

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**SCHEDULE 14A
(Rule 14a-101)**

INFORMATION REQUIRED IN PROXY STATEMENT

SCHEDULE 14A INFORMATION

**Proxy Statement Pursuant to Section 14(a) of the
Securities Exchange Act of 1934**

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Confidential, For Use of the Commission Only (as permitted by 14a-6(e)(2))**
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material Pursuant To §240.14a-12

ARROWHEAD RESEARCH CORPORATION

(Name of Registrant as Specified in Its Charter)

(Name of Person(s) Filing Proxy Statement if other than the Registrant)

Payment of filing fee (Check the appropriate box):

- No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

(1) Title of each class of securities to which transaction applies:

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(3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

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- Fee paid previously with preliminary materials.
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(1) Amount Previously Paid:

(2) Form, Schedule or Registration Statement No.:

(3) Filing party:

(4) Date filed:

ARROWHEAD RESEARCH CORPORATION
225 SOUTH LAKE AVENUE, SUITE 300
PASADENA, CALIFORNIA 91101

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS
TO BE HELD ON MONDAY, AUGUST 8, 2011

TO THE STOCKHOLDERS OF ARROWHEAD RESEARCH CORPORATION:

NOTICE IS HEREBY GIVEN that the Annual Meeting of Stockholders of Arrowhead Research Corporation, a Delaware corporation (the “Company”), will be held on August 8, 2011, at 10:00 a.m., local time, at the Sheraton Pasadena, 303 E. Cordova Street, Pasadena, California 91101, for the following purposes:

1. To elect six (6) directors to serve as members of the Company’s Board of Directors until the next Annual Meeting or until their successors are elected;
2. To approve an amendment to the Company’s certificate of incorporation, as further described in Proposal Number 2, and to grant the Board of Directors the authority to effect a reverse split of our Common Stock at a specific whole number ratio within a range from 1-for-2 to 1-for-15;
3. To ratify the selection of Rose, Snyder & Jacobs as independent auditors of the Company for the fiscal year ending September 30, 2011;
4. To adjourn the Annual Meeting, if necessary, to solicit additional proxies, if there are not sufficient votes in favor of the foregoing proposals.

The foregoing items of business are more fully described in the Proxy Statement accompanying this Notice. Proposal 1 relates solely to the election of the six (6) directors nominated by the Board of Directors and does not include any other matters relating to the election of directors, including, without limitation, the election of directors nominated by any stockholder of the Company.

Only stockholders of record at the close of business on June 14, 2011, are entitled to notice of and to vote at the Annual Meeting.

All stockholders of record are cordially invited to attend the Annual Meeting in person. However, to ensure your representation at the meeting, you are urged to vote via the Internet or telephone as instructed in the Notice Regarding the Internet Availability of Proxy Materials, or to mark, sign, date and return the proxy card as promptly as possible in the postage-prepaid envelope enclosed for that purpose. Any stockholder of record attending the Annual Meeting may vote in person even if such stockholder has previously returned a proxy.

/s/ Jane Davidson

Jane Davidson
Secretary

Pasadena, California
June 27, 2011

Important Notice Regarding the Availability of Proxy Materials for the Stockholder Meeting To Be Held on Monday, August 8, 2011

You may access the following proxy materials at www.edocumentview.com/ARWR

Notice of the 2011 Annual Meeting of Stockholders;
Company’s 2011 Proxy Statement;
Company’s Annual Report on Form 10-K for the year ended September 30, 2010; and
Form of Proxy Card

Your vote is important, whether or not you expect to attend the Annual Meeting of Stockholders. Stockholders of record are urged to vote via the Internet or telephone as instructed, or if you are voting by mail, to mark, sign and date and promptly return the proxy in the stamped return envelope provided. Beneficial holders are urged to vote via telephone or the Internet. Voting promptly will help avoid the additional expense of further solicitation to assure a quorum at the meeting.

ARROWHEAD RESEARCH CORPORATION
225 South Lake Avenue, Suite 300
Pasadena, California 91101
(626) 304-3400

**PROXY STATEMENT FOR ANNUAL MEETING OF STOCKHOLDERS
TO BE HELD ON MONDAY, AUGUST 8, 2011**

GENERAL INFORMATION CONCERNING SOLICITATION AND VOTING

The enclosed Proxy is solicited on behalf of Arrowhead Research Corporation (the “**Company**” or “**Arrowhead**”) for use at the Annual Meeting of Stockholders (the “**Annual Meeting**”) to be held on August 8, 2011, at 10:00 a.m., local time, and at any adjournment(s) thereof, for the purposes set forth herein and in the accompanying Notice of Annual Meeting of Stockholders. The Annual Meeting will be held at the Sheraton Pasadena, 303 E. Cordova Street, Pasadena, CA 91101.

The Company anticipates that these proxy solicitation materials will first be mailed on or about July 1, 2011, to all stockholders entitled to vote at the Annual Meeting.

Record Date

Only holders of record of voting stock at the close of business on June 14, 2011 (the “**Record Date**”) are entitled to notice of the Annual Meeting and to vote at the Annual Meeting. On that date, the Company had outstanding 71,833,693 shares of voting common stock (“**Common Stock**”).

Revocability of Proxies

Any proxy given by a stockholder of record pursuant to this solicitation may be revoked by the person giving it at any time before its use by delivering to the Secretary of the Company, at or before the taking of the vote at the Annual Meeting, a written notice of revocation or a duly executed proxy bearing a later date or by attending the Annual Meeting and voting in person. Stockholders may also revoke their proxy by entering a new vote over the Internet or by telephone.

Voting and Solicitation

Each share of the Company’s Common Stock is entitled to one vote on all matters presented at the Annual Meeting. Stockholders do not have the right to cumulate their votes in the election of directors. Shares of Common Stock represented by properly executed proxies will, unless such proxies have been previously revoked, be voted in accordance with the instructions indicated thereon. In the absence of specific instructions to the contrary, properly executed proxies will be voted FOR all matters submitted to a vote of stockholders at the Annual Meeting pursuant to this proxy statement. No business other than that set forth in the accompanying Notice of Annual Meeting of Stockholders is expected to come before the Annual Meeting. Should any other matter requiring a vote of stockholders properly arise, the persons named in the enclosed form of proxy will vote such proxy in accordance with the recommendation of the Board of Directors (the “**Board**”).

If you will not be able to attend the Annual Meeting to vote in person, you may vote your shares via the Internet or by telephone or by mail as set forth in the Notice.

In addition to proxy solicitation by a proxy solicitor engaged by the Company, proxies may be solicited by certain of the directors, officers and employees of the Company, without additional compensation. The Company will bear the costs of solicitation. In addition, the Company expects to reimburse brokerage firms and other persons representing beneficial owners of shares for their expenses in forwarding solicitation materials to such beneficial owners.

If your shares are held in street name, the voting instruction form sent to you by your broker, bank or other nominee should indicate whether the institution has a process for beneficial holders to provide voting instructions over the Internet or by telephone. A number of banks and brokerage firms participate in a program that also permits stockholders whose shares are held in street name to direct their vote over the Internet or by telephone. If your bank or brokerage firm gives you this opportunity, the voting instructions from the bank or brokerage firm that accompany this proxy statement will tell you how to use the Internet or telephone to direct the vote of shares held in your account. If your voting instruction form does not include Internet or telephone information, please complete and return the voting instruction form in the self-addressed, postage-paid envelope provided by your broker. Stockholders who vote by proxy over the Internet or by telephone need not return a proxy card or voting instruction form by mail.

Quorum; Abstentions; Broker Non-Votes

The required quorum for the transaction of business at the Annual Meeting is a majority of the votes eligible to be cast by holders of shares of Common Stock issued and outstanding on the Record Date. Shares that are voted “FOR,” “AGAINST” or “ABSTAIN” on a matter are treated as being present at the meeting for purposes of establishing a quorum and are also treated as shares entitled to vote at the Annual Meeting (the “**Votes Cast**”) with respect to such matter. For certain proposals, brokers may not have discretionary authority to vote on a particular matter if they have not received specific instructions from the beneficial owner of the shares (“**broker non-votes**”). Shares subject to a broker non-vote are counted as present for the purpose of determining the presence or absence of a quorum for the transaction of business; the effect of abstentions and broker non-votes on the proposals presented herein is discussed below.

With regard to the election of directors, votes may be cast in favor of a director nominee or withheld. Because directors are elected by plurality, abstentions from voting and broker non-votes will be entirely excluded from the vote and will have no effect on its outcome. If a quorum is present at the meeting, the nominees receiving the greatest number of votes, up to six directors, will be elected.

With regard to Proposal Two, a majority of the shares outstanding as of the Record Date must vote in favor of this proposal for it to be approved. Accordingly, abstentions and broker non-votes will have the same effect as a vote against this proposal.

With regard to Proposals Three and Four, the affirmative vote of a majority of the Votes Cast is required for approval. With regard to these proposals, abstentions will be counted in tabulations of the votes cast on each such proposal and will have the same effect as a vote against the proposal, whereas broker non-votes will be excluded from the vote and will have no effect on its outcome.

Deadline for Receipt of Stockholder Proposals

Any stockholder who meets the requirements of the proxy rules under the Securities Exchange Act of 1934, as amended (the “Exchange Act”) who intends to present a proposal at the Company’s 2012 Annual Meeting of Stockholders must ensure that the proposal is received by the Corporate Secretary at Arrowhead Research Corporation, 225 South Lake Avenue, Suite 300, Pasadena, CA 91101, not later than January 3, 2012, in order to be considered for inclusion in our proxy materials for that meeting. Proposals received after that date may be excluded from the Company’s proxy statement.

Our Bylaws, as amended to date, provide for additional notice procedures to recommend a person for nomination as a director or to propose business to be considered by stockholders at a meeting. To be considered timely under these provisions, the stockholder’s notice must be received by the Corporate Secretary at our principal executive offices at the address set forth above between 90 and 120 days prior to the one-year anniversary of the date of the 2011 Annual Meeting; *provided, however*, that if the 2012 annual meeting date is advanced by more than 30 days before or delayed by more than 60 days after the anniversary date of the 2011 Annual Meeting, then stockholders must provide notice within time periods specified in our Bylaws. Our Bylaws also specify requirements as to the form and content of a stockholder’s notice.

**PROPOSAL ONE
ELECTION OF DIRECTORS**

The Board has nominated the following six persons as directors to serve until their successors have been duly elected. Each of the nominees is currently a director of Arrowhead. None of the nominees is related by blood, marriage or adoption to any other nominee or any executive officer of the Company. The six nominees receiving the greatest numbers of votes at the meeting will be elected to the six director positions. Unless otherwise instructed, the proxy holders will vote the proxies received by them for the Board's six nominees named below. If any nominee is unable or declines to serve as director at the time of the Annual Meeting, the proxies will be voted for any nominee who is designated by our present Board to fill the vacancy. The table below sets forth, with respect to each nominee for election, his age and current position with Arrowhead.

Nominees for Election as Directors. The Board unanimously adopted a resolution proposing the nominees set forth below for election as Directors of the Company for the next year.

OUR BOARD UNANIMOUSLY RECOMMENDS A VOTE "FOR" EACH OF THE NOMINEES LISTED BELOW.

Name	Age	Position with Arrowhead
R. Bruce Stewart	73	Executive Chairman of the Board
Christopher Anzalone	42	Chief Executive Officer & President, Director
Edward W. Frykman*	75	Director
Charles P. McKenney*	72	Director
Mauro Ferrari**	51	Director
Douglass Given*	58	Director

* Member of the Audit Committee, Compensation Committee and Nomination Committee.

** Member of the Compensation Committee and Nomination Committee

Each nominee, if elected at the Annual Meeting, will serve as a director until the earlier of the 2012 Annual Meeting of the Company's stockholders or until their successors are duly elected.

R. Bruce Stewart has been Executive Chairman of the Board of the Company since December 1, 2007. Mr. Stewart was Arrowhead's Chief Executive Officer and Chairman of the Board of the Company from January 2004 to November 30, 2007. Mr. Stewart was the Chairman of the Board of Arrowhead's predecessor company since its inception in May 2003 and devoted much of his time from early in 2003 to development of its plan of operations. Mr. Stewart founded Acacia Research Corporation in March 1991, and was employed by Acacia Research Corporation in various capacities until January 2003, serving as its President from inception through January 1997, Chairman until April 2000, and as a senior advisor until January 2003. We believe Mr. Stewart's qualifications to serve on the Board include his long tenure as Chief Executive Officer and as a member of the Board during which time he gained an extensive understanding of the Company's operations, strategy and finances, as well as his extensive experience in the field of finance.

Christopher Anzalone, Ph.D., has been President, Chief Executive Officer and Director of the Company since December 1, 2007. In 2005, Dr. Anzalone formed and served as CEO of the Benet Group LLC, a private equity firm focused on creating and building new nano-biotechnology companies from university-generated science. While at The Benet Group, Dr. Anzalone was founding CEO in two portfolio companies, Nanotope, Inc., a tissue regeneration company, and Leonardo Biosystems, Inc., a cancer drug delivery company. Dr. Anzalone remains CEO of Nanotope. Prior to his tenure at Benet Group, from 1999 until 2003, he was a partner at the Washington, DC-based private equity firm Galway Partners, LLC, where he was in charge of sourcing, structuring, and building new business ventures, and was founding CEO of NanoInk, Inc., a leading nanolithography company. Dr. Anzalone holds a Ph.D. in Biology from UCLA and a B.A. in Government from Lawrence University. We believe

Dr. Anzalone's qualifications to serve on the Board include his deep understanding of the business through his role as Chief Executive Officer; in addition, Dr. Anzalone has extensive experience in nanotechnology, biotechnology, company-building and venture capital.

Edward W. Frykman has been a director of the Company since January 2004. Mr. Frykman was an Account Executive with Crowell, Weedon & Co., a position he held from 1992 until 2008 when he retired. Before his service at Crowell, Weedon & Co., Mr. Frykman served as Senior Vice President of L.H. Friend & Co. Both Crowell Weedon & Co. and L.H. Friend & Co. are investment brokerage firms located in Southern California. In addition, Mr. Frykman was a Senior Account Executive with Shearson Lehman Hutton, where he served as the Manager of the Los Angeles Regional Retail Office of E. F. Hutton & Co. Mr. Frykman was a director of Arrowhead's predecessor company since its inception in May 2003 until January 2004, when he became a director of the Company. Mr. Frykman is also a director of Acacia Research Corporation, a publicly-held corporation based in Newport Beach, California. We believe Mr. Frykman's qualifications to serve on the Board include his long tenure as a member of the Board which enabled Mr. Frykman to gain a deep understanding of the Company's operations, strategy and finances. Mr. Frykman also has extensive experience in the fields of finance and public company oversight.

Charles P. McKenney has been a director of the Company since April 2004. Mr. McKenney has maintained a government affairs law practice in Pasadena, California since 1989, representing businesses and organizations in their relations with state and local government regarding their obligations under state and local land use and trade practices laws. From 1973 through 1989, he served as Attorney for Corporate Government Affairs for Sears, Roebuck and Co., helping organize and carry out Sears's western state and local government relations programs. Mr. McKenney has served two terms on the Pasadena, California City Council as well as on several city boards and committees, including three city Charter Reform Task Forces. We believe Mr. McKenney's qualifications to serve on the Board include his long tenure as a member of the Board resulting in a deep understanding of the Company's operations, strategy and finances. Mr. McKenney also has extensive experience providing strategic legal and advisory services to developmental stage organizations.

Mauro Ferrari, Ph.D. was appointed to the Arrowhead Board of Directors in 2010. Dr. Ferrari is the President and CEO of The Methodist Hospital Research Institute (TMHRI). He is also the President of The Alliance for NanoHealth. Dr. Ferrari is an internationally recognized expert in nanomedicine and biomedical nanotechnology. Prior to assuming leadership of TMHRI, Dr. Ferrari was Professor and Chairman of The Department of NanoMedicine and Biomedical Engineering at The University of Texas Health Science Center at Houston, Professor of Experimental Therapeutics at the MD Anderson Cancer Center, Adjunct Professor of Bioengineering at Rice University, and Adjoint Professor of Biomedical Engineering at the University of Texas in Austin. His previous academic appointments include professorships at UC Berkeley and Ohio State University.

From 2003 to 2005, he served as Special Expert on Nanotechnology and Eminent Scholar at The National Cancer Institute, where he led the development of the NCI's program in Nanotechnology, which remains the largest program in NanoMedicine in the world. Dr. Ferrari has been serving as the Editor-in-Chief for "Biomedical Microdevices: BioMEMS and Biomedical Nanotechnology" since 1997. We believe Dr. Ferrari's qualifications to serve on the Board include his extensive training and experience in the fields of nanotechnology, biotechnology and biomedical applications. Dr. Ferrari has significant technical training, several academic appointments and numerous published articles and patents. Additionally, Dr. Ferrari has extensive experience in developmental stage organizations having founded several startup companies.

Douglass Given, M.D., Ph.D., M.B.A., was appointed to the Arrowhead Board of Directors in 2010 and is an Investment Partner at Bay City Capital, where he has been with the firm since October 2000. He was formerly Chief Executive Officer and a director of NeoRx, Corporate Senior Vice President and Chief Technical Officer of Mallinckrodt, and Chief Executive Officer and a director of Progenitor and Mercator Genetics. He held positions as Vice President at Schering Plough Research Institute, Vice President at Monsanto/G.D. Searle Research Laboratories, and Medical Advisor at Lilly Research Laboratories. Dr. Given is the Chairman of VIA Pharmaceuticals, and Chairman & CEO of Vivaldi Biosciences. He is Chairman of the Visiting Committee to the Division of Biological Sciences and the Pritzker School of Medicine at the University of Chicago, a member of the Johns Hopkins Bloomberg School of Public Health Advisory Board, and a member of the Harvard School of Public Health AIDS Initiative International Advisory Council.

Dr. Given holds an M.D. with honors and a Ph.D. from the University of Chicago, and an MBA from the Wharton School, University of Pennsylvania. He was a fellow in Internal Medicine and Infectious Diseases at

Harvard Medical School and Massachusetts General Hospital. We believe Dr. Given's qualifications to serve on the Board include his extensive experience in finance and business transactions, particularly investments in the life sciences industry, as well as directorship roles in start-up biotechnology companies. Dr. Given also has significant leadership roles, including CEO and Senior Vice President, at several large pharmaceutical companies.

Corporate Governance Policies and Practices

The following is a summary of our corporate governance policies and practices:

- A majority of the members of the Board are independent directors, as defined by the NASDAQ Marketplace Rules. The Board has determined that all of the Company's directors are independent, except Mr. Stewart and Dr. Anzalone. Independent directors do not receive consulting, legal or other fees from the Company, other than Board and Committee compensation.
- All of the Company's employees, officers and directors are subject to the Company's Code of Business Conduct and Ethics Policy, which is available on the Company's website at www.arrowheadresearch.com. The ethics policy meets the requirements of NASDAQ, as well as the code of ethics requirements of the SEC.
- The Audit, Compensation and Nomination Committees consist entirely of independent directors.
- The independent directors meet separately on a regular basis to discuss matters relating to the Company and the Board, without members of the management team present.
- The Board reviews at least annually the Company's business initiatives, capital projects and budget matters.
- The Audit Committee reviews and approves all related-party transactions or, if the size and nature of the transaction warrants, a special committee of non-related Board members is formed to negotiate and approve the transaction.

Stockholder Communications with Directors

Stockholders who wish to communicate with the Board or any individual director can write to: Jane Davidson, Corporate Secretary, Arrowhead Research Corporation, 225 South Lake Avenue, Suite 300, Pasadena, CA 91101. Your letter should indicate that you are an Arrowhead stockholder. Depending on the subject matter, management will:

- Forward the communication to the director or directors to whom it is addressed;
- Forward the communication to the Chairman of the Board, if addressed to the board of directors; or
- If not addressed to any director or directors, attempt to handle the inquiry directly (for example, requests for information or stock-related matters).

Board Meetings and Committees

The Board held a total of eight meetings during the fiscal year ended September 30, 2010. The Board has three standing committees: an Audit Committee, a Compensation Committee, and a Nomination Committee. Current committee members are listed below.

The functions of the Audit Committee are to select independent public accountants, to review the scope and results of the year-end audit with management and the independent auditors, to review the Company's accounting principles and its system of internal accounting controls and to review the Company's annual and quarterly reports before filing with the Securities and Exchange Commission, and to review any related party transactions. The Audit Committee met four times during fiscal 2010. The current members of the Audit Committee are Edward W. Frykman, Chairman, Charles P. McKenney, and Douglass Given. The Board has determined that all members of the Audit Committee are independent directors under the Rules of the SEC and the listing standards of The NASDAQ Stock Market. The Board has determined that Mr. Frykman and Dr. Given are "audit committee financial experts" in accordance with the applicable regulations. The Audit Committee Charter is available on the Company's website at www.arrowheadresearch.com.

The functions of the Compensation Committee are to review the goals and achievements of the Chief Executive Officer (“CEO”) for the prior year and approve the goals of the CEO for the next year, to review and approve salaries, bonuses and other benefits payable to the Company’s executive officers and to administer the Company’s 2004 Equity Incentive Plan (the “**2004 Incentive Plan**”) and the 2000 Stock Option Plan (the “**2000 Option Plan**”). The Compensation Committee is specifically responsible for determining the compensation of the CEO. The Compensation Committee reviews compensation recommendations made by the CEO for other senior executives of the Company at least annually. The Compensation Committee did not retain the services of a compensation consultant in fiscal 2010, but may do so in the future. The Compensation Committee met seven times during fiscal 2010. The current members of the Compensation Committee are Douglass Given, Chairman, Edward Frykman, Charles P. McKenney, and Mauro Ferrari. The Board has determined that all members of the Compensation Committee are independent directors under the Rules of the SEC and the listing standards of The NASDAQ Stock Market. The Compensation Committee’s charter is available on the Company’s website at www.arrowheadresearch.com. The Committee has not delegated any of its responsibilities or authorities granted under its charter to anyone else.

The Nomination Committee is responsible for proposing a slate of directors for election by the stockholders at each Annual Stockholders Meeting and for proposing candidates to fill any vacancies. The Nomination Committee met one time during fiscal 2010. The current members of the Nomination Committee are Mauro Ferrari, Chairman, Edward Frykman, Charles P. McKenney and Douglass Given. The Nomination Committee’s charter is available on the Company’s website at www.arrowheadresearch.com. The Nomination Committee manages the process for evaluating current Board members at the time they are considered for re-nomination. After considering the appropriate skills and characteristics required on the Board, the current makeup of the Board, the results of the evaluations, and the wishes of the Board members to be re-nominated, the Nomination Committee recommends to the Board whether those individuals should be re-nominated.

On at least an annual basis, the Nomination Committee reviews with the Board whether it believes the Board would benefit from adding a new member(s) and, if so, the appropriate skills and characteristics required for the new member(s). If the Board determines that a new member would be beneficial, the Nomination Committee solicits and receives recommendations for candidates and manages the process for evaluating candidates. All potential candidates, regardless of their source, are reviewed under the same process. The Nomination Committee (or its chairman) screens the available information about the potential candidate(s). Based on the results of the initial screening, interviews with viable candidates are scheduled with Nomination Committee members, other members of the Board and senior members of management. Upon completion of these interviews and other due diligence, the Nomination Committee may recommend to the Board the election or nomination of a candidate.

Candidates for independent Board member positions have typically been found through recommendations from directors or others associated with the Company. Arrowhead stockholders may also recommend candidates by sending the candidate’s name and resume to the Nomination Committee pursuant to the procedures, set forth above, for communication with the Board. Our Bylaws also provide for separate notice procedures to recommend a person for nomination as a director to be considered by stockholders at a meeting, including requirements as to the form and content of a stockholder’s notice.

The Nomination Committee has no predefined minimum criteria for selecting Board nominees, although it believes that all independent directors should share qualities such as independence, business experience at the corporate level, relevant non-competitive experience, and strong communication and analytical skills. In any given search, the Nomination Committee may also define particular characteristics for candidates to balance the overall skills and characteristics of the Board and the needs of the Company. However, during any search, the Nomination Committee reserves the right to modify its stated search criteria for exceptional candidates.

No incumbent director attended fewer than 75% of the aggregate of (i) the total number of meetings of the Board held during fiscal 2010, and (ii) the total number of meetings held by all committees of the Board during fiscal 2010 on which such person served.

In addition, all directors attended the 2010 Annual Meeting of Stockholders. It is the Company’s policy to encourage, but not require, that all directors attend our annual stockholder meetings.

FISCAL 2010 NON-EMPLOYEE DIRECTOR COMPENSATION

Director Compensation

Directors who are also employees of the Company receive no separate compensation from the Company for their service as members of the Board. Non-employee directors currently receive a cash retainer of \$20,000 per year. Additionally, non-employee directors who have served on the Board for at least six months receive an automatic grant of non-qualified stock options to purchase 40,000 shares of common stock upon re-election each year. Dr. Ferrari and Dr. Given have each waived his right to cash compensation and waived his right to receive stock option grants while employed at The Methodist Hospital Research Institute and Bay City Capital, respectively. The following table sets forth the total compensation paid to our non-employee directors in fiscal 2010.

<u>Name</u>	<u>Fee Earned or Paid in Cash (\$)(1)</u>	<u>Option Awards (\$)(2)(3)</u>	<u>Total (\$)</u>
Edward Frykman	\$ 20,000	\$80,735	\$ 100,735
Leroy Rahn (4)	\$ 20,000	\$80,735	\$ 100,735
Charles McKenney	\$ 20,000	\$90,560	\$ 110,560
Mauro Ferrari	\$ —	\$ —	\$ —
Douglass Given (5)	\$ —	\$ —	\$ —

- (1) Each non-employee director received \$5,000 per quarter for his service as a director. There are no additional payments for being a member of a committee. Dr. Ferrari and Dr. Given have declined to receive cash compensation.
- (2) Amounts included under Options Awards reflect the grant date fair value of stock options granted during fiscal 2010, computed in accordance with FASB ASC 718. The assumptions used to calculate the value of option awards are set forth under Note 9 to the Consolidated Financial Statements included with the Company's Annual Report on Form 10-K for the year ended September 30, 2010.
- (3) Annual option grants to non-employee directors vest one year from date of grant. At September 30, 2010, Mr. Frykman had outstanding option grants to purchase 265,000 shares at prices ranging from \$0.49 to \$2.02; Mr. Rahn had outstanding option grants to purchase 265,000 shares at prices ranging from \$0.49 to \$2.02; Mr. McKenney has outstanding option grants to purchase 240,000 shares at prices ranging from \$0.49 to \$2.02; and Mr. Ferrari had outstanding option grants to purchase 248,438 shares at prices ranging from \$0.96 to \$2.87.
- (4) Mr. Rahn resigned as a director of the Company on August 17, 2010.
- (5) Dr. Given was appointed to the Board of Directors on November 23, 2010.

Vote Required; Recommendation of the Board

The six nominees receiving the greatest numbers of votes at the meeting, assuming a quorum is present, will be elected to the six director positions to serve until the next annual meeting of stockholders or until their successors have been duly elected and qualified. Because directors are elected by plurality, abstentions from voting and broker non-votes will be entirely excluded from the vote and will have no effect on its outcome.

**THE BOARD UNANIMOUSLY RECOMMENDS A VOTE "FOR" EACH OF THE NOMINEES
FOR DIRECTOR IN PROPOSAL ONE.**

PROPOSAL TWO
APPROVAL OF AMENDMENT TO THE COMPANY'S CERTIFICATE OF INCORPORATION TO
EFFECT A REVERSE STOCK SPLIT

Introduction

The Board is recommending that the stockholders approve an amendment to the Company's Certificate of Incorporation (the "**Charter**") to effect a reverse stock split of the Company's outstanding shares of Common Stock at a whole number ratio within a range of 1-for-2 to 1-for-15 and to grant the Board discretionary authority, within twelve months from the date of the 2011 Annual Meeting, to determine whether to effect the split and the exact whole number ratio within the range at which the split will be effected. If the Board decides to implement the split, it will become effective upon the filing of the amendment to the Company's Charter with the Secretary of State of the State of Delaware (the "**Effective Date**"). If the reverse split is implemented, the number of issued and outstanding shares of Common Stock would be reduced in accordance with the exchange ratio selected by the Board. The total number of authorized shares of Common Stock would not, however, be affected. The form of amendment to the Company's Charter to effect the reverse split is attached as *Annex A* to this proxy statement.

The Board may not elect to implement a reverse split. However, the Board believes that having the time-limited authority to take such an action is an important proactive step to maintain and build stockholder value.

Purpose and Background of the Reverse Split

The Board's primary objective in asking for the authority to effect a reverse split is to raise the per share trading price of our Common Stock. The Board believes that having the ability to implement a reverse split would better enable the Company to maintain the listing of its Common Stock on The NASDAQ Capital Market. Also, if the reverse split is implemented, the Board believes it would facilitate higher levels of institutional stock ownership, where investment policies generally prohibit investments in lower-priced securities and better enable the Company to raise funds to finance development and operations.

The Company's Common Stock is currently quoted on The NASDAQ Capital Market. In order for the Common Stock to continue to be quoted on The NASDAQ Capital Market, the Company must satisfy various listing standards established by NASDAQ. Among other things, if the closing bid price of the Company's Common Stock is under \$1.00 per share for 30 consecutive trading days and does not thereafter reach \$1.00 per share or higher for a minimum of ten consecutive business days during the 180 calendar days following notification by NASDAQ, NASDAQ may delist the Common Stock from trading. The closing sale price of the Company's Common Stock on the Record Date was \$0.51 per share and the Company's Common Stock has closed below \$1.00 per share continuously since January 5, 2011. The Company has sought and received from NASDAQ a 180-day extension from delisting based on the Company's assurance that it will seek stockholder approval to implement a reverse split, if necessary, to regain compliance. The extension expires on December 5, 2011. If a delisting from The NASDAQ Capital Market were to occur, the Common Stock would trade on the OTC Bulletin Board or in the "pink sheets." These alternative markets are generally considered to be less efficient than, and not as broad as, The NASDAQ Capital Market. Additionally, the Company is obligated contractually to use reasonable efforts to maintain the listing of the Common Stock on NASDAQ and the Board believes that it may be necessary to effect a reverse stock split in order to maintain this listing.

The Board further believes that an increased stock price may encourage investor interest and improve the marketability of the Company's Common Stock to a broader range of investors, and thus improve liquidity. Because of the trading volatility often associated with low-priced stocks, many brokerage firms and institutional investors have internal policies and practices that either prohibit them from investing in low-priced stocks or tend to discourage individual brokers from recommending low-priced stocks to their customers. The Board believes that the anticipated higher market price resulting from a reverse stock split may enable institutional investors and brokerage firms with policies and practices such as those described above to invest in the Company's Common Stock.

The purpose of seeking stockholder approval of a range of whole number exchange ratios from 1-for-2 to 1-for-15 (rather than a fixed exchange ratio) is to provide the Company with the flexibility to achieve the desired results of the reverse stock split. If the stockholders approve this proposal, the Board would effect a reverse stock split only upon the Board determination that a reverse stock split would be in the best interests of the Company at

that time. If the Board were to effect a reverse stock split, the Board would set the timing for such a split and select the specific ratio within the permitted range. No further action on the part of stockholders would be required to either implement or abandon the reverse stock split. If the stockholders approve the proposal, and the Board determines to effect the reverse stock split, we would communicate to the public, prior to the Effective Date, additional details regarding the reverse split, including the specific ratio selected by the Board. If the Board does not implement the reverse stock split within twelve months from the Annual Meeting, the authority granted in this proposal to implement the reverse stock split will terminate. The Board reserves its right to elect not to proceed with the reverse stock split if it determines, in its sole discretion, that this proposal is no longer in the best interests of the Company.

Material Effects of Proposed Reverse Stock Split

The Board believes that the reverse split will increase the price level of the Company's Common Stock, which is expected to help ensure continued compliance with the NASDAQ minimum bid price listing standard. The Board cannot predict, however, the actual effect of the reverse split upon the market price for the Common Stock, and the history of similar reverse stock splits for companies in like circumstances is varied. The market price per share of Common Stock after the reverse split may not rise in proportion to the reduction in the number of shares of Common Stock outstanding resulting from the reverse split, which would reduce the market capitalization of the Company. The market price per post-reverse split share may not remain in excess of the \$1.00 minimum bid price as required by NASDAQ, or the Company may not otherwise meet the requirements for continued listing on The NASDAQ Capital Market, including the stockholders' equity requirements. The market price of the Common Stock will also be based on our performance and other factors, the effect of which the Board cannot predict.

The reverse split will affect all stockholders of the Company uniformly and will not affect any stockholder's percentage ownership interests or proportionate voting power, except to the extent that the reverse split results in any of the stockholders owning a fractional share of Common Stock. In lieu of issuing fractional shares, the Company may either (i) directly pay each stockholder who would otherwise have been entitled to a fraction of a share an amount in cash equal to the closing sale price of the Common Stock, as quoted on NASDAQ on the Effective Date, multiplied by the fractional share amount, or (ii) make arrangements with the Company's transfer agent or exchange agent to aggregate all fractional shares otherwise issuable in the reverse stock split and sell these whole shares as soon as possible after the Effective Date at then prevailing market prices on the open market on behalf of those holders, and then pay each such holder his, her or its pro rata portion of the sale proceeds.

The principal effects of the reverse split will be that (i) the number of shares of Common Stock issued and outstanding will be reduced from approximately 71,833,693 shares as of the Record Date to a range of 35,916,846 to 4,788,913 shares, depending on the exact split ratio chosen by the Board, (ii) all outstanding options and warrants entitling the holders thereof to purchase shares of Common Stock will enable such holders to purchase, upon exercise of their options or warrants, from one-half to one-fifteenth of the number of shares of Common Stock which such holders would have been able to purchase upon exercise of their options or warrants immediately preceding the reverse split, at an exercise price equal to two to fifteen times the exercise price specified before the reverse split, resulting in the same aggregate price being required to be paid upon exercise thereof immediately preceding the reverse split, and (iii) the number of shares reserved for issuance pursuant to our 2000 Stock Option Plan and 2004 Equity Incentive Plan will be similarly reduced to one-half to one-fifteenth of the number of shares currently included in each such plan.

The reverse split will not affect the par value of the Common Stock. As a result, on the Effective Date, the stated capital on the Company's balance sheet attributable to the Common Stock will be reduced by a fractional proportion equal to the split ratio and the additional paid-in capital account will be credited with the amount by which the stated capital is reduced. The per share net income or loss and the per-share net book value of the Common Stock will be retroactively adjusted for each period because there will be fewer shares of Common Stock outstanding.

The amendment will not change the terms of the Common Stock. After the reverse split, the shares of common stock will have the same voting rights and rights to dividends and distributions and will be identical in all other respects to the Common Stock now authorized. Each stockholder's percentage ownership of the new Common Stock will not be altered except for the effect of eliminating fractional shares. The Common Stock issued pursuant to the reverse split will remain fully paid and non-assessable. The reverse split is not intended as, and will not have the effect of, a "going private transaction" covered by Rule 13e-3 under the Securities Exchange Act of 1934. Following

the reverse split, the Company will continue to be subject to the periodic reporting requirements of the Securities Exchange Act of 1934.

Because the Company will not reduce the number of authorized shares of Common Stock, the overall effect will be an increase in authorized but unissued shares of Common Stock as a result of the reverse stock split. The Company has no current plans for the issuance of any shares that would become available as a result of this effective increase in authorized shares following the implementation of the reverse stock split. The Company does expect that it will need to raise additional capital and will do so through the issuance of common stock that would become available by this proposal, but there are no current offering terms that are being contemplated.

No Dissenter's Rights

Under applicable Delaware law, our stockholders are not entitled to dissenter's rights with respect to the reverse stock split, and we will not independently provide stockholders with any such right.

Procedure for Effecting Reverse Split and Exchange of Stock Certificates

If the reverse split is approved by the Company's stockholders, and the Board determines it is in the best interests of the Company to effect the split, the reverse stock split would become effective at such time as the amendment to the Company's Charter, the form of which is attached as *Annex A* to this proxy statement, is filed with the Secretary of State of Delaware. Upon the filing of the amendment, all of the Company's existing Common Stock will be subdivided into fewer shares of Common Stock as set forth in the amendment.

As soon as practicable after the Effective Date, stockholders will be notified that the reverse split has been effected. ComputerShare, Inc., the Company's transfer agent, will act as exchange agent for purposes of implementing the exchange of stock certificates. Holders of pre-reverse split shares will be asked to surrender to the exchange agent certificates representing pre-reverse split shares and will be issued certificates representing post-reverse split shares in accordance with the procedures to be set forth in a letter of transmittal delivered to the Company's stockholders. No new certificates will be issued to a stockholder until the stockholder has surrendered to the exchange agent his, her or its outstanding certificate(s) together with the properly completed and executed letter of transmittal. STOCKHOLDERS SHOULD NOT DESTROY ANY STOCK CERTIFICATES AND SHOULD NOT SUBMIT ANY CERTIFICATES UNTIL REQUESTED TO DO SO. Stockholders whose shares are held by their stockbroker do not need to submit old share certificates for exchange. These shares will automatically reflect the new quantity of shares based on the reverse split. Beginning on the Effective Date, each certificate representing pre-reverse split shares will be deemed for all corporate purposes to evidence ownership of post-reverse split shares. Unclaimed certificates for the post-split shares may be tendered to state authorities by the transfer agent under applicable unclaimed property or "escheat" laws, in which case the stockholder would need to obtain the post-split shares from the relevant state authority.

Fractional Shares

The Company will not issue fractional shares in connection with the reverse split. In lieu of issuing fractional shares, the Company may either (i) directly pay each stockholder who would otherwise have been entitled to a fraction of a share an amount in cash equal to the closing sale price of the Common Stock, as quoted on NASDAQ on the Effective Date, multiplied by the fractional share amount, or (ii) make arrangements with the Company's transfer agent or exchange agent to aggregate all fractional shares otherwise issuable in the reverse stock split and sell these whole shares as soon as possible after the Effective Date at then prevailing market prices on the open market on behalf of those holders, and then pay each such holder his, her or its pro rata portion of the sale proceeds.

Certain U.S. Federal Income Tax Considerations Relating to the Reverse Split

The following is a summary of certain U.S. federal income tax considerations relating to the reverse stock split as of the date hereof. Except where noted, this summary deals only with a stockholder who holds Common Stock as a capital asset.

For purposes of this summary, a "U.S. holder" means a beneficial owner of Common Stock who is any of the following for U.S. federal income tax purposes: (i) a citizen or resident of the United States, (ii) a corporation created or organized in or under the laws of the United States, any state thereof, or the District of Columbia, (iii) an estate the income of which is subject to U.S. federal income taxation regardless of its source, or (iv) a trust if (1) its

administration is subject to the primary supervision of a court within the United States and one or more U.S. persons have the authority to control all of its substantial decisions, or (2) it has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person. A non-U.S. holder of Common Stock is a stockholder who is not a U.S. holder.

This summary is based upon provisions of the Internal Revenue Code of 1986, as amended (the “Code”), and regulations, rulings and judicial decisions as of the date hereof. Those authorities may be changed, perhaps retroactively, and may be subject to differing interpretations, so as to result in U.S. federal income tax considerations different from those summarized below. This summary does not represent a detailed description of the U.S. federal income tax consequences to a stockholder in light of his, her or its particular circumstances. In addition, it does not represent a description of the U.S. federal income tax consequences to a stockholder who is subject to special treatment under the U.S. federal income tax laws and does not address the tax considerations applicable to stockholders who may be subject to special tax rules, such as:

- partnerships;
- financial institutions;
- insurance companies;
- real estate investment trusts;
- regulated investment companies;
- grantor trusts;
- tax-exempt organizations;
- dealers or traders in securities or currencies;
- stockholders who hold Common Stock as part of a position in a straddle or as part of a hedging, conversion or integrated transaction for U.S. federal income tax purposes or U.S. holders that have a functional currency other than the U.S. dollar;
- stockholders who actually or constructively own 10 percent or more of the Company’s voting stock; or
- a non-U.S. holder who is a U.S. expatriate, “controlled foreign corporation” or “passive foreign investment company”.

Moreover, this description does not address the U.S. federal estate and gift tax, alternative minimum tax or other tax consequences of the reverse stock split.

If an entity classified as a partnership for U.S. federal income tax purposes holds Common Stock, the tax treatment of a partner will generally depend on the status of the partner and the activities of the partnership.

Each stockholder should consult his, her or its own tax advisers concerning the particular U.S. federal tax consequences of the reverse stock split, as well as the consequences arising under the laws of any other taxing jurisdiction, including any state, local or foreign income tax consequences.

To ensure compliance with Treasury Department Circular 230, each holder of Common Stock is hereby notified that: (a) any discussion of U.S. federal tax issues in this proxy statement is not intended or written to be used, and cannot be used, by such holder for the purpose of avoiding penalties that may be imposed on such holder under the Code; (b) any such discussion has been included by the Company in furtherance of the reverse stock split on the terms described herein; and (c) each such holder should seek advice based on its particular circumstances from an independent tax advisor.

U.S. Holders. Generally, a reverse stock split will not result in the recognition of gain or loss by a U.S. holder for U.S. federal income tax purposes (except to the extent of cash received in lieu of a fractional share). The aggregate adjusted basis of the new shares of Common Stock will be the same as the aggregate adjusted basis of the Common Stock exchanged for such new shares, reduced by the amount of the adjusted basis of any Common Stock exchanged for such new shares that is allocated to the fractional share for which cash is received. The holding period of the new, post-reverse split shares of the Common Stock resulting from implementation of the reverse stock split will include a U.S. holder’s holding periods for the pre-reverse split shares. A stockholder who receives cash in lieu

of a fractional share of new Common Stock generally will recognize taxable gain or loss equal to the difference, if any, between the amount of cash received and the portion of the stockholder's aggregate adjusted tax basis in the shares of old common stock allocated to the fractional share. If the shares of old Common Stock allocated to the fractional shares were held by the stockholder as capital assets, the gain or loss resulting from the payment of cash in lieu of the issuance of a fractional share will be taxed as capital gain or loss. Such capital gain or loss will be short term if the pre-reverse split shares were held for one year or less and long term if held more than one year.

Non U.S. Holders. A non-U.S. holder of the Company's Common Stock generally will not be subject to U.S. federal income tax with respect to any gain recognized as a result of cash received in lieu of a fractional share in connection with the reverse stock split; provided, however, that gain will be subject to tax if (i) the gain is effectively connected with a trade or business of the non-U.S. holder in the U.S. (in which case, for a non-U.S. holder that is a foreign corporation, the branch profits tax may also apply), and, where a tax treaty applies, is attributable to a U.S. permanent establishment of the non-U.S. holder, (ii) the gain is recognized by a non-U.S. holder who is present in the United States for 183 or more days in the taxable year of the reverse stock split and certain other conditions are met, or (iii) the Company is or has been a "U.S. real property holding corporation" for U.S. federal income tax purposes. The Company believes it currently is not and it does not anticipate becoming, a "U.S. real property holding corporation" for U.S. federal income tax purposes.

Information Reporting and Backup Withholding. Payment of cash in lieu of fractional shares within the United States or conducted through certain U.S. related financial intermediaries is subject to both backup withholding and information reporting unless the beneficial owner certifies under penalties of perjury that it is not a U.S. holder (and the payor does not have actual knowledge or reason to know that the beneficial owner is a U.S. holder) or the stockholder otherwise establishes an exemption. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against such stockholder's U.S. federal income tax liability provided the required information is furnished to the Internal Revenue Service.

Approval Required

The affirmative vote of a majority of the shares issued and outstanding on the Record Date is required to approve the amendment of the Company's Charter to effect the reverse split of the Common Stock. Abstentions and "broker non-votes" will therefore have the same effect as negative votes.

Recommendation of the Board

THE BOARD UNANIMOUSLY RECOMMENDS A VOTE "FOR" THIS PROPOSAL.

PROPOSAL THREE RATIFICATION OF APPOINTMENT OF INDEPENDENT AUDITORS

Our Audit Committee, with the ratification of our Board, selected the accounting firm of Rose, Snyder & Jacobs ("**RS&J**") as the Company's independent auditors for the fiscal year ending September 30, 2011, and that selection is now being submitted to the stockholders.

A representative of RS&J will be available at the Annual Meeting to respond to appropriate questions or make any other statements such representative deems appropriate.

Stockholders are not required to ratify the appointment of RS&J as our independent auditor. However, we are submitting the appointment for ratification as a matter of good corporate practice. If stockholders fail to ratify the appointment, the Audit Committee will consider whether or not to retain RS&J. Even if the appointment is ratified, the Audit Committee may direct the appointment of a different independent auditor at any time during the year if it determines that such a change would be in the best interests of the Company and our stockholders.

Vote Required; Recommendation of the Board

In order to be ratified, proposal three must be approved by a majority of Votes Cast, assuming a quorum is present. For this purpose, abstentions will be counted as a vote against the proposal, while broker non-votes will have no effect on the outcome of the vote.

THE BOARD UNANIMOUSLY RECOMMENDS A VOTE “FOR” PROPOSAL THREE.

AUDIT FEES

The Audit Committee regularly reviews and determines whether specific projects or expenditures with our independent auditors, Rose, Snyder & Jacobs (RS&J), may potentially affect their independence. The Audit Committee’s policy is to pre-approve all audit and permissible non-audit services provided by RS&J. Pre-approval is generally provided by the Audit Committee for up to one year, detailed to the particular service or category of services to be rendered, and is generally subject to a specific budget. The Audit Committee may also pre-approve additional services of specific engagements on a case-by-case basis. All engagements of our independent registered public accounting firm in 2010 and 2009 were pre-approved by the audit committee.

The following table sets forth the aggregate fees invoiced by RS&J for the fiscal years ended September 30, 2010, and September 30, 2009:

	Year Ended September 30,	
	2010	2009
Audit fees (1)	\$ 126,200	\$ 117,000
Audit-related fees (2)	76,300	43,500
Tax fees (3)	47,050	56,900
All other fees (4)	—	57,500
Total	<u>\$ 249,550</u>	<u>\$ 364,900</u>

(1) Fees invoiced by RS&J include year-end audit and quarterly reviews of Form 10-Q.

(2) Fees invoiced by RS&J related to Arrowhead Comfort Letter and Consents, and other agreed-upon procedures.

(3) This category consists of professional services rendered by RS&J for tax return preparation.

(4) Fees in 2009 related to Sarbanes-Oxley compliance work.

REPORT OF THE AUDIT COMMITTEE

The following is the report of the Audit Committee with respect to the Company’s audited financial statements for fiscal 2010, which include the consolidated balance sheets of the Company as of September 30, 2010 and 2009, and the related consolidated statements of operations, stockholders’ equity and cash flows for each of the last two fiscal years, and the notes thereto.

Composition. The Audit Committee of the Board is comprised of three directors and operates under a written charter adopted by the Board. The members of the Audit Committee are Edward W. Frykman, Charles P. McKenney, and Douglass Given. All members of the Audit Committee are “independent,” as defined in Rule 10A-3 under the Exchange Act and Rule 4200(a)(14) of the NASDAQ Marketplace Rules, and financially literate.

Responsibilities. The responsibilities of the Audit Committee include engaging an accounting firm as the Company’s independent registered public accounting firm. Management has primary responsibility for the Company’s internal controls and financial reporting process. The independent registered public accounting firm is responsible for performing an independent audit of the Company’s consolidated financial statements in accordance with generally accepted auditing standards and for issuing a report thereon. The Audit Committee’s responsibility is to oversee these processes.

Review with Management and independent registered public accounting firm. The Audit Committee has met separately to review the Company’s consolidated audited financial statements and held discussions with

management and RS&J. Management represented to the Audit Committee that the Company's consolidated financial statements were prepared in accordance with generally accepted accounting principles. The Audit Committee discussed with RS&J matters required to be discussed by Statement on Auditing Standards No. 61, as amended, "Communication with Audit Committees."

The Company's independent registered public accounting firm also provided to the Audit Committee the written disclosures and the letter required by the Public Company Accounting Oversight Board regarding the independent registered public accounting firm's communications with the Audit Committee concerning independence, and the Audit Committee discussed the firm's independence with RS&J.

Conclusion. Based upon the Audit Committee's discussions with management and RS&J, the Audit Committee's review of the representations of management and the report of RS&J to the Audit Committee, the Audit Committee recommended that the Board include the audited consolidated financial statements in the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2010, as filed with the SEC.

This report is submitted by the Audit Committee of the Board.

Edward W. Frykman, Chairman
Charles P. McKenney
Douglass Given

PROPOSAL FOUR
ADJOURNMENT OF THE ANNUAL MEETING, IF NECESSARY, TO SOLICIT ADDITIONAL
PROXIES IF THERE ARE NOT SUFFICIENT VOTES IN FAVOR OF THE FOREGOING PROPOSALS

At the Annual Meeting and any adjournment or postponement thereof, our stockholders may be asked to consider and vote upon a proposal to adjourn the Annual Meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of the adoption of the foregoing proposals. The Board may wish to adjourn the Annual Meeting if necessary to provide additional time to solicit proxies and doing so may save the Company the time and additional expense needed with preparing and filing a new proxy statement.

Approval Required

In order to be adopted, proposal four must be approved by a majority of Votes Cast, assuming a quorum is present. For this purpose, abstentions will be counted as a vote against the proposal, while broker non-votes will have no effect on the outcome of the vote.

Recommendation of the Board

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THIS PROPOSAL.

VOTING SECURITIES OF PRINCIPAL STOCKHOLDERS AND MANAGEMENT

The following table sets forth the beneficial ownership of the Company's Common Stock as of June 14, 2011, by (i) by each of the named executive officers named in the table under "Executive Compensation and Related Information," (ii) by each director, (iii) all current directors and executive officers as a group, and (iv) the sole holder of greater than 5% of our total shares outstanding known to us. The persons and entities named in the table have sole voting and investment power with respect to all shares beneficially owned, subject to community property laws, where applicable and the address of each stockholder is c/o Arrowhead Research Corporation, 225 South Lake Avenue, Suite 300, Pasadena, California 91101.

	Number and Percentage of Shares Beneficially Owned (1)	
	Shares	Percentage
5% Beneficial Owners		
M. Robert Ching (2)	7,108,863	9.9%
Executive Officers and Directors		
R. Bruce Stewart (3)	1,265,773	1.8%
Chris Anzalone (4)	2,182,158	3.0%
Kenneth Myszkowski (5)	203,222	*
Mark Tilley (6)	169,489	*
Edward Frykman (7)	309,218	*
Charles McKenney (8)	217,125	*
Mauro Ferrari (9)	267,948	*
Douglass Given		
All executive officers and directors as a group (8 persons) (10)	4,614,933	6.4%

* Less than 1%

- (1) Based on 71,833,693 common shares issued and outstanding as of June 14, 2011. Shares not outstanding but deemed beneficially owned by virtue of the right of a person to acquire them as of June 14, 2011, or within sixty days of such date, are treated as outstanding only when determining the percentage owned by such individual and when determining the percentage owned by a group of which such individual is a member.
- (2) Includes 2,558,026 shares issuable upon the exercise of common stock purchase warrants that are exercisable within 60 days of June 14, 2011.
- (3) Includes 754,273 shares issuable upon the exercise of stock options that are exercisable within 60 days of June 14, 2011.
- (4) Includes 1,518,700 shares issuable upon the exercise of stock options, and 321,729 shares issuable upon the exercise of common stock purchase warrants that are exercisable within 60 days of June 14, 2011.
- (5) Includes 188,222 shares issuable upon the exercise of stock options that are exercisable within 60 days of June 14, 2011.
- (6) Includes 164,089 shares issuable upon the exercise of stock options, and 5,400 shares issuable upon the exercise of common stock purchase warrants that are exercisable within 60 days of June 14, 2011. Unidym, Inc. was sold in January 2011 and Dr. Tilley is no longer employed by the Company.
- (7) Includes 239,218 shares issuable upon the exercise of stock options that are exercisable within 60 days of June 14, 2011.
- (8) Includes 206,925 shares issuable upon the exercise of stock options that are exercisable within 60 days of June 14, 2011.
- (9) Includes 248,459 shares issuable upon the exercise of stock options that are exercisable within 60 days of June 14, 2011.
- (10) Includes 3,319,886 shares issuable upon the exercise of stock options, and 327,129 shares issuable upon the exercise of common stock purchase warrants that are exercisable within 60 days of June 14, 2011.

EQUITY COMPENSATION PLAN INFORMATION

The following table provides information as of September 30, 2010 with respect to shares of our Common Stock that may be issued under our equity compensation plans.

<u>Plan Category</u>	<u>Equity Compensation Plan Information</u>		
	<u>Number of securities to be issued upon exercise of outstanding options, warrants and rights</u>	<u>Weighted average exercise price of outstanding options, warrants and rights</u>	<u>Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))</u>
Equity compensation plans approved by security holders (1)	8,123,338	\$ 1.06	3,140,097
Equity compensation plans not approved by security holders	N/A	N/A	—
Total	8,123,338		3,140,097

(1) Includes 6,591,338 shares subject to the 2004 Equity Incentive Plan and 1,532,000 shares subject to the 2000 Option Plan.

Current Executive Officers of the Registrant

The names, ages and positions of our current executive officers serving as of June 14, 2011 are provided below. Biographical information regarding these officers is set forth under the following table, except for Mr. Stewart and Dr. Anzalone, whose biographies are set forth above with our other directors.

<u>Name</u>	<u>Age</u>	<u>Position with Arrowhead</u>
Christopher Anzalone	42	Chief Executive Officer, and Director
R. Bruce Stewart	73	Executive Chairman of the Board
Kenneth A. Myszkowski	45	Chief Financial Officer

Kenneth A. Myszkowski, Chief Financial Officer, brings to Arrowhead a broad range of finance and accounting experience spanning two decades in both the public and private sectors, including senior level positions at two publicly traded energy companies and, earlier in his career, in two early stage technology companies. Prior to joining Arrowhead, Mr. Myszkowski served as the corporate controller for Broadwind Energy, a \$200 million public energy company which provides products and services to the wind energy industry. Previous to his position at Broadwind, Mr. Myszkowski was controller for Epcor USA, the U.S. headquarters for Epcor Utilities, Inc., a \$4 billion public energy company. Prior to Epcor, Mr. Myszkowski was controller for two start-up ventures: NanoInk, specializing in Dip Pen Nanolithography, a nanofabrication technology, and Delphion, which provided on-line tools for intellectual property research. Mr. Myszkowski also held several corporate roles at FMC Corporation, and Premark International, both Fortune 500 conglomerates. He began his career in the audit practice of Arthur Andersen & Co. in Chicago, Illinois. Mr. Myszkowski received his undergraduate degree from the University of Illinois, and his MBA from the University of Chicago Booth School of Business. He is a certified public accountant.

SUMMARY COMPENSATION TABLE

The following table summarizes compensation paid, awarded or earned for services rendered during fiscal 2010 and fiscal 2009 by our Chief Executive Officer, and our two most highly paid executive officers serving the Company as of September 30, 2010. We refer to those persons collectively as our “Named Executive Officers”.

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Stock Awards (\$)	Option Awards (\$) (1)	All Other Compensation (\$) (2)	Total (\$)
Christopher Anzalone President & Chief Executive Officer	2010	400,000	—	—	396,800	—	796,800
	2009	394,485	—	—	737,294	—	1,131,779
Ken Myszkowski Chief Financial Officer	2010	185,096	27,419	—	95,232	1,731	309,478
	2009	—	—	—	153,940	—	153,940
Mark Tilley Former President & CEO of Unidym, Inc. (3)	2010	192,000	—	—	95,232	1,538	288,764
	2009	170,665	—	—	103,878	—	274,543

- (1) Amounts included under Options Awards reflect the grant date fair value computed in accordance with FASB ASC 718. The assumptions used to calculate the value of the stock underlying the option awards are set forth in Note 9 of the Notes to the Consolidated Financial Statements included with the Company’s Annual Report on Form 10-K for the year ended September 30, 2010.
- (2) Amounts consist of 401(k) matching contributions.
- (3) Unidym, Inc. was sold in January 2011 and Dr. Tilley is no longer an employee of the Company.

Outstanding Equity Awards at Fiscal Year-End

The following table provides information, with respect to the Named Executive Officers, concerning the Outstanding Equity Awards of the Company’s stock as of September 30, 2010.

	Option Awards (1)			
	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$)	Option Expiration Date
Christopher Anzalone	25,000	—	2.13	6/11/2018
	499,884	626,616	0.51	10/8/2019
	140,813	422,437	0.52	3/4/2020
	10,417	489,583	0.99	8/16/2020
Ken Myszkowski	44,268	205,732	0.70	11/16/19
	20,000	60,000	0.52	3/4/2020
	2,500	117,500	0.99	8/16/2020
Mark Tilley	25,000	—	1.11	1/31/12
	62,569	78,431	0.51	1/31/12
	25,000	75,000	0.52	1/31/12
	2,500	117,500	0.99	1/31/12

- (1) All option awards were granted under the 2000 Stock Option Plan or the 2004 Equity Incentive Plan of the Company. Options are priced at the market closing price on the day of the award. Options have various vesting parameters, but generally vest within 48 months or less after the award is granted.

Option Exercises and Stock Vested in Fiscal Year 2010

No named executive officers exercised any options or had any restricted stock vest in fiscal year 2010.

Section 16(a) Beneficial Ownership Reporting Compliance

Under Section 16(a) of the Securities Exchange Act of 1934, the Company's directors and officers and its significant stockholders (defined by statute as stockholders beneficially owning more than ten percent (10%) of the Common Stock) are required to file with the SEC and the Company reports of ownership, and changes in ownership, of common stock. Based solely on a review of the reports received by it, the Company believes that, during the fiscal year ended September 30, 2010, all of its officers, directors and significant stockholders complied with all applicable filing requirements under Section 16(a) except as follows: Form 3 for Ken Myszkowski was not filed timely to report his initial ownership position when he was appointed Chief Financial Officer of the Company, and Form 4s for Edward W. Frykman, Leroy T. Rahn and Charles P. McKenney were not filed timely for automatic director grants on June 16, 2010.

REVIEW AND APPROVAL OF RELATED-PARTY TRANSACTIONS

Our Board has adopted policies and procedures for the review and approval of related-party transactions and has delegated to the Audit Committee the authority to review and approve the material terms of any proposed related-party transactions. To the extent that a proposed related-party transaction may involve a non-employee director or nominee for election as a director and may be material to a consideration of that person's independence, the matter may also be considered by the other disinterested directors.

Pursuant to our Code of Business Conduct and Ethics and our Corporate Governance Committee Charter, each of our officers, directors and employees must disclose related-party transactions to our Board of Directors. In order to avoid conflicts of interest, our executive officers and directors may not acquire any ownership interest in any supplier, customer or competitor (other than nominal amounts of stock in publicly traded companies), enter into any consulting or employment relationship with any customer, supplier or competitor, or engage in any outside business activity that is competitive with any of our businesses, without first disclosing the proposed transaction. After the proposed transaction has been disclosed, a determination will be made by our Board or Audit Committee as to what course to follow, depending on the nature or extent of the conflict. Furthermore, our executive officers and directors may not serve on any board of directors of any customer, supplier or competitor unless such board service has been disclosed to us and approved by our Board.

In determining whether to approve or ratify a related-party transaction, the Board and/or Committee may consider, among other factors it deems appropriate, the potential benefits to us, the impact on a director's or nominee's independence or an executive officer's relationship with or service to us, whether the related-party transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances and the extent of the related party's interest in the transaction. In deciding to approve a transaction, the Board or Audit Committee may, in its sole discretion, impose such conditions as it deems appropriate on us or the related party in connection with its approval of any transaction. Any transactions involving the compensation of executive officers, however, are reviewed and approved by the Compensation Committee. If a related-party transaction will be ongoing, the Audit Committee may establish guidelines to be followed in our ongoing dealings with the related party. Thereafter, the Audit Committee reviews and assesses the ongoing relationship with each related party to see that it is in compliance with the committee's guidelines and that the related-party transaction remains appropriate.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

A majority of the members of the Board are independent directors, as defined by the NASDAQ Marketplace Rules. The Board has determined that all of the Company's directors are independent, except Mr. Stewart, the Company's Executive Chairman and former Chief Executive Officer, and Dr. Anzalone, the Company's Chief Executive Officer. Independent directors do not receive consulting, legal or other fees from the Company, other than Board compensation.

Nanotope and Leonardo were co-founded by the Company's President and Chief Executive Officer, Dr. Christopher Anzalone, through The Benet Group, since dissolved, and Dr. Anzalone owns approximately 14.2%

and 15.9% of the outstanding voting securities of Nanotope and Leonardo, respectively. Dr. Anzalone does not hold options, warrants or any other rights to acquire securities of Nanotope or Leonardo. Dr. Anzalone has the right to appoint a representative to the Board of Directors of each Nanotope and Leonardo. Dr. Anzalone is serving as the President and Chief Executive Officer of Nanotope. Dr. Anzalone has not received any compensation for his work on behalf of Nanotope or Leonardo since joining the Company on December 1, 2007.

On December 11, 2009, the Company sold an aggregate of 5,083,430 units in a private placement transaction with accredited investors. Each unit consisted of one share of Arrowhead Common Stock and a warrant to purchase an additional share of Common Stock exercisable at \$0.509 per share. The unit price was \$0.634, based upon the closing bid price of the Company's Common Stock on December 11, 2009, which was \$0.509, plus \$0.125 for the purchase of the warrant. Dr. Anzalone, Arrowhead's President and CEO, participated in this transaction on the same terms, investing \$100,000.

During fiscal 2010, a portion of Arrowhead employee salary costs, including Dr. Anzalone's salary and administrative overhead was charged to Nanotope and Leonardo for management and administrative services provided by Arrowhead to Nanotope and Leonardo. During fiscal 2010, the charge for services provided to Nanotope and Leonardo were \$166,204 and \$250,190, respectively. In addition, Arrowhead made cash advances to Nanotope of \$300,000 during fiscal 2010. The majority of the balance due Arrowhead is expected to be repaid in cash or converted to equity in fiscal 2011. In addition, the CEO of Leonardo, Bruce Given, is the brother of Douglass Given, a member of Arrowhead's Board of Directors; Douglass Given has no financial interest in Leonardo.

FORM 10-K

The Company will mail, without charge to any stockholder upon written request, a copy of the Company's Annual Report on Form 10-K for the year ended September 30, 2010 including the financial statements, schedules and a list of exhibits. Requests should be sent to Arrowhead Research Corporation, 225 S. Lake Avenue, Suite 300 Pasadena, CA 91101, Attn: Corporate Secretary, Phone (626) 304-3400.

Stockholders Sharing the Same Address

We may satisfy SEC rules regarding delivery of proxy statements including the proxy statement, annual report and Notice, by delivering a single Notice and, if applicable, a single set of proxy materials to an address shared by two or more of our stockholders. This delivery method can result in meaningful cost savings for us. To take advantage of this opportunity, we may deliver only one Notice, and if applicable, a single set of proxy materials to multiple stockholders who share an address, unless contrary instructions are received prior to the mailing date. Similarly, if you share an address with another stockholder and have received multiple copies of our Notice and/or other proxy materials, you may write or call us at the address and phone number below to request delivery of a single copy of these materials in the future. We undertake to deliver promptly upon written or oral request a separate copy of the Notice and/or other proxy materials to a stockholder at a shared address to which a single copy of these documents was delivered. If you hold stock as a record stockholder and prefer to receive separate copies of a Notice, and if applicable, other proxy materials either now or in the future, please contact us at the address provided below. If your stock is held through a brokerage firm or bank and you prefer to receive separate copies of a Notice and, if applicable, other proxy materials either now or in the future, please contact your brokerage firm or bank.

Arrowhead Research Corporation
225 S. Lake Avenue, Suite 300
Pasadena CA 91101
Attn: Corporate Secretary
Phone (626) 304-3400

Other Matters

The Company knows of no other matters to be submitted at the Annual Meeting. If any other matters properly come before the meeting, it is the intention of the persons named in the proxy card to vote the shares they represent as the Board may recommend.

BY ORDER OF THE BOARD OF DIRECTORS

/s/ Jane Davidson

Jane Davidson,
Secretary

Pasadena, California
June 27, 2011

Annex A

**CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
ARROWHEAD RESEARCH CORPORATION**

Arrowhead Research Corporation (the "Corporation"), a corporation organized and existing under the General Corporation Law of the State of Delaware, does hereby certify:

FIRST: That the Board of Directors of the Corporation has duly adopted resolutions (i) authorizing the Corporation to execute and file with the Secretary of State of the State of Delaware this Certificate of Amendment (the "Certificate of Amendment") of Certificate of Incorporation, as amended (the "Certificate of Incorporation") to combine each []¹ outstanding shares of the Corporation's Common Stock, par value \$0.001 per share, into one (1) share of Common Stock, par value \$0.001 per share; and (ii) declaring this Certificate of Amendment to be advisable and recommended for approval by the stockholders of the Corporation.

SECOND: That this Certificate of Amendment was duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware by the Board of Directors and stockholders of the Corporation.

THIRD: That the capital of the Corporation shall not be reduced under or by reason of this Certificate of Amendment.

FOURTH: That upon the effectiveness of this Certificate of Amendment, Article Fourth of the Certificate of Incorporation is hereby amended such that, as amended, Article Fourth shall read in its entirety as follows:

FOURTH: The total number of shares that the corporation shall have authority to issue is 150,000,000, of which 145,000,000 shares shall be common stock, \$0.001 par value ("Common Stock"), and 5,000,000 shares shall be preferred stock, \$0.001 par value ("Preferred Stock"). The Board of Directors is authorized, subject to the limitations prescribed by law and the provisions of this Article FOURTH, to provide for the issuance of the Preferred Stock in series, and by filing a certificate pursuant to the applicable laws of the State of Delaware, to establish from time to time the number of shares to be included in each such series, and to fix the designation, powers, preferences and rights of the shares of each such series and the qualifications, limitations or restrictions thereof. The authority of the Board of Directors with respect to each such series shall include, but not be limited to, the determination of the following: (a) The number of shares constituting that series and the distinctive designation of that series; (b) The dividend rate, if any, on the shares of that series, whether dividends shall be cumulative, and, if so, from which date or dates, and the relative priority, if any, of payment of dividends on shares of that series; (c) Whether that series shall have voting rights, in addition to the voting rights expressly required by law, and, if so, the terms of such voting rights; (d) Whether that series shall have conversion privileges, and, if so, the terms and conditions of such conversion, including provisions for adjustment of the conversion rate in such events as the Board of Directors shall determine; (e) Whether or not the shares of that series shall be redeemable, and, if so, the terms and conditions of such redemption, including the date or dates upon or after which they shall be redeemable, and the amount per share payable in the case of redemption, which amount may vary under different conditions and at different redemption dates; (f) Whether that series shall have a sinking fund for the redemption or purchase of shares of that series, and, if so, the terms and amount of such sinking fund; (g) The rights of the shares of that series in the event of a voluntary or involuntary liquidation, dissolution or winding up of the corporation, and the relative rights of priority, if any, of payment of shares of that series; and (h) Any other relative rights, preferences and limitations of that series.

Upon the filing of this Certificate of Amendment, each _____¹ shares of Common Stock issued and outstanding at such time shall be combined into one (1) share of Common Stock, par value \$0.001 per share (the "Reverse Stock Split").

¹ Final split ratio, within a range of 1-for-2 to 1-for-15 to be determined by Board of Directors pursuant to authority granted by stockholders, as described in the accompanying proxy statement.

No fractional share shall be issued upon the Reverse Stock Split. All shares of Common Stock (including fractions thereof) issuable upon the Reverse Stock Split to a given holder shall be aggregated for purposes of determining whether the Reverse Stock Split would result in the issuance of any fractional share. If, after the aforementioned aggregation, the Reverse Stock Split would result in the issuance of a fraction of a share of Common Stock, the Corporation shall, in lieu of issuing any such fractional share, pay the holder otherwise entitled to such fraction a sum in cash equal to the fraction multiplied by the fair market value per share of the Common Stock as determined in a reasonable manner by the Board of Directors. Upon surrender by a holder of a certificate or certificates for Common Stock (including, for this purpose, a holder of shares of Common Stock issuable upon conversion of Preferred Stock), duly endorsed, at the office of the Corporation, the Corporation shall, as soon as practicable thereafter, issue and deliver to such holder, or to the nominee or assignee of such holder, a new certificate or certificates for the number of shares of Common Stock that such holder shall be entitled to following the Reverse Stock Split.

IN WITNESS WHEREOF, the Corporation has caused this Certificate of Amendment of Amended and Restated Certificate of Incorporation to be executed by _____, its _____, this day of _____, 201__.

ARROWHEAD RESEARCH CORPORATION

By: _____
Name:
Title:

Important Notice Regarding the Availability of Proxy Materials for the Stockholder Meeting To Be Held on Monday, August 8, 2011

You may access the following proxy materials at www.edocumentview.com/ARWR

Notice of the 2011 Annual Meeting of Stockholders;
Company's 2011 Proxy Statement;
Company's Annual Report on Form 10-K for the year ended September 30, 2010; and
Form of Proxy Card

▼ IF YOU HAVE NOT VOTED VIA THE INTERNET OR TELEPHONE, FOLD ALONG THE PERFORATION, DETACH AND RETURN THE BOTTOM PORTION IN THE ENCLOSED ENVELOPE. ▼

Proxy — ARROWHEAD RESEARCH CORPORATION

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

ANNUAL MEETING OF STOCKHOLDERS

MONDAY, AUGUST 8, 2011

The undersigned stockholder of ARROWHEAD RESEARCH CORPORATION, a Delaware corporation, hereby acknowledges receipt of the Notice of Annual Meeting of Stockholders and Proxy Statement, each dated June 27, 2011, and hereby appoints Christopher Anzalone and Jane Davidson, or any of them, proxies and attorneys-in-fact with full power to each of substitution, on behalf and in the name of the undersigned, to represent the undersigned at the Annual Meeting of Stockholders of Arrowhead Research Corporation to be held on Monday, August 8, 2011 at 10:00 a.m., local time, at the Sheraton Pasadena, 303 E. Cordova Street, Pasadena, California 91101 and at any adjournment or adjournments thereof, and to vote all shares of capital stock that the undersigned would be entitled to vote if then and there personally present, on the matters set forth on the reverse side.

This Proxy, when properly executed, will be voted in the manner directed herein by the undersigned stockholder. If no direction is made, this consent will be IN FAVOR of the foregoing proposals and as the proxy holders deem advisable on such other matters as may properly come before the meeting. This Proxy is revocable with respect to any Proposal at any time before the date on which at least a majority of the outstanding shares of Common Stock have consented to that Proposal.

SEE REVERSE
SIDE

CONTINUED AND TO BE SIGNED ON REVERSE SIDE

SEE REVERSE
SIDE