

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.)

201 South Lake Street, Suite 703
Pasadena, California 91106
(626) 304-3400
(Address of Principal Executive Offices) (Zip Code)

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

Joseph T. Kingsley, President
ARROWHEAD RESEARCH CORPORATION
201 South Lake Street, Suite 703
Pasadena, California 91106
(626) 304-3400

With a copy to:
Rachael Simonoff Wexler, Esq.
ALSCHULER GROSSMAN STEIN & KAHAN LLP
1620 26th Street – North Tower, Fourth Floor
Santa Monica, CA 90404
(310) 907-1000

(Name and Address of Agent For Service)

(Telephone Number, Including Area Code, of Agent For Service)

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(3)
Common Stock, \$.001 par value	5,000,000	\$4.815	\$24,075,000	\$2,576.03

- (1) Plus such additional number of shares as may be required pursuant to the terms of the 2004 Equity Incentive Plan, as amended, in the event of a stock dividend, stock split, recapitalization or other similar change in the Common Stock.
- (2) The Proposed Maximum Offering Price per Share was estimated pursuant to Rule 457(c), calculated on the basis of the average of the high and low share price of the Registrant's Common Stock on the NASDAQ National Market on July 28, 2006.
- (3) This Registration Fee has been offset by the \$1,384.15 Registration Fee paid by the Company in connection with its Form S-8 filed on April 14, 2005 registering 3,000,000 shares under the Company's 2004 Equity Incentive Plan. As such, an additional Registration Fee of \$1,191.87 has been paid with this filing.

**EXPLANATORY NOTE
AND INCORPORATION BY REFERENCE
OF CONTENTS OF EARLIER
REGISTRATION STATEMENT ON FORM S-8, FILE NO. 333-25363**

The Arrowhead Research Corporation 2004 Equity Incentive Plan (the "Plan") was amended February 23, 2006 to increase the number of shares of common stock, par value \$0.001 per share, available for awards thereunder to 5,000,000. A Registration Statement on Form S-8, File No. 333-25363 was filed previously with the SEC by the Registrant to register 3,000,000 shares of its common stock issued or issuable under the Plan. Pursuant to General Instruction E to Form S-8, this Registration Statement is being filed to register the additional 2,000,000 shares of common stock issuable under the Plan. The contents of the prior Registration Statement relating to the 2004 Equity Incentive Plan, File No. 333-124066, are incorporated herein by reference.

Item 8. Exhibits.

<u>Exhibit No.</u>	<u>Description</u>
4.1	2004 Equity Incentive Plan, as amended February 23, 2006 and related equity incentive plan agreements (incorporated by reference from the Registrant's Current Report on Form 8-K, filed February 28, 2006).
5.1	Legal Opinion of Alschuler Grossman Stein & Kahan LLP
23.1	Consent of Alschuler Grossman Stein & Kahan LLP (included in Exhibit 5.1)
23.2	Consent of Rose, Snyder & Jacobs, LLP

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Company 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, State of California, on August 1, 2006.

ARROWHEAD RESEARCH CORPORATION

By: /s/ R. Bruce Stewart
R. Bruce Stewart
Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints R. Bruce Stewart and Joseph T. Kingsley as attorneys-in-fact, with power of substitution, in any and all capacities, to sign any and all amendments and post-effective amendments to this registration statement, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or his substitute or substitutes, may do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement on Form S-8 has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Office(s)</u>	<u>Date</u>
<u>/s/ Joseph T. Kingsley</u> Joseph T. Kingsley	President and Chief Financial Officer (principal financial officer)	August 1, 2006
<u>/s/ R. Bruce Stewart</u> R. Bruce Stewart	Chief Executive Officer and Director (principal executive officer)	August 1, 2006
<u>/s/ Edward W. Frykman</u> Edward W. Frykman	Director	August 1, 2006
<u>/s/ LeRoy T. Rahn</u> LeRoy T. Rahn	Director	August 1, 2006
<u>/s/ Charles P. McKenney</u> Charles P. McKenney	Director	August 1, 2006

Alschuler Grossman Stein & Kahan LLP
1620 26th Street, Fourth Floor, North Tower
Santa Monica, California 90404-4060

July 31, 2006

Arrowhead Research Corporation
201 South Lake Street, Suite 703
Pasadena, California 91106

Re: 2004 Equity Incentive Plan, as amended February 23, 2006 and Registration Statement on Form S-8

Ladies and Gentlemen:

We have acted as counsel to Arrowhead Research Corporation, a Delaware corporation (the "**Company**"), in connection with its Registration Statement on Form S-8 (the "**Registration Statement**") filed with the Securities and Exchange Commission with respect to the registration of an additional 2,000,000 shares ("**Shares**") of the Company's common stock, \$0.001 par value, issuable pursuant to the 2004 Equity Incentive Plan, as amended February 23, 2006.

As such counsel, we have examined such records, documents, certificates and other instruments as in our judgment are necessary or appropriate in order to enable us to render this opinion. Based on the foregoing and our examination of such questions of law as we deem necessary, we are of the opinion that the Shares, when sold and issued in accordance with (i) the 2004 Equity Incentive Plan, as amended February 23, 2006, and (ii) the Registration Statement, will be validly issued, fully paid and non-assessable.

We consent to the use of this opinion as an exhibit to the Registration Statement. Except as set forth in this paragraph, this opinion is furnished solely for your benefit and may not be relied upon by, nor copies delivered to, any other person or entity without our prior written consent.

Sincerely,

/s/ Alschuler Grossman Stein & Kahan LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement on Form S-8 of our report dated November 30, 2005, with respect to the consolidated financial statements of Arrowhead Research Corporation, which expressed an unqualified opinion and is included in its Form 10K-SB for its year ended September 30, 2005.

Rose, Snyder & Jacobs
A Corporation of Certified Public Accountants

Encino, California
July 28, 2006