

ARROWHEAD RESEARCH CORP

Form 424B5

January 28, 2013

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PROSPECTUS SUPPLEMENT
(To Prospectus dated August 17, 2011)

Filed pursuant to Rule 424(b)(5)

Registration No. 333-176159

Arrowhead Research Corporation

Up to 1,700,000 Units Consisting of

One Share of Common Stock and

One Warrant to Purchase .50 of a Share of Common Stock

Arrowhead Research Corporation is offering by this prospectus supplement 1,700,000 units, with each unit consisting of one share of our common stock and one warrant to purchase .50 of a share of our common stock (the Units) (and the shares of our common stock issuable from time to time upon exercise of the offered warrants). The Units are being offered at a price of \$2.12 per Unit. The Units will not be issued or certificated. The shares of common stock and the warrants are immediately separable and will be issued separately, but will be purchased together in this offering. We are not required to sell any specific dollar amount or number of units, but will use our best efforts to sell all of the units being offered.

Our common stock is listed on the NASDAQ Capital Market under the symbol ARWR. On January 24, 2013, the last reported sales price of our common stock on the NASDAQ Capital Market was \$2.14 per share. We do not intend to list the warrants on the NASDAQ Capital Market, any other national securities exchange or any other nationally recognized trading system.

Investing in our securities involves certain risks. Before purchasing our common stock and warrants, please review the information, including the information incorporated by reference, under the heading Risk Factors beginning on Page S-5 of this prospectus supplement and Page 2 of the accompanying prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense.

The aggregate market value of our outstanding common equity held by non-affiliates is \$33,380,820 based on 15,644,158 shares of common stock currently outstanding, of which 15,598,514 shares are held by non-affiliates, and a closing sale price on the NASDAQ Capital Market of \$2.14 on January 24, 2013. During the 12 calendar months prior to and including the date hereof, we have not sold any securities pursuant to General Instruction I.B.6 of Form S-3.

We have retained Dawson James Securities, Inc. to act as our exclusive placement agent in connection with the Units offered by this prospectus supplement. We have agreed to pay the placement agent an aggregate placement agent fee equal to (i) 6% of the gross proceeds related to Units placed by the placement agent and (ii) 1% of the gross proceeds related to all Units issued in this offering. The per Unit placement agent fees are set forth in the table below, which assumes that we sell all of the Units we are offering. The Company will issue to the placement agent a number of warrants to purchase Common Stock equal to 6% of the aggregate number Shares for which the placement agent arranged the purchase and sale of such Shares to the investors. The Company also may enter into agreements to sell a certain number of Units to other investors, and the placement agent will receive no fees for such sales (other than the 1% of gross proceeds as set forth above). The Company will deliver to the placement agent the shares of common stock and Warrants for which the placement agent has arranged the purchase and sale, and such securities will be distributed by the placement agent to the respective investors. The Company will deliver the shares of common stock and Warrants purchased by other investors directly to such investors. The placement agent is not purchasing or selling any of the Units we are offering, and it is not required to arrange the purchase or sale of any specific number of Units or dollar amount, but they have agreed to use their best efforts to arrange for the sale of the Units offered by this prospectus supplement.

	Per Unit	Total
Offering price	\$2.12	\$3,604,000
Placement agent fees ⁽¹⁾	\$0.14	\$ 240,000
Proceeds, before expenses, to us	\$1.98	\$3,364,000

(1) In addition, we have agreed to reimburse the placement agent for certain of its expenses as described under "Plan of Distribution" on page S-9 of this prospectus supplement. The total fee is based on the number of units placed by the placement agent and a lesser management fee payable in respect to Units placed directly by the Company.

The above summary of offering proceeds to us does not give effect to any exercise of the Warrants being issued in this offering. Delivery of the shares of common stock and Warrants will be made on or about January 30, 2013. We estimate the expenses of this offering, excluding placement agent fees, will be approximately \$50,000.

Because there is no minimum offering amount required as a condition to closing this offering, the actual offering amount, the placement agent fees and net proceeds to us, if any, in this offering may be substantially less than the maximum offering amounts set forth above.

DAWSON JAMES SECURITIES, INC.

The date of this prospectus supplement is January 25, 2013.

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ABOUT THIS PROSPECTUS SUPPLEMENT

This document consists of two parts. The first part is this prospectus supplement, which describes the specific terms of this offering. The second part, the accompanying prospectus, gives more general information, some of which may not apply to this offering. Generally, when we refer only to the prospectus, we are referring to both parts combined. This prospectus supplement may add to, update or change information in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement or the accompanying prospectus.

If information in this prospectus supplement is inconsistent with the information contained in the accompanying prospectus or in any document incorporated by reference that was filed with the Securities and Exchange Commission before the date of this prospectus supplement, you should rely on this prospectus supplement. If any statement in one of these documents is inconsistent with a statement in another document having a later date—for example, a document incorporated by reference in the accompanying prospectus—the statement in the document having the later date modifies or supersedes the earlier statement. This prospectus supplement, the accompanying prospectus and the documents incorporated into each by reference include important information about us, the shares and warrants being offered and other information you should know before investing in shares of our common stock and warrants to purchase our common stock. Before you invest, you should carefully read this prospectus supplement, the accompanying prospectus, all information incorporated by reference herein and therein, as well as the additional information described under **Where You Can Find Additional Information** on page 5 of the accompanying prospectus.

You should rely only on this prospectus supplement, the accompanying prospectus and the information incorporated or deemed to be incorporated by reference in this prospectus supplement and the accompanying prospectus. We have not, and the placement agent has not, authorized anyone to provide you with information that is in addition to, or different from, that contained or incorporated by reference in this prospectus supplement and the accompanying prospectus. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and the placement agent is not, offering to sell shares of our common stock or warrants to purchase our common stock in any jurisdiction where the offer or sale is not permitted. You should not assume that the information contained or incorporated by reference in this prospectus supplement or the accompanying prospectus is accurate as of any date other than as of the date of this prospectus supplement or the accompanying prospectus, as the case may be, or in the case of the documents incorporated by reference, the date of such documents regardless of the time of delivery of this prospectus supplement and the accompanying prospectus or any sale of shares of our common stock or warrants to purchase our common stock. Our business, financial condition, liquidity, results of operations, and prospects may have changed since those dates.

*Unless otherwise noted, (1) the term **Arrowhead Research** refers to Arrowhead Research Corporation, a Delaware corporation, formerly known as InterActive Group, Inc., (2) the terms **Arrowhead**, **the Company**, **we**, **us**, and **our**, refer to the ongoing business operations of Arrowhead Research and its subsidiaries, whether conducted through Arrowhead Research or a subsidiary of the company, (3) the term **Common Stock** refers to shares of Arrowhead Research's Common Stock, (4) the term **Warrants** refers to warrants to purchase shares of Common Stock and (5) the term **stockholder(s)** refers to the holders of Common Stock or securities exercisable for Common Stock.*

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement contains forward-looking statements within the meaning of the federal securities laws. You can identify forward-looking statements by the use of the words **believe**, **expect**, **anticipate**, **intend**, **estimate**, **project**, **will**, **should**, **may**, **plan** and other expressions which predict or indicate future events and trends and which do not relate to historical matters. You should not rely on forward-looking statements, because they involve known and unknown risks, uncertainties and other factors, some of which are beyond the control of the Company. These risks, uncertainties and other factors may cause the actual results, performance or achievements of the Company to be materially different from the anticipated future results, performance or achievements expressed or implied by the forward-looking statements.

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Factors that might cause these differences include the following:

the ability to obtain substantial additional funding;

the integration of multiple technologies and programs;

the ability to successfully complete development and commercialization of products and the Company's expectations regarding market growth;

the cost, timing, scope and results of ongoing safety and efficacy trials of preclinical and clinical testing;

the ability to successfully complete product research and further development;

the volume and profitability of product sales of future products;

changes in existing and potential relationships with corporate collaborators and partners;

the availability, cost, delivery and quality of materials supplied by contract manufacturers;

the timing, cost and uncertainty of obtaining regulatory approvals of our products;

the ability to develop and commercialize products before competitors that are superior to the alternatives developed by competitors;

the ability to retain certain members of management;

the Company's expectations regarding research and development expenses and general and administrative expenses;

the Company's expectations regarding cash balances, capital requirements, anticipated revenue and expenses, including infrastructure expenses;

our belief regarding the validity of our patents and potential litigation; and

other factors detailed from time to time in filings with the Securities and Exchange Commission.

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In addition, the factors described under the section captioned "Risk Factors" in this prospectus supplement, as may be updated from time to time by our future filings under the Securities Exchange Act of 1934, and elsewhere in the documents incorporated by reference in this prospectus, may result in these differences. You should carefully review all of these factors. These forward-looking statements were based on information, plans and estimates at the date of this prospectus supplement, and we assume no obligation to update any forward-looking statements to reflect changes in underlying assumptions or factors, new information, future events or other changes.

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PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights selected information appearing elsewhere or incorporated by reference in this prospectus supplement and accompanying prospectus and may not contain all of the information that is important to you. This prospectus supplement and the accompanying prospectus include or incorporate by reference information about the Common Stock and Warrants we are offering as well as information regarding our business and detailed financial data. You should read this prospectus supplement and the accompanying prospectus in their entirety, including the information incorporated by reference.

About the Company

Arrowhead Research Corporation is a clinical stage targeted therapeutics company with development programs in oncology, obesity, and chronic hepatitis B virus infection. Our platform technologies have the potential to enable revolutionary new classes of drugs, such as RNAi interference and peptide drug conjugates, for a broad range of unmet medical needs. Our pipeline of targeted therapeutics are designed to have increased effectiveness through guided delivery and decreased toxicity through reduction of side effects associated with unwanted exposure in healthy cells and tissues. These platforms have yielded several targeted drug candidates under both internal and partnered development.

Our common stock is listed on the Nasdaq Capital Market under the symbol ARWR .

Our executive offices are located at 225 South Lake Avenue, Suite 1050, Pasadena CA 91101 and our telephone number is (626) 304-3400. Additional information regarding our company, including our audited financial statements and descriptions of our business, is contained in the documents incorporated by reference into this prospectus. See [Where You Can Find More Information](#) and [Incorporation of Documents by Reference](#) on page 5 of the accompanying prospectus.

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THE OFFERING

Units offered by us	Up to 1,700,000 Units. Each Unit consists of one share of Common Stock and one Warrant to purchase .50 of a share of Common Stock. The shares of Common Stock and Warrants offered hereby are immediately separable and will be issued separately.
Warrants offered by us	Each warrant will have an exercise price of \$2.14 per share, will be immediately exercisable on the date of issuance and will expire five years from the date of issuance. For additional information, see Description of the Securities on page S-11 of this prospectus supplement. This prospectus supplement also relates to the offering of the shares of Common Stock issuable upon exercise of the Warrants.
Common stock to be outstanding immediately after this offering	17,344,158 Shares
Use of proceeds	We intend to use the net proceeds of this offering for general corporate purposes, including working capital, capital expenditures, research and development expenditures and clinical trial expenditures. A portion of the net proceeds may also be used for the acquisition of businesses, products and technologies that are complementary to ours, or for other strategic purposes.
Risk Factors	See Risk Factors beginning on page S-5 of this prospectus supplement and page 2 of the accompanying prospectus for a discussion of factors that you should read and consider before investing in our securities.
NASDAQ Capital Market symbol	Our Common Stock is listed on the NASDAQ Capital Market under the symbol ARWR .
The number of shares of common stock shown above to be outstanding after this offering is based on 15,644,158 shares outstanding as of December 31, 2012, and excludes the shares of common stock issuable upon exercise of the Warrants being offered by us in this offering and excludes the following as of December 31, 2012:	

- Ø 1,914,794 shares of our common stock subject to options outstanding having a weighted average exercise price of \$6.00 per share;
- Ø 455,166 shares of our common stock that have been reserved for issuance in connection with future grants under our 2004 equity compensation plan;
- Ø 5,138,195 shares of our common stock that have been reserved for issuance upon exercise of outstanding warrants having a weighted average exercise price of \$5.99 per share, of which 322,150 warrants have an exercise price of \$1.38, and 912,543 warrants have an exercise price of \$2.20, which exercise prices may be adjusted downward as a result of this offering and according to the terms of the warrant depending on the unit price of the offering, the number of shares subject to purchase pursuant to warrants issued in the offering and the strike price of such warrants, however the number of shares issuable pursuant to such warrants will not change as a result of this offering;
- Ø 131,579 shares owed to Galloway Limited as compensation pursuant to a services agreement dated December 31, 2011; and

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- Ø 27,000 shares of our 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.

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RISK FACTORS

We are a development-stage company and we have accrued net losses annually since inception. Before making an investment decision, you should carefully consider the risks described below and in the sections entitled "Risk Factors" in our most recent Annual Report on Form 10-K or Quarterly Report on Form 10-Q, as filed with the Securities and Exchange Commission, which are incorporated herein by reference in their entirety, as well as any amendment or updates to our risk factors reflected in subsequent filings with the Securities and Exchange Commission, including any applicable prospectus supplement. Our business, financial condition or results of operations could be materially adversely affected by any of these risks. The trading price of our common stock could decline due to any of these risks, and you may lose all or part of your investment. This prospectus and the incorporated documents also contain forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks mentioned elsewhere in this prospectus supplement.

Risks Related to Our Financial Condition

Our ability to continue as a going concern could adversely affect our ability to secure financing or to continue our operations.

Our cumulative and continuing losses, negative cash flow and accumulated deficit as of and for the year ended September 30, 2012 raise substantial doubt about our ability to continue as a going concern. The audit report included in our Annual Report on Form 10-K included a going concern explanatory paragraph, which may make it more difficult for us to secure financing on terms acceptable to us, if at all, and may adversely affect the terms of any financing that we may obtain.

If we are unable to raise funds when required or on acceptable terms, we may have to delay, scale back, or discontinue the development and/or commercialization of one or more product candidates, or relinquish or otherwise dispose of rights to technologies, product candidates, or products that we would otherwise seek to develop or commercialize ourselves and/or cease operations.

We have a history of net losses, and we expect to continue to incur net losses and may not achieve or maintain profitability.

We have incurred net losses since our inception, including net losses of approximately \$22.1 million for the year ended September 30, 2012 and a cumulative net loss since inception of approximately \$153.7 million. We expect that our operating losses will continue as we fund our drug development and discovery efforts. To achieve profitability, we must, either directly or through licensing and/or partnering relationships, successfully develop and obtain regulatory approval for a drug candidate and effectively manufacture, market and sell any drugs we successfully develop. Even if we successfully commercialize drug candidates that receive regulatory approval, we may not be able to realize revenues at a level that would allow us to achieve or sustain profitability. Accordingly, we may never generate significant revenue and, even if we do generate significant revenue, we may never achieve profitability.

Our \$2.5 million note receivable may not be fully realized.

The Company has a note receivable from Wisepower in the amount of \$2.5 million and is in negotiations to sell the note to a third party. It is anticipated that the note would be sold for value received in two tranches. The first tranche would include 1.57 million shares of Wisepower stock, which would be sold over a period of time not to exceed three weeks following the sale of the note. The second tranche would be owed on March 29, 2013, and would include shares of Wisepower stock valued at \$2.5 million less the value of the proceeds of the stock received in the first tranche. The second tranche of shares would be freely tradable and sold at the discretion of the Company.

Risks Related to This Offering

Management will have broad discretion as to the use of the net proceeds from this offering, and we may not use the proceeds effectively.

Our management will have broad discretion as to the application of the net proceeds and could use them for purposes other than those contemplated at the time of this offering. Our stockholders may not agree with the manner in which our management chooses to allocate and spend the net proceeds. Moreover, our management may use the net proceeds for corporate purposes that may not increase our market value.

Investors in this offering will experience immediate and substantial dilution.

The public offering price of the securities offered pursuant to this prospectus supplement may be substantially higher than the net tangible book value per share of our common stock. Therefore, if you purchase Units in this offering, you will incur immediate and substantial dilution in the

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pro forma net tangible book value per share of common stock from the price per share that you pay for the Units. If the holders of outstanding options or other

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securities convertible into our common stock exercise those options or other such securities at prices below the public offering price, you will incur further dilution. See **Dilution** on page S-8 of this prospectus supplement for a more detailed discussion of the dilution you will incur in this offering.

The warrants are a new issue of securities with no established trading market.

The warrants are a new issue of securities with no established trading market. The warrants will not be listed on any securities exchange or quotation system. A trading market for the warrants may not develop and even if a market develops it may not provide meaningful liquidity. The absence of a trading market or liquidity for the warrants may adversely affect their value.

Future sales of substantial amounts of our common stock could adversely affect the market price of our common stock.

Future sales of substantial amounts of our common stock, or securities convertible or exchangeable into shares of our common stock, into the public market, including shares of our common stock issued upon exercise of options and warrants, or perceptions that those sales could occur, could adversely affect the prevailing market price of our common stock and our ability to raise capital in the future. We also may offer and sell up to an aggregate of \$15 million of shares of our common stock pursuant to a purchase agreement entered into with Lincoln Park Capital Fund, LLC on October 20, 2011. As of January 23, 2013, we had \$14 million remaining available for sale under the purchase agreement with Lincoln Park Capital.

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USE OF PROCEEDS

We estimate that the net proceeds from this offering, based on an offering price of \$2.12 per Unit, after deducting placement agent fees and offering expenses of approximately \$290,000 and excluding the proceeds, if any, from any exercise of the warrants by the holder thereof, will be approximately \$3.3 million, assuming that we sell the maximum number of Units we are offering pursuant to this prospectus supplement. Because there is no minimum offering amount required as a condition to the closing of this offering, the actual number of units sold, placement agent fees and proceeds to us are not presently determinable and may be substantially less than the maximum amount set forth above.

We intend to use the net proceeds of this offering (including any resulting from the exercise of warrants, if any) for general corporate purposes, including working capital, capital expenditures, research and development expenditures and clinical trial expenditures. A portion of the net proceeds may also be used for the acquisition of businesses, products and technologies that are complementary to ours, or for other strategic purposes. Although we have no specific agreements, commitments or understandings with respect to any acquisition, we evaluate acquisition opportunities and engage in related discussions with other companies from time to time.

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If you invest in our common stock, your interest will be diluted immediately to the extent of the difference between the public offering price per Unit and the adjusted net tangible book value per share of our common stock after this offering.

The net tangible book value of our common stock as of September 30, 2012, was approximately \$4.0 million, or approximately \$0.30 per share. Net tangible book value per share represents the amount of our total tangible assets, excluding goodwill and intangible assets, less total liabilities, divided by the total number of shares of our common stock outstanding.

Dilution per share to new investors represents the difference between the amount per share paid by purchasers for each Unit in this offering and the net tangible book value per share of our common stock immediately following the completion of this offering.

After giving effect to the sale of up to 1,700,000 Units offered by this prospectus supplement at an offering price of \$2.12 per Unit in connection with this offering and after deducting the estimated placement agent fees and offering expenses and excluding the proceeds, if any, from the exercise of the warrants issued pursuant to this offering, our pro forma net tangible book value as of September 30, 2012 would have been approximately \$7.3 million or approximately \$0.48 per share. This represents an immediate increase in net tangible book value of approximately \$0.18 per share to our existing stockholders and an immediate dilution in pro forma net tangible book value of approximately \$1.64 per share to purchasers of Units in this offering, as illustrated by the following table:

Offering price per Unit	\$ 2.12
Net tangible book value per share as of September 30, 2012	\$0.30
Increase per share attributable to the offering	\$0.18
As adjusted net tangible book value per share after this offering	\$ 0.48
Dilution per share to new investors	\$ 1.64

The discussion of dilution, and the table quantifying it, assumes no exercise of any outstanding options or warrants or the issuance of other potentially dilutive securities. The exercise of potentially dilutive securities having an exercise price less than the offering price would increase the dilutive effect to new investors.

The number of shares of common stock shown above to be outstanding after this offering is based on 13,579,185 shares outstanding as of September 30, 2012, and excludes the shares of common stock issuable upon exercise of the Warrants being offered by us in this offering and excludes the following as of September 30, 2012:

- Ø 1,910,794 shares of our common stock subject to options outstanding having a weighted average exercise price of \$6.01 per share;
- Ø 459,466 shares of our common stock that have been reserved for issuance in connection with future grants under our 2004 equity compensation plan;
- Ø 4,116,147 shares of our common stock that have been reserved for issuance upon exercise of outstanding warrants having a weighted average exercise price of \$6.91 per share, of which 322,150 warrants have an exercise price of \$1.38, which exercise price may be adjusted downward as a result of this offering and according to the terms of the warrant depending on the unit price of the offering, the number of shares subject to purchase pursuant to warrants issued in the offering and the strike price of such warrants, however the number of shares issuable pursuant to such warrants will not change as a result of this offering;

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- Ø 131,579 shares owed to Galloway Limited as compensation pursuant to a services agreement dated September 30, 2011; and

- Ø 27,000 shares of our 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.

- Ø 239,894 shares of our common stock issued to an affiliate of Hoffmann-La Roche Inc. on October 21, 2012 as additional consideration pursuant to the Stock and Asset Purchase Agreement, entered into between the Company and Hoffmann-La Roche Inc. and F Hoffmann-La Roche Ltd on October 21, 2011.

- Ø 1,825,079 shares issued and 1,022,048 shares issuable upon the exercise of warrants issued pursuant to a public offering in December 2012. The exercise price of 912,543 warrants is subject to downward adjustment pursuant to the terms of the warrants and the terms of the offering, however the number of shares issuable pursuant to such warrants will not change as a result of this offering.

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Pursuant to a placement agent agreement between us and Dawson James Securities, Inc., we have engaged Dawson James Securities, Inc. as our exclusive placement agent to solicit offers to purchase the Units offered by this prospectus supplement. The placement agent is not purchasing or selling any of the Units we are offering, and it is not required to arrange the purchase or sale of any specific number of Units or dollar amount, but the placement agent has agreed to use its best efforts to arrange for the sale of the Units offered by this prospectus supplement.

Except for sales to certain purchasers excluded under the placement agent agreement due to our prior relationship with such investors, the placement agent proposes to arrange for the sale of the Units we are offering pursuant to this prospectus supplement to a number of investors through its brokerage relationships. All of the Units will be sold at the same price. The price will be established following negotiations with prospective investors and with reference to the prevailing market price of our common stock, recent trends in such price and other factors. It is possible that not all of the Units we are offering pursuant to this prospectus supplement will be sold, in which case our net proceeds would be reduced.

In connection with this offering, the placement agent may distribute this prospectus supplement and the accompanying prospectus electronically.

5,138,195 shares of our common stock that have been reserved for issuance upon exercise of outstanding warrants having a weighted average exercise price of \$5.99 per share, 322,150 of which have an exercise price of \$1.38 and 912,543 warrants have an exercise price of \$2.20, which exercise prices may be adjusted downward as a result of this offering and according to the terms of the warrant depending on the unit price of the offering, the number of shares subject to purchase pursuant to warrants issued in the offering and the strike price of such warrants; however, the number of shares issuable pursuant to such warrants will not change as a result of this offering.

We have retained Dawson James Securities, Inc. to act as placement agent in connection with the Units offered by this prospectus supplement. We have agreed to pay the placement agent an aggregate placement agent fee equal to (i) 6% of the gross proceeds related to Units placed by the placement agent and (ii) 1% of the gross proceeds related to all Units issued in this offering. The per Unit placement agent fees are set forth in the table below, which assumes that we sell all of the Units we are offering. The Company will issue to the placement agent a number of warrants to purchase Common Stock equal to 6% of the aggregate number Shares for which the placement agent arranged the purchase and sale of such Shares to the investors. Such warrants will be identical to the Warrants, except that (i) the exercise price will be \$2.65 (125% of the public offering price per Unit), (ii) the expiration date will be August 17, 2016 (five years from the effective date of our registration statement), (iii) the warrants issued to the placement agent and any shares issued upon any exercise of such warrants issued to the placement agent will not be transferable by the placement agent for a period of 180 days from the closing date of the offering, except as expressly permitted by FINRA Rule 5110(g)(2) and (iv) such warrants will not have anti-dilution protection. The Company also may enter into agreements to sell a certain number of Units to other investors, and the placement agent will receive no fees or warrants for such sales (other than the 1% of gross proceeds as set forth above). The placement agent agreement provides that, at the request of the placement agent, the compensation of the placement agent may be reduced to comply with FINRA rules. The Company will deliver to the placement agent the shares of common stock and Warrants for which the placement agent has arranged the purchase and sale, and such securities will be distributed by the placement agent to the respective investors. The Company will deliver the shares of common stock and Warrants purchased by other investors directly to such investors. The placement agent is not purchasing or selling any of the Units we are offering, and it is not required to arrange the purchase or sale of any specific number of Units or dollar amount, but they have agreed to use their best efforts to arrange for the sale of the Units offered by this prospectus supplement. Based on the number of Units placed by the Placement Agent and the number of Units placed by the Company, we expect to pay the following per Unit and aggregate placement fees:

Per Unit	\$ 0.14
Total	\$ 240,000

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We will also reimburse the placement agent for its accountable expenses in an amount equal to 0.8% of the gross proceeds from this offering, subject to an overall cap of \$35,000. We estimate the total expenses of this offering that will be payable by us, excluding the placement agent fees, will be approximately \$50,000. After deducting certain fees due to the placement agent and our estimated offering expenses, we expect the net proceeds from this offering will be approximately \$3.3 million.

We have agreed to indemnify the placement agent against certain liabilities, including liabilities relating to or arising out of (i) any actions taken or omitted to be taken by the Company, (ii) any actions taken or omitted to be taken by the placement agent (or its affiliates) in connection with the Company's engagement with the placement agent and (iii) the placement agent's activities on the Company's behalf under the placement agent's engagement. We have also agreed to reimburse the placement agent for certain expenses (including the reasonable fees and expenses of counsel) incurred by the placement agent in connection with defending any claim, action, suit or proceeding in respect of such liabilities.

The placement agent agreement will be included as an exhibit to our Current Report on Form 8-K that we will file with the SEC in connection with this offering.

The placement agent and its affiliates may in the future provide certain commercial banking, financial advisory or investment banking services for us for which it has received and may in the future receive fees, but there are no current arrangements between us. The placement agent and its affiliates may also from time to time in the future engage in transactions with us and perform services for us in the ordinary course of its business, but there are no current arrangements between us.

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DESCRIPTION OF THE SECURITIES

Common Stock

The material terms and provisions of our common stock are described in our registration statement on Form 8-A/A (Registration No. 000-21898), filed on November 1, 2010, including any amendments or reports filed for the purpose of updating such description.

Warrants

The following is a brief summary of certain terms and conditions of the warrants and is subject in all respects to the provisions contained in the warrants.

Form. The warrants will be issued as individual warrant agreements to the investors. Except for certain excluded investors as set forth in the placement agent agreement, the warrants will be delivered to the placement agent on the date of closing for distribution to investors. You should review a copy of the form of warrant, which will be filed with the Securities and Exchange Commission by us as an exhibit to a Current Report on Form 8-K in connection with this offering within the time period required by such form, for a complete description of the terms and conditions applicable to the warrants.

Exercisability. The warrants are exercisable at any time after their issuance, expected to be January 30, 2013, and at any time up to the date that is five years after their original issuance. The warrants will be exercisable, at the option of each holder, in whole or in part by delivering to us a duly executed exercise notice and, at any time a registration statement registering the issuance of the shares of common stock underlying the warrants under the Securities Act of 1933, as amended, or the Securities Act, is effective and available for the issuance of such shares, or an exemption from registration under the Securities Act is available for the issuance of such shares, by payment in full in immediately available funds for the number of shares of common stock purchased upon such exercise. If a registration statement registering the issuance of the shares of common stock underlying the warrants under the Securities Act is not then effective or available, the holder may only exercise the warrant through a cashless exercise, in which case the holder would receive upon such exercise the net number of shares of common stock determined according to the formula set forth in the warrant. No fractional shares of common stock will be issued in connection with the exercise of a warrant. In lieu of fractional shares, we will pay the holder an amount in cash equal to the fractional amount multiplied by the exercise price.

Exercise Limitation. A holder will not have the right to exercise any portion of the warrant if the holder (together with its affiliates) would beneficially own in excess of 4.99% of the number of shares of our stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the warrants. However, any holder may increase or decrease such percentage to any other percentage not in excess of 9.99% upon at least 61 days prior notice from the holder to us.

Exercise Price. The exercise price per share of common stock purchasable upon exercise of the warrants is \$2.14 per share of common stock. The exercise price is subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our common stock and also upon any distributions of assets, including cash, stock or other property to our stockholders.

Anti-Dilution Protection. The Warrants contain full-ratchet anti-dilution protection upon the issuance of any common stock, securities convertible into common stock or certain other issuances at a price below the then-existing exercise price of the Warrants, with certain exceptions. If the Company issues securities in units consisting of common stock and any option, warrant or convertible security that represents the right to acquire common stock, then the exercise price of the Warrants will adjust to the public offering price of such units. However, the number of shares issuable pursuant to the warrants will not change as a result of such adjustments. The terms of the Warrants, including these anti-dilution protections, may make it difficult for us to raise additional capital at prevailing market terms in the future.

Transferability. Subject to applicable laws, the warrants may be offered for sale, sold, transferred or assigned without our consent. There is currently no trading market for the warrants and a trading market may not develop.

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Exchange Listing. We do not plan on applying to list the warrants on the NASDAQ Capital Market, any other national securities exchange or any other nationally recognized trading system.

Fundamental Transactions. In the event of a fundamental transaction, as described in the warrants and generally including any reorganization, recapitalization or reclassification of our common stock, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, the holders of the warrants will be entitled to receive, upon any subsequent exercise of the warrants and for each share of our common stock that would have been issuable upon such exercise immediately prior to the occurrence of a fundamental transaction, the number of shares of common stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration receivable as a result of such fundamental transaction by a holder of the number of shares of common stock for which the warrants are exercisable immediately prior to such fundamental transaction.

Rights as a Stockholder. Except as otherwise provided in the warrants or by virtue of such holder's ownership of shares of our common stock, the holder of a warrant does not have the rights or privileges of a holder of our common stock, including any voting rights, until the holder exercises the warrant.

Listing; Transfer Agent

Our shares of common stock are traded on the NASDAQ Capital Market under the symbol ARWR. The transfer agent for our shares of common stock to be issued in this offering is Computershare Trust Company, located at 350 Indiana Street, Suite 800, Golden, CO, 80401, telephone number 800-962-4284.

DIVIDEND POLICY

We have never declared or paid dividends on our common stock and do not anticipate paying any dividends on our common stock in the foreseeable future.

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LEGAL MATTERS

Ropes & Gray LLP, San Francisco, California, will pass upon the validity of the common stock and warrants offered by this prospectus supplement and the accompanying prospectus. Ellenoff Grossman & Schole LLP, New York, New York is acting as counsel for the placement agent in connection with certain legal matters related to this offering.

EXPERTS

The financial statements of the Company incorporated in this prospectus by reference from the Company's Annual Report on Form 10-K for the year ended September 30, 2012, have been audited by Rose, Snyder & Jacobs, LLP, as stated in their report incorporated by reference, and given upon the authority of said firm as experts in auditing and accounting.

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Prospectus

\$50,000,000

Arrowhead Research Corporation

Common Stock

Warrants

This prospectus will allow us to issue, from time to time in one or more offerings,

shares of our common stock, and

warrants to purchase shares of our common stock.

The common stock and warrants may be offered and sold separately or together in one or more series of issuances, for an aggregate dollar amount not to exceed \$50,000,000. We will provide specific terms of the securities in supplements to this prospectus.

In this prospectus, we refer to the common stock and the warrants collectively as the securities.

This prospectus provides a general description of the securities we may offer. We may sell the securities to or through underwriters, directly to investors or through agents, or through a combination of these methods. Each time we sell securities we will provide a prospectus supplement that will contain specific information about the terms of that sale, including the names of any underwriters or agents, and may add, update or change the information contained in this prospectus. You should read this prospectus and any prospectus supplement, and the information incorporated by reference herein and therein, carefully before you invest in our securities. This prospectus may not be used to consummate a sale of securities unless accompanied by a prospectus supplement for those securities.

Our common stock is listed on the Nasdaq Capital Market under the symbol ARWR. On August 5, 2011, the last reported sale price of our common stock on the Nasdaq Capital Market was \$0.51.

*Investing in our securities involves a high degree of risk. You should carefully consider the **Risk Factors** beginning on page 2 before you invest in our securities.*

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is August 17, 2011

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or the SEC, utilizing a shelf registration process. Under this shelf registration process, we may offer from time to time any combination of the securities described in this prospectus for a total dollar amount not to exceed \$50,000,000. This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and any prospectus supplement together with additional information described under the heading **Where You Can Find More Information**.

We have not authorized any dealer, salesperson or other person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus and any accompanying prospectus supplement. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus or any accompanying prospectus supplement as if we had authorized it. This prospectus and any accompanying prospectus supplement do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they relate, nor does this prospectus and any accompanying prospectus supplement constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. You should not assume that the information contained in this prospectus and any accompanying prospectus supplement is correct on any date after their respective dates, even though this prospectus or any prospectus supplement is delivered or securities are sold on a later date.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements within the meaning of the federal securities laws. You can identify forward-looking statements by the use of the words believe, expect, anticipate, intend, estimate, project, will, should, may, plan, intend, as expressions which predict or indicate future events and trends and which do not relate to historical matters. You should not rely on forward-looking statements, because they involve known and unknown risks, uncertainties and other factors, some of which are beyond the control of the Company. These risks, uncertainties and other factors may cause the actual results, performance or achievements of the Company to be materially different from the anticipated future results, performance or achievements expressed or implied by the forward-looking statements.

Factors that might cause these differences include the following:

the integration of multiple technologies and programs;

the ability to successfully complete development and commercialization of products and the Company's expectations regarding market growth;

the cost, timing, scope and results of ongoing safety and efficacy trials of preclinical and clinical testing;

the ability to successfully complete product research and further development;

the volume and profitability of product sales of future products;

changes in existing and potential relationships with corporate collaborators and partners;

the availability, cost, delivery and quality of materials supplied by contract manufacturers;

the timing, cost and uncertainty of obtaining regulatory approvals of our products;

the ability to obtain substantial additional funding;

the ability to develop and commercialize products before competitors that are superior to the alternatives developed by competitors;

the ability to retain certain members of management;

the Company's expectations regarding research and development expenses and general and administrative expenses;

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the Company's expectations regarding cash balances, capital requirements, anticipated revenue and expenses, including infrastructure expenses;

our belief regarding the validity of our patents and potential litigation; and

other factors detailed from time to time in filings with the Securities and Exchange Commission.