Stock beneficially owned by such Holder or any of its Affiliates and (ii) exercise or conversion of the unexercised or unconverted portion of any other securities of the Corporation subject to a limitation on conversion or exercise analogous to the limitation contained herein (including, without limitation, the Preferred Stock) beneficially owned by such Holder or any of its Affiliates. Except as set forth in the preceding sentence, for purposes of this Section 6(d), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. To the extent that the limitation contained in this Section 6(d) applies, the determination of whether the Preferred Stock is convertible (in relation to other securities owned by such Holder together with any Affiliates) and of how many shares of Preferred Stock are convertible shall be in the sole discretion of such Holder, and the submission of a Notice of Conversion shall be deemed to be such Holder's determination of whether the shares of Preferred Stock may be converted (in relation to other securities owned by such Holder together with any Affiliates) and how many shares of the Preferred Stock are convertible, in each case subject to the Beneficial Ownership Limitation. To ensure compliance with this restriction, each Holder will be deemed to represent to the Corporation each time it delivers a Notice of Conversion that such Notice of Conversion has not violated the

restrictions set forth in this paragraph and the Corporation shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 6(d), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as stated in the most recent of the following: (i) the Corporation's most recent periodic or annual report filed with the Commission, as the case may be, (ii) a more recent public announcement by the Corporation or (iii) a more recent written notice by the Corporation or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Corporation shall within two Trading Days confirm orally and in writing to such Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Corporation, including the Preferred Stock, by such Holder or its Affiliates since the date as of which such number of outstanding shares of Common Stock was reported. The "Beneficial Ownership Limitation" shall be 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon conversion of Preferred Stock held by the applicable Holder. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 6(d) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation contained herein or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of Preferred Stock.

Section 7. Certain Adjustments.

a) Stock Dividends and Stock Splits. If the Corporation, at any time while this Preferred Stock is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions payable in shares of Common Stock on shares of Common Stock or any other Common Stock Equivalents (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Corporation upon conversion of, or payment of a dividend on, this Preferred Stock), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of a reverse stock split) outstanding shares of Common Stock into a smaller number of shares, or (iv) issues, in the event of a reclassification of shares of the Common Stock, any shares of capital stock of the Corporation, then the Conversion Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding any treasury shares of the Corporation) outstanding immediately before such event, and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to this Section 7(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

b) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 7(a) above, if at any time the Corporation grants, issues or sells any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the "Purchase Rights"), then the Holder of will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete conversion of such Holder's Preferred Stock (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such shares of Common Stock as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

c) Pro Rata Distributions. During such time as this Preferred Stock is outstanding, if the Corporation declares or makes any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "Distribution"), at any time after the issuance of this Preferred Stock, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete Conversion of this Preferred Stock (without regard to any limitations on Conversion hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided, however, to the extent that the Holder's right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any shares of Common Stock as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

d) Fundamental Transaction. If, at any time while this Preferred Stock is outstanding, (i) the Corporation, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Corporation with or into another Person, (ii) the Corporation, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Corporation or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Corporation, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Corporation, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person whereby such other Person acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination) (each a "Fundamental Transaction"), then, upon any subsequent conversion of this Preferred Stock, the Holder shall have the right to receive, for each Conversion Share that would have been issuable upon such conversion immediately prior to the occurrence of such Fundamental Transaction (without regard to any limitation in Section 6(d) on the conversion of this Preferred Stock), the number of shares of Common Stock of the successor or acquiring corporation or of the Corporation, if it is the surviving corporation, and any additional consideration (the "Alternate Consideration") receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Preferred Stock is convertible immediately prior to such Fundamental Transaction (without regard to any limitation in Section 6(d) on the conversion of this Preferred Stock). For purposes of any such conversion, the determination of the Conversion Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Corporation shall apportion the Conversion Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any conversion of this Preferred Stock following such Fundamental Transaction. To the extent necessary to effectuate the foregoing provisions, any successor to the Corporation or surviving entity in such Fundamental Transaction shall file a new Certificate of Designation with the same terms and conditions and issue to the Holders new preferred stock consistent with the foregoing provisions and evidencing the Holders' right to convert such preferred stock into Alternate Consideration. The Corporation shall cause any successor entity in a Fundamental Transaction in which the Corporation is not the

survivor (the “Successor Entity”) to assume in writing all of the obligations of the Corporation under this Certificate of Designation and the other Transaction Documents (as defined in the Purchase Agreement) in accordance with the provisions of this Section 7(d) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the holder of this Preferred Stock, deliver to the Holder in exchange for this Preferred Stock a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Preferred Stock which is convertible for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon conversion of this Preferred Stock (without regard to any limitations on the conversion of this Preferred Stock) prior to such Fundamental Transaction, and with a conversion price which applies the conversion price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such conversion price being for the purpose of protecting the economic value of this Preferred Stock immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Certificate of Designation and the other Transaction Documents referring to the “Corporation” shall refer instead to the Successor Entity), and may exercise every right and power of the Corporation and shall assume all of the obligations of the Corporation under this Certificate of Designation and the other Transaction Documents with the same effect as if such Successor Entity had been named as the Corporation herein.

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

f) Notice to the Holders.

i. Adjustment to Conversion Price. Whenever the Conversion Price is adjusted pursuant to any provision of this Section 7, the Corporation shall promptly deliver to each Holder a notice setting forth the Conversion Price after such adjustment and setting forth a brief statement of the facts requiring such adjustment.

ii. Notice to Allow Conversion by Holder. If (A) the Corporation shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Corporation shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Corporation shall authorize the granting to all holders of the Common Stock of rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights,

(D) the approval of any stockholders of the Corporation shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Corporation is a party, any sale or transfer of all or substantially all of the assets of the Corporation, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property or (E) the Corporation shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Corporation, then, in each case, the Corporation shall cause to be filed at each office or agency maintained for the purpose of conversion of this Preferred Stock, and shall cause to be delivered to each Holder at its last address as it shall appear upon the stock books of the Corporation, at least twenty (20) calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange, provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Corporation or any of the Subsidiaries, the Corporation shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to convert the Conversion Amount of this Preferred Stock (or any part hereof) during the 20-day period commencing on the date of such notice through the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

Section 8. Miscellaneous.

a) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Conversion, shall be in writing and delivered personally, by facsimile, or sent by a nationally recognized overnight courier service, addressed to the Corporation, at the address set forth above **Attention:** [], facsimile number [], or such other facsimile number or address as the Corporation may specify for such purposes by notice to the Holders delivered in accordance with this Section 8. Any and all notices or other communications or deliveries to be provided by the Corporation hereunder shall be in writing and delivered personally, by facsimile, or sent by a nationally recognized overnight courier service addressed to each Holder at the facsimile number or address of such Holder appearing on the books of the Corporation, or if no such facsimile number or address appears on the books of the Corporation, at the

principal place of business of such Holder, as set forth in the Purchase Agreement. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number set forth in this Section prior to 5:30 p.m. (New York City time) on any date, (ii) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number set forth in this Section on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (iii) the second Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given.

b) Absolute Obligation. Except as expressly provided herein, no provision of this Certificate of Designation shall alter or impair the obligation of the Corporation, which is absolute and unconditional, to pay liquidated damages, accrued dividends and accrued interest, as applicable, on the shares of Preferred Stock at the time, place, and rate, and in the coin or currency, herein prescribed.

c) Lost or Mutilated Preferred Stock Certificate. If a Holder's Preferred Stock certificate shall be mutilated, lost, stolen or destroyed, the Corporation shall execute and deliver, in exchange and substitution for and upon cancellation of a mutilated certificate, or in lieu of or in substitution for a lost, stolen or destroyed certificate, a new certificate for the shares of Preferred Stock so mutilated, lost, stolen or destroyed, but only upon receipt of evidence of such loss, theft or destruction of such certificate, and of the ownership hereof reasonably satisfactory to the Corporation.

d) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Certificate of Designation shall be governed by and construed and enforced in accordance with the internal laws of the State of Delaware, without regard to the principles of conflict of laws thereof. Each party agrees that all legal proceedings concerning the interpretation, enforcement and defense of the transactions contemplated by any of the Transaction Documents (whether brought against a party hereto or its respective Affiliates, directors, officers, shareholders, employees or agents) shall be commenced in the state and federal courts sitting in the City of New York, Borough of Manhattan (the "New York Courts"). Each party hereto hereby irrevocably submits to the exclusive jurisdiction of the New York Courts for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of such New York Courts, or such New York Courts are improper or inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Certificate of Designation and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be

deemed to limit in any way any right to serve process in any other manner permitted by applicable law. Each party hereto hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Certificate of Designation or the transactions contemplated hereby. If any party shall commence an action or proceeding to enforce any provisions of this Certificate of Designation, then the prevailing party in such action or proceeding shall be reimbursed by the other party for its attorneys' fees and other costs and expenses incurred in the investigation, preparation and prosecution of such action or proceeding.

e) Waiver. Any waiver by the Corporation or a Holder of a breach of any provision of this Certificate of Designation shall not operate as or be construed to be a waiver of any other breach of such provision or of any breach of any other provision of this Certificate of Designation or a waiver by any other Holders. The failure of the Corporation or a Holder to insist upon strict adherence to any term of this Certificate of Designation on one or more occasions shall not be considered a waiver or deprive that party (or any other Holder) of the right thereafter to insist upon strict adherence to that term or any other term of this Certificate of Designation on any other occasion. Any waiver by the Corporation or a Holder must be in writing.

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

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

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

i) Status of Converted or Redeemed Preferred Stock. Shares of Preferred Stock may only be issued pursuant to the Purchase Agreement. If any shares of Preferred Stock shall be converted, redeemed or reacquired by the Corporation, such shares shall resume the status of authorized but unissued shares of preferred stock and shall no longer be designated as Series A Convertible Preferred Stock.

RESOLVED, FURTHER, that the Chairman, the president or any vice-president, and the secretary or any assistant secretary, of the Corporation be and they hereby are authorized and directed to prepare and file this Certificate of Designation of Preferences, Rights and Limitations in accordance with the foregoing resolution and the provisions of Delaware law.

IN WITNESS WHEREOF, the undersigned have executed this Certificate this day of May 2013.

Name:
Title:

Name:
Title:

ANNEX A

NOTICE OF CONVERSION

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

The undersigned hereby elects to convert the number of shares of Series B Convertible Preferred Stock indicated below into shares of common stock, par value \$0.001 per share (the "Common Stock"), of Arrowhead Research Corporation, a Delaware corporation (the "Corporation"), according to the conditions hereof, as of the date written below. If shares of Common Stock are to be issued in the name of a Person other than the undersigned, the undersigned will pay all transfer taxes payable with respect thereto and is delivering herewith such certificates and opinions as may be required by the Corporation in accordance with the Purchase Agreement. No fee will be charged to the Holders for any conversion, except for any such transfer taxes.

Conversion calculations:

Date to Effect Conversion: _____

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

Number of shares of Preferred Stock to be Converted: _____

Stated Value of shares of Preferred Stock to be Converted: _____

Number of shares of Common Stock to be Issued: _____

Applicable Conversion Price: _____

Number of shares of Preferred Stock subsequent to Conversion: _____

Address for Delivery: _____

or

DWAC Instructions:

Broker no: _____

Account no: _____

[HOLDER]

By: _____

Name:

Title:

Trout Capital LLC

Member FINRA, SIPC

April 25, 2013

PERSONAL & CONFIDENTIAL

Christopher Anzalone Ph.D
President & Chief Executive Officer
Arrowhead Research Corporation
225 South Lake Avenue, Suite 1050
Pasadena, California 91101

Dear Chris,

This letter (the "Agreement") confirms the agreement between Trout Capital LLC ("Trout") and Arrowhead Research Corporation (the "Company") as follows:

1. Services.

(a) The Company hereby engages Trout to render financial advisory services to the Company, including those described in Section 1. (b) herein.

(b) Trout shall provide non-exclusive advisory services (the "Services") in connection with a currently contemplated financing of the Company (a "Transaction"). As appropriate, Trout will:

- (i) Develop a list of targets to approach on behalf of the Company;
- (ii) Advise the Company with respect to the structure, terms and timing of a Transaction;
- (iii) Prepare and assist in negotiations, as required;
- (iv) Review the required Transaction documents to the extent such documents relate to the Transaction or the terms of securities being offered in the Transaction;
- (v) Render such other financial advisory services as may from time to time be agreed upon by the Company and Trout.

(c) The Company shall make available to Trout all information concerning the business, assets, liabilities, operations and financial condition of the Company which Trout reasonably requests in connection with its performance of the Services. All such information provided by or on behalf of the Company shall be complete, accurate and not misleading. Trout will not independently verify such information and will rely upon the accuracy and completeness of the information provided by the Company. The

740 Broadway / 9th Floor / New York, NY 10003
Phone / 646-378-2900 Fax / 646-378-2901
www.troutcapital.com

Company shall be solely responsible for the accuracy and completeness of the information memorandum and all other descriptive material prepared by the Company (with or without Trout's assistance) concerning the Company and the proposed Transaction. Trout will not independently verify information contained in such material. No descriptive material shall be distributed without the Company's prior consent.

(d) The Company agrees that it will be solely responsible for ensuring that any Transaction complies with applicable law. The Company understands that Trout is not undertaking to provide any legal, regulatory, accounting, insurance, tax or other similar professional advice and the Company confirms that it is relying on its own counsel, accountants and similar advisors for such advice.

2. Conduct of Potential Transaction Services. In order for Trout to effectively coordinate the Transaction process, Trout shall have the sole authority to initiate and conduct discussions or negotiations with all potential targets that have been approved by the Company. The Company shall identify to Trout (a) all potential targets that Company has been in contact with prior to Trout's engagement, and (b) all potential targets that make inquiries to the Company during Trout's engagement.

3. Best Efforts. Subject to the performance by the Company of its obligations under this Agreement and to the terms and conditions of this Agreement, Trout agrees to use its reasonable best efforts, in accordance with customary practice, to arrange the proposed Transaction. The Company expressly acknowledges and agrees that Trout's obligations under this Agreement are on a reasonable best efforts basis only and that Trout cannot ensure the successful arrangement or completion of the proposed Transaction.

4. Fees and Expenses.

(a) Trout shall receive a transaction fee with respect to any actual Transaction arising from this Agreement. Upon the closing of the sale of any debt or equity securities in a Transaction or any part of a Transaction, the Company shall pay Trout a fee equal to two percent (2%) of the total gross amount raised or committed by the lenders and/or investors in the Transaction listed in Schedule A to this Agreement (the "Fee").

(b) The Company shall reimburse Trout for all reasonable out-of-pocket expenses incurred by Trout in connection with the performance of the Services under this Agreement, including, without limitation, reasonable attorneys' fees and expenses, long distance telephone charges, overnight delivery costs, postage, printing, photocopying and travel; provided, that such out-of-pocket expenses shall not exceed a total of \$10,000 without the prior consent of the Company. Trout personnel shall travel coach class for all domestic flights of five hours or less in duration and may travel business class for all domestic flights more than five hours in duration and all foreign flights. The Company shall reimburse Trout for expenses within ten (10) days after submission of an expense report detailing expenses incurred.

740 Broadway / 9th Floor / New York, NY 10003

Phone / 646-378-2900 Fax / 646-378-2901

www.troutcapital.com

(c) All fees and expenses payable under this Agreement are net of applicable withholding, sales or similar taxes.

(d) All Fees associated with the Transaction are due within ten (10) business days after the closing of a Transaction.

5. Term.

(a) The Term of the Agreement is 30 days.

(b) This Agreement may be terminated at any time by either Trout or the Company, with or without cause, upon written notice to the other. Upon termination of this Agreement, the Company shall pay Trout for all out-of-pocket expenses which it has incurred in connection with the performance of the Services under this Agreement and which have not been reimbursed pursuant to Section 4(c).

(c) If the Company terminates this Agreement pursuant to Section 4(b) and the Company completes a Transaction within 30 days of the date of this Agreement with an investor listed on Schedule A , the Company shall pay Trout the same Fee Trout would have been entitled to receive had the Transaction been completed during the term of this Agreement.

6. Nature of Relationship. Trout will act under this Agreement as an independent contractor with duties solely to the Company. Nothing in this Agreement shall be deemed to create a fiduciary, agency, employment or joint venture relationship between Trout and the Company. Nothing in this Agreement shall be deemed to confer on any person or entity other than Trout and the Company or their respective successors and assigns and, to the extent expressly set forth herein, the Indemnified Parties (as defined in Section 8(a)), any relationship, rights or remedies under or by reason of this Agreement or of the Services to be rendered by Trout.

7. Confidentiality.

(a) Trout will not disclose to any other person or entity, or use for any purpose, any information pertaining to the Company or any subsidiary of the Company which is either non-public, confidential or proprietary ("Information") that Trout obtains or is given access to by the Company or one of its subsidiaries or any of their respective officers, directors, employees, advisors or other agents ("Representatives") during the term of this Agreement. "Information" does not include information which (i) is now, or hereafter becomes, through no act or failure to act on the part of Trout, generally

740 Broadway / 9th Floor / New York, NY 10003

Phone / 646-378-2900 Fax / 646-378-2901

www.troutcapital.com

known or available to the public; (ii) was acquired by Trout before receiving such information from the Company (or any of its subsidiaries or Representatives) and without restriction as to use or disclosure; (iii) is hereafter rightfully furnished to Trout by a third party, without restriction as to use or disclosure; (iv) is information which was independently developed by Trout without breach of any obligation of confidentiality; (v) is required to be disclosed pursuant to law, provided that Trout (A) gives the Company reasonable advance notice of such required disclosure so that the Company may seek an appropriate protective order or other remedy; (B) will not oppose, and will cooperate with, the Company at the Company's expense in seeking such order or remedy and (C) will disclose only that portion of the Information which it is legally compelled to disclose; or (vi) is disclosed with the prior written consent of the Company. The provisions of this Section 7(a) shall survive the termination of this Agreement for a period of three years.

(b) Notwithstanding the foregoing, Trout may disclose any Information to its affiliates and to its or their respective Representatives in connection with the performance of the Services or if necessary in order to protect or enforce its rights under this Agreement. In addition, Trout shall have the right to disclose to others in the normal course of its business its relationship with the Company.

(c) All advice (written or oral) given by Trout to the Company or any of its subsidiaries is intended solely for the benefit and use of the Company and its subsidiaries (limited to their respective management and Board of Directors). Except as required by law, the Company shall not use, reproduce, disseminate or quote such advice at any time in any manner, nor shall any public references to Trout be made by the Company, in each case, without Trout's prior written consent. Any descriptive material prepared with Trout's assistance shall not be used, reproduced, disseminated, quoted or referred to by the Company, any subsidiaries of the Company nor any of their respective Representatives at any time or in any matter, except (i) with regard to assisting potential investors or lenders under the terms of separate confidentiality agreements; or (ii) with the prior written consent of Trout, unless the Company is required by law to disclose such information, provided that the Company (A) gives Trout reasonable advance notice of such required disclosure so that Trout may seek an appropriate protective order or other remedy; (B) will not oppose, and will cooperate with, Trout, at its own expense, in seeking such order or remedy and (C) will disclose only that portion of the Information which it is legally compelled to disclose. The provisions of this Section 7(c) shall survive the termination of this Agreement for a period of three years.

8. Indemnification.

(a) The Company hereby agrees to defend, indemnify and hold harmless Trout and its members, managers, employees, agents, other representatives and each other person who controls Trout within the meaning of the Securities Act of 1933, as

740 Broadway / 9th Floor / New York, NY 10003
Phone / 646-378-2900 Fax / 646-378-2901
www.troutcapital.com

amended or the Securities Exchange Act of 1934, as amended, and their respective heirs, successors, assigns and affiliates (each an “Indemnified Party” and together, the “Indemnified Parties”) from and against any and all losses, deficiencies, claims, actions, liabilities, damages, assessments, judgments, obligations, penalties, awards and other liabilities, costs and expenses, including but not limited to interest, penalties and reasonable fees, disbursements and expenses of attorneys, accountants, financial and other advisors, experts and witnesses, both those incurred in connection with the defense or prosecution of the indemnifiable claim and those incurred in connection with the enforcement of this provision (collectively, “Damages”) caused by, based upon, resulting from or arising out of this Agreement and/or the provision of the Services to the Company by Trout and/or the Transaction, except for Damages that result primarily and directly from the gross negligence or willful misconduct of any such Indemnified Party, as determined in a final adjudication by a court of competent jurisdiction.

(b) Promptly after receipt by an Indemnified Party of notice of the commencement of any claim, action or other proceeding against it (collectively, an “Indemnified Claim”), such Indemnified Party shall provide the Company with written notice of the commencement thereof; provided, that no failure or delay by the Indemnified Party in giving such notice will relieve the Company from any obligation or liability under this Agreement, except and to the extent that the Company is materially prejudiced by such failure or delay. Such notice shall describe the Indemnified Claim in reasonable detail. The Company may elect to defend, at its own expense and with counsel of its selection, reasonably satisfactory to the Indemnified Party, any Indemnified Claim unless (i) the Indemnified Claim seeks an order, injunction or other equitable or declaratory relief against the Indemnified Party; (ii) the Indemnified Party shall have reasonably concluded that there is an actual or potential conflict of interest between it and the Company in the conduct of such defense; (iii) the Indemnified Party shall have one or more defenses available to it that are not available to the Company; (iii) the Company shall have failed to employ counsel reasonably satisfactory to the Indemnified Party; or (iv) the Company is not timely or diligently defending such Indemnified Claim. If the Company elects to defend such Indemnified Claim, it shall within ten days (or sooner, if the nature of the Indemnified Claim so requires) notify the Indemnified Party of its intent to do so, and the Indemnified Party shall cooperate, at the expense of the Company, in the defense of such Indemnified Claim. If the Company elects not to defend the Indemnified Claim, is not permitted to defend the Indemnified Claim by reason of this Section 8(b), fails to notify the Indemnified Party of its election as herein provided or contests its obligation to indemnify under this Agreement with respect to such Indemnified Claim, the Indemnified Party may pay, compromise or defend such Indemnified Claim at the sole cost and expense of the Company. Notwithstanding the foregoing, neither the Indemnified Party nor the Company may settle or compromise any claim over the reasonable written objection of the other; provided that the Indemnified Party may settle or compromise any Indemnified Claim as to which the Company has failed to notify the Indemnified Party of its election under

740 Broadway / 9th Floor / New York, NY 10003
Phone / 646-378-2900 Fax / 646-378-2901
www.troutcapital.com

this Section 8(b) or as to which the Company is contesting its indemnification obligations hereunder or as to which such settlement includes as an unconditional term thereof the giving by the claimant or plaintiff of a release of the Company from all liability with respect to such Indemnified Claim. Should either party unreasonably withhold, delay or condition consent to any settlement or compromise of any Indemnified Claim, that party shall be liable for all further defense related costs, including reasonable outside attorneys' fees and expenses. In any event, the Indemnified Party may participate, at its own expense, in the defense of any Indemnified Claim. If the Company chooses to defend any Indemnified Claim, the Indemnified Party shall make available to the Company any books, records or other documents within its control that are necessary or appropriate for such defense. If the Indemnified Party defends the Indemnified Claim, the Company shall cooperate in such defense and shall make available to the Indemnified Party any books, records or other documents within its control that are necessary or appropriate for such defense. Any Damages of the Indemnified Party for which the Company is liable for indemnification hereunder shall be paid upon written demand therefor.

(c) If the foregoing indemnity is unavailable to any Indemnified Party for any reason, then the Company, on one hand, and Trout, on the other hand, shall contribute to the Damages of the Indemnified Party in accordance with the relative benefits received by the Company, on one hand, and Trout, on the other hand, and also the relative fault of the Company, on one hand, and Trout on the other hand, in connection with the statements, acts or omissions which resulted in such Damages and other relevant equitable considerations. Notwithstanding the foregoing, Trout shall not be obligated to contribute any amount pursuant to this Section 8(c) that exceeds the amount of the Fee received by Trout pursuant to this Agreement.

(d) The provisions of this Section 8 shall survive the termination of this Agreement.

9. Freedom to Provide Other Services. During the term of this Agreement, Trout may provide the same or similar Services to or for any person or entity other than the Company, including, but not limited to, competitors of the Company.

10. Communications. The Company acknowledges that certain communications systems and networks which Trout may use or rely on in performing the Services do not necessarily represent a secure environment in which to conduct communications. These systems include certain telephone systems, computer networks and the Internet. Nevertheless, the Company authorizes Trout, subject to the confidentiality provisions of Section 7, to use such systems (including sending and receiving electronic mail) for communication of sensitive information about the Company.

740 Broadway / 9th Floor / New York, NY 10003
Phone / 646-378-2900 Fax / 646-378-2901
www.troutcapital.com

11. Publicity. Subject to applicable law, Trout may (i) place advertisements in financial and other newspapers and journals (including electronic versions thereof) at its own expense describing its services to the Company and (ii) use the Company's name and corporate logo in such advertising or in other promotional materials (including electronic versions thereof) concerning Trout's services.

12. Governing Law; Jurisdiction.

(a) This Agreement shall be governed by and construed in accordance with the laws of the State of New York with respect to contracts made and to be performed entirely therein and without regard to choice of law principles thereof.

(b) Any dispute, controversy or claim arising out of, relating to or in connection with this Agreement or the breach, validity or termination thereof shall be fully and finally settled in accordance with the rules of the FINRA, under procedures administered by FINRA Dispute Resolution, Inc., and judgment on the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof. The place of arbitration shall be New York City, New York. A request for interim measures by a party to a court shall not be deemed incompatible with, or a waiver of, this agreement to arbitrate.

(c) The parties (A) consent to the exclusive jurisdiction of the state and federal courts located in the County of New York, State of New York for all purposes in connection with dispute resolution, including the entry of judgment on any award; (B) waive any objection to laying venue in any such court; (C) waive any objection that any such court is an inconvenient forum or does not have jurisdiction over any party; and (D) consent that any process, notice of motion or other application to such courts, and any papers in connection with arbitration, may be served by registered or certified mail, return receipt requested, by personal service, or in such other manner as may be permissible under the rules of the applicable court or arbitration tribunal, provided a reasonable time for appearance is allowed.

13. Miscellaneous.

(a) If any one or more of the provisions of this Agreement shall for any reason be held to be invalid, illegal or unenforceable, the remaining provisions of this Agreement shall be unimpaired and the invalid, illegal or unenforceable provision shall be replaced by a mutually acceptable provision, which, being valid, legal and enforceable, comes closest to the intention of the parties underlying the invalid, illegal or unenforceable provision.

(b) This Agreement contains the entire understanding of the parties relating to the subject matter of this Agreement and supercedes all prior agreements and understandings with respect to such subject matter, whether oral or written. No

740 Broadway / 9th Floor / New York, NY 10003
Phone / 646-378-2900 Fax / 646-378-2901
www.troutcapital.com

modification to any provision of this Agreement shall be binding unless in writing and signed by both the Company and Trout. No waiver of any rights under this Agreement will be effective unless in writing, signed by the party against whom enforcement of such waiver is sought. The waiver of a default shall not constitute a waiver of any other default, and the failure of either party to enforce any right or remedy for any one default shall not be deemed a waiver of such right or remedy if the offending party persists in such default or commits another default, nor shall such failure in any way affect the validity of the Agreement or any provision of this Agreement.

(c) All notices under this Agreement shall be sufficient if delivered by registered or certified mail, overnight mail or personal service. Any notice shall be deemed to be given only upon actual receipt or refusal of receipt to the address of the Company or Trout, as the case may be, set forth above or such other address as such party shall have specified in writing to the other party in accordance with this Section 14(c).

(d) This Agreement may be executed in two or more counterparts, each of which shall be deemed to be an original as against any party whose signature appears on such counterpart, but all of which together shall constitute but one and the same instrument.

(e) This Agreement, and any right or obligation under this Agreement, may not be assigned, transferred or delegated by either party without the express prior written consent of the other party; provided, however, that either party may, without the consent of the other party, assign or transfer this Agreement to any direct or indirect parent or subsidiary company of such party or in connection with a merger or sale of all or substantially all of the assets or stock of such party. Subject to the foregoing, this Agreement and the obligations hereunder shall be binding on the representatives, assigns, and successors of the party in question and shall inure to the benefit of the assigns and successors of such party.

If the foregoing terms meet with your approval, please sign and return the enclosed copy of this Agreement.

We look forward to working with you.

740 Broadway / 9th Floor / New York, NY 10003
Phone / 646-378-2900 Fax / 646-378-2901
www.troutcapital.com

Acknowledged and Agreed to:

Trout Capital LLC

By: Jonathan Fassberg

/s/ Jonathan Fassberg

Its: CEO

Dated: April 25, 2013

Arrowhead Research Corporation

By: Christopher Anzalone

/s/ Christopher Anzalone

Its: CEO

Dated: April 25, 2013

740 Broadway / 9th Floor / New York, NY 10003

Phone / 646-378-2900 Fax / 646-378-2901

www.troutcapital.com

**PRESS RELEASE**

April 29, 2013

Arrowhead Prices \$36 Million Private Offering

PASADENA, Calif. — April 29, 2013 — Arrowhead Research Corporation (NASDAQ: ARWR), a targeted therapeutics company, today announced that it has priced a private offering with gross proceeds expected to be \$36 million. The offering was priced at \$1.83 per common share.

Approximately 14.3 million shares of common stock and 9,900 shares of series B convertible preferred stock are expected to be issued at closing. The series B preferred shares are priced at \$1,000 per share, are convertible into shares of common stock at a conversion price of \$1.83 per share of common stock and include no dividends or liquidation preferences. The offering is expected to close on or about May 3, 2013, 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 sale of these securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities laws of any such jurisdiction.

The securities sold in the private placement have not been registered under the Securities Act of 1933, as amended, or state securities laws and may not be offered or sold in the United States absent registration with the Securities and Exchange Commission (SEC) or an applicable exemption from such registration requirements. The Company has agreed to file a registration statement with the SEC registering the resale of the shares of common stock and the shares of common stock issuable upon conversion of the series B preferred.

About Arrowhead Research Corporation

Arrowhead Research Corporation is a clinical stage targeted therapeutics company with development programs in oncology, obesity, and chronic hepatitis B virus infection. The company is leveraging its platform technologies to design and develop peptide-drug conjugates (PDCs) that specifically home to

cell types of interest while sparing off-target tissues, create targeted drugs based on the gene silencing RNA interference (RNAi) mechanism, and work with partners to create improved versions of traditional small molecule drugs.

For more information please visit <http://www.arrowheadresearch.com>, or follow us on Twitter [@ArrowRes](https://twitter.com/ArrowRes). To be added to the Company's email list to receive news directly, please send an email to ir@arrowres.com

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 and the results of the offering described in this news release 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 sell the securities in the offering described in this news release, 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. Arrowhead Research Corporation's 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.

Contacts:

Arrowhead Research Corporation
Vince Anzalone, CFA
626-304-3400

The Trout Group
Lauren Glaser
646-378-2972
ir@arrowres.com

###