

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM S-8
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

ARROWHEAD RESEARCH CORPORATION

(Exact Name of Registrant as Specified in its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

46-0408024
(I.R.S. Employer
Identification No.)

225 South Lake Avenue, Suite 1050
Pasadena, CA 91101
(Address of Principal Executive Offices)

2004 EQUITY INCENTIVE PLAN, AS AMENDED
(Full Title of the Plan)

Christopher Anzalone
President and Chief Executive Officer
225 South Lake Avenue, Suite 1050
Pasadena, CA 91101
Telephone: (626) 304-3400
(Name, address, and telephone number, including area code, of agent for service)

Copy to:
Ryan A. Murr
ROPES & GRAY
Three Embarcadero Center
San Francisco, California 94111
Telephone: (415) 315-6300
Facsimile: (415) 315-6026

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer Accelerated filer
Non-accelerated filer (Do not check if a smaller reporting company) Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price per Share (2)	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, \$0.001 par value per share	1,000,000 (3)	\$4.26	\$4,260,000	\$581.06

- (1) Pursuant to Rule 416 of the Securities Act of 1933, as amended (the "Securities Act"), this registration statement also covers any additional shares of common stock which become issuable under the 2004 Equity Incentive Plan, as amended by reason of any stock split, stock dividend or similar transaction effected without the receipt of consideration which results in an increase in the number of the Registrant's outstanding shares of common stock.
- (2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457 of the Securities Act, and based on the average of the high and low sale prices of the Registrant's common stock, as reported on the Nasdaq Capital Market, on August 29, 2013.
- (3) Represents shares of Common Stock reserved for issuance pursuant to options available for grant under the Amended and Restated 2004 Incentive Plan (the "2004 Equity Incentive Plan").

Explanatory Note

This Registration Statement on Form S-8 is being filed by the registrant to register 1,000,000 shares of common stock, par value \$0.001 per share, issuable under the registrant's 2004 Equity Incentive Plan, as amended (the "2004 Plan"), which shares represent an increase to the shares issuable under the Plan from 2,000,000 to 3,000,000 shares approved by the stockholders at the Company's 2013 Annual Meeting.

Registration Statements on Form S-8, (File Nos. 333-124066, 333-136225, 333-170252 and 333-180692) were filed previously with the SEC by the Registrant to register an aggregate of 2,000,000 shares of its common stock issued or issuable under the 2004 Plan. The contents of the prior Registration Statements relating to the 2004 Plan (File Nos. 333-124066, 333-136225, 333-170252 and 333-180692) are incorporated herein by reference.

Part I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

Information required by Part I to be contained in the Section 10(a) prospectus is omitted from this Registration Statement in accordance with Rule 428 under the Securities Act of 1933, as amended, and the Note to Part I of Form S-8.

Part II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The SEC allows us to "incorporate by reference" the information we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this registration statement, and later information filed with the SEC will update and supersede this information. We hereby incorporate by reference into this registration statement the following documents previously filed with the SEC:

- The registrant's Annual Report on Form 10-K for the year ended September 30, 2012 filed with the SEC on December 28, 2012;
- The registrant's Quarterly Reports on Form 10-Q for the quarters ended December 31, 2012, March 31, 2013 and June 30, 2013 and filed with the SEC on February 13, 2013, May 9, 2013 and August 7, 2013, respectively;
- The registrant's Current Reports on Form 8-K filed with the SEC on December 12, 2012, January 30, 2013, March 25, 2013, and May 1, 2013; and
- The description of the Registrant's common stock contained in the registrant's registration statement on Form 8-A/A (Registration No. 000-21898), filed by the registrant with the SEC under Section 12(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), on November 1, 2010, including any amendments or reports filed for the purpose of updating such description.

All documents that the registrant subsequently files pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act of 1934, as amended, prior to the filing of a post-effective amendment to the registration statement which indicates that all of the shares of common stock offered have been sold or which deregisters all of such shares then remaining unsold, shall be deemed to be incorporated by reference in this registration statement and to be a part hereof from the date of the filing of such documents; except as to any portion of any future annual or quarterly report to stockholders or document or current report furnished under current Items 2.02 or 7.01 of Form 8-K that is not deemed filed under such provisions. For the purposes of this registration statement, any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

Under no circumstances will any information filed under current items 2.02 or 7.01 of Form 8-K be deemed incorporated herein by reference unless such Form 8-K expressly provides to the contrary.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

None.

Item 6. Indemnification of Directors and Officers.

The Company's Certificate of Incorporation, as amended, provides for the elimination of personal monetary liability of directors to the fullest extent permissible under Delaware law. Delaware law does not permit the elimination or limitation of director monetary liability for: (i) breaches of the director's duty of loyalty to the corporation or its stockholders; (ii) acts or omissions not in good faith or involving intentional misconduct or knowing violations of law; (iii) the payment of unlawful dividends or unlawful stock repurchases or redemptions or (iv) transactions in which the director received an improper personal benefit.

Section 145 of the Delaware General Corporation Law permits a Delaware corporation to indemnify, on certain terms and conditions, any person who was or is a party or is threatened to be made a party to any threatened pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he is or was a director, officer, employee or agent of the corporation or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him in connection with such action. The Certificate of Incorporation and Bylaws of the Company require the Company to indemnify the Company's directors and officers to the fullest extent permitted under Delaware law.

We have entered into indemnification agreements with each of our directors and our executive officers. These agreements provide that we will indemnify each of our directors and executive officers to the fullest extent permitted by Delaware law. We will advance expenses, including attorneys' fees, judgments, fines and settlement amounts, to each indemnified director and executive officer in connection with any proceeding in which indemnification is available and we will indemnify our directors and officers for any action or proceeding arising out of that person's services as an officer or director brought on behalf of the Company or in furtherance of our rights.

We also maintain general liability insurance which covers certain liabilities of our directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers, including liabilities under the Securities Act.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

<u>Exhibit No.</u>	<u>Description</u>
4.1	Form of Common Stock Certificate (1)
5.1	Opinion of Ropes & Gray LLP*
23.1	Consent of Rose, Snyder & Jacobs*
23.2	Consent of Ropes & Gray LLP (filed as a part of Exhibit 5.1)
24.1	Power of attorney (set forth on signature page)
99.1	2004 Equity Incentive Plan, as amended (2)

* Filed herewith.

- (1) Filed as an exhibit to the registrant's Amendment No. 2 to the Registration Statement on Form S-1, filed on September 11, 2009 and incorporated herein by reference.
- (2) Filed as Annex A of the registrant's Proxy Statement filed on February 4, 2013 and incorporated herein by reference.

Item 9. Undertakings.

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

Provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) of this section shall not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(h) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Pasadena, California, on September 3, 2013.

Arrowhead Research Corporation

By: /s/ Christopher Anzalone
Christopher Anzalone
President and Chief Executive Officer

POWER OF ATTORNEY

Each of the undersigned hereby constitutes and appoints each of Christopher Anzalone and Kenneth A. Myszkowski, his or her attorney-in-fact, with power of substitution, in his or her name and in the capacity indicated below, to sign any and all further amendments (including post-effective amendments) to this registration statement on Form S-8 and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that said attorney-in-fact, or his substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the date indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Christopher Anzalone</u> Christopher Anzalone	President, Chief Executive Officer and Director (Principal Executive Officer)	September 3, 2013
<u>/s/ Kenneth A. Myszkowski</u> Kenneth A. Myszkowski	Chief Financial Officer (Principal Financial and Accounting Officer)	September 3, 2013
<u>/s/ Mauro Ferrari</u> Mauro Ferrari	Director	September 3, 2013
<u>/s/ Edward W. Frykman</u> Edward W. Frykman	Director	September 3, 2013
<u>/s/ Douglass Given</u> Douglass Given	Director	September 3, 2013
<u>/s/ Charles P. McKenney</u> Charles P. McKenney	Director	September 3, 2013
<u>/s/ Michael S. Perry</u> Michael S. Perry	Director	September 3, 2013

EXHIBIT INDEX

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September 3, 2013

Arrowhead Research Corporation
225 South Lake Avenue, Suite 1050
Pasadena, CA 91101

Ladies and Gentlemen:

This opinion letter is furnished to you in connection with a registration statement on Form S-8 (the "Registration Statement"), filed by Arrowhead Research Corporation, a Delaware corporation (the "Company"), on the date hereof, with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "Securities Act"), for the registration of an aggregate of 1,000,000 shares of the Company's Common Stock (the "Shares"). The Shares are issuable under the Company's 2004 Equity Incentive Plan, as amended (the "Plan").

We are familiar with the actions taken by the Company in connection with the authorization of the Shares under the Plan. We have examined such certificates, documents and records and have made such investigation of fact and such examination of law as we have deemed appropriate in order to enable us to render the opinion set forth herein. In conducting such investigation, we have relied, without independent verification, upon certificates of officers of the Company, public officials and other appropriate persons.

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

For purposes of the opinion expressed below, we have assumed that a sufficient number of authorized but unissued shares of the Company's Common Stock will be available for issuance when the Shares are issued.

Based upon and subject to the foregoing, we are of the opinion that the Shares have been duly authorized and, when the Shares have been issued and sold in accordance with the terms of the Plan, the Shares will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion letter as an exhibit to the Registration Statement. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

/s/ Ropes & Gray LLP
Ropes & Gray LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference, in this Registration Statement on Form S-8 of our report dated December 27, 2012, with respect to the consolidated financial statements of Arrowhead Research Corporation and Subsidiaries appearing in the Company's Annual Report on Form 10-K for the year ended September 30, 2012, and to the reference of our Firm under the caption "Experts" in the Registration Statement.

/s/ Rose, Snyder & Jacobs LLP

Rose, Snyder & Jacobs LLP

Encino, California
September 3, 2013