UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

FORM 10-KSB/A

(Mark One)

ANNUAL REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 [FEE REQUIRED]

For the fiscal year ended September 30, 2003.

□ TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 [NO FEE REQUIRED]

For the transition period from ______ to _____

Commission file number 000-21898

ARROWHEAD RESEARCH CORPORATION

(Name of small business issuer in its charter)

Delaware (State of incorporation) 46-0408024 (I.R.S. Employer Identification No.)

1118 East Green Street Pasadena, California 91106 (626) 792-5549 (Address and telephone number of principal executive offices)

> 150 South Los Robles Ave Suite 480 Pasadena, California 91101

(former address of principal executive offices)

Securities registered under Section 12(b) of the Exchange Act:

Title of each class

Name of each exchange on which registered

None

None

Securities registered pursuant to Section 12(g) of the Exchange Act:

Common Stock, \$.001 par value

Common Stock Purchase Warrants

Check whether the issuer (1) filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the past 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes \boxtimes No \square

Check if disclosure of delinquent filers in response to item 405 of Regulation S-B is not contained in this form, and no disclosure will be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-KSB or any amendment to this Form 10-KSB \boxtimes .

Indicate by checkmark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Exchange Act. Yes 🗆 No 🗵

Issuer's revenue for its most recent fiscal year: None ⊠

The aggregate market value of issuer's outstanding Common stock held by non-affiliates was approximately \$141,662, based upon the bid price of issuer's Common Stock on January 9, 2004 (prior to the 1-for-65 "reverse split" that was consummated on January 12, 2004.)

As of January 12, 2004, 6,435,529 shares of the issuer's common stock were outstanding.

PART I

Item 1. Description of Business.

On January 12, 2004, the Company, a Delaware corporation then known as "InterActive Group, Inc.", acquired all of the issued and outstanding securities of Arrowhead Research Corporation, a California corporation (the "California corporation"). As a result of this transaction, control of the Company was changed, with the former shareholders of the California corporation owning approximately 89% of the Company's Common Stock outstanding immediately following the transaction. In addition, all of the officers and directors of the Company prior to the transaction were replaced by designees of the former shareholders of the California corporate name was changed to "Arrowhead Research Corporation." These transactions were consummated on the terms and conditions set forth in the Stock Purchase and Exchange Agreement (the "Exchange Agreement") described below.

In connection with the change in control pursuant to the Exchange Agreement, all prior business activities of the Company were completely terminated, and the Company adopted the business and plan of operations that had been developed and was in the process of implementation by the California corporation prior to the transaction. See Item 6, "Management's Discussion and Analysis or Plan of Operations," below.

Consequently, the Company currently is engaged in continuing efforts to finance research in various aspects of nanotechnology, with a view toward realizing future revenue and profit from any such technologies that might result from the Company's sponsored research. The National Nanotechnology Initiative ("NNI") has defined nanotechnology as "research and technology development at the atomic, molecular, or macromolecular levels, in the length scale of approximately 1 - 100 nanometer range[.]" At the nanoscale, materials can have unique and unexpected electrical, mechanical, optical, and chemical properties. Nanotechnology is expected to be used in a variety of diverse applications ranging from drug delivery to semiconductors to manufacturing processes.

Through January 13, 2004, the Company had entered into arrangements with the California Institute of Technology ("Caltech"), and two individual professors on the faculty of Caltech, with respect to the financing of research projects in various aspects of nanotechnology development. In consideration of the financing to be provided, the Company has obtained the exclusive right to license and commercially exploit any technology developed as a result of the research, along with any patents that are awarded to Caltech and the researchers.

The first research project which the Company is funding is under the direction of C. Patrick Collier, Ph.D. The project involves understanding and controlling assemblies of dynamically interacting biomolecules. The Company has agreed to provide \$810,000 over a 5-year period, at the rate of \$162,000 per year, which Dr. Collier and his team will use to finance direct costs, such as salaries and benefits for two post-doctoral researchers, purchase items such as chemical reagents, optical supplies, and other materials used in connection with the research program, and domestic travel to attend conferences of professional organizations whose members are involved in comparable research projects. Although the Company will also pay some indirect costs, other expenses such as the salary and benefits of Dr. Collier will be borne by Caltech. This agreement was modified on February 26, 2004, to increase the annual contract amount to \$235,894 for the first year ended \$263,218 in each of the next four years. Total project cost is not to exceed \$1,288,764 over the five-year period.

The second research project that the Company has agreed to finance is headed by Marc Bockrath, Ph.D. His applied physics group at Caltech is working on the application of nanoscale optoelectric components to chemical and biological sensors and electronic circuits. The five year financing agreement between the Company and Dr. Bockrath also specifies annual contributions of approximately \$162,000, for a total of \$810,000, to be spent on a comparable basis except that this group will use \$5,000 of the funds to purchase a computer and specialized software to perform transport measurements in connection with the project.

The Company is also engaged in negotiations with Caltech and members of its faculty pertaining to additional research agreements.

In the case of each project financed by the Company, the respective head of the research team will be required to provide a technical report to the Company at each anniversary date of the project, to include details of scientific progress and results, highlighting those that may be of possible commercial interest to the Company. In addition, the statement of work to be performed under each financing agreement will be updated on an annual basis, to reflect any changes in research goals that the parties may agree upon and/or to identify new opportunities that the parties mutually agree to pursue.

The goal of the Company in providing financing for research projects such as those described above is to obtain the rights to patentable and other intellectual property that can be used for commercial purposes. Should one or more of the projects financed by the Company result in the discovery of a technology having commercial application, it is anticipated that the Company would either start a new company, as a majority-owned subsidiary, to pursue the commercial opportunity, or license one or more third parties to use the technology for commercial purposes, in exchange for the payment of royalties to the Company.

As is the case with any research project, it is possible that no commercially viable technology will be developed as a result of any one or more of the projects that the Company has agreed to finance to date or may finance in the future. This is particularly true in the case of the projects that the Company typically will finance, since most of these projects are in the very early stages of research, well before they have generated sufficient results to attract the interest of traditional venture capital firms that focus in the high tech arena. Consequently, the Company will enter into comparable arrangements with a number of researchers in the nanotechnology field, both at Caltech and at other universities. The Company also may seek to identify and finance the research and development activities of other entrepreneurs who are working in the nanotechnology arena outside of a university setting.

Given its strategy of financing new, as yet unproven technology research, it should be expected that the Company would not realize significant revenue in the foreseeable future, if at all. For this reason, it is anticipated that the Company will generate the funds needed to finance a growing number of research projects through future sales of securities, rather than out of profits generated internally. There can, however, be no assurance that the Company will be successful in the future in raising the level of additional capital sought, or on terms currently contemplated, if at all. Should the Company prove successful in selling securities to raise the additional capital sought to finance additional research, the current stockholders of the Company will experience dilution in their percentage ownership of the Company's outstanding securities.

Although the risks taken by the Company in financing leading edge technology research may be considered to be great, management of the Company believes that the rewards to the Company and its stockholders also have the potential to be great. That is, it is anticipated that the early-stage investments to be made by the Company should enable the Company to obtain the right, at a relatively low cost per research project, to exploit one or more technologies that could have significant commercial potential. However, as is the case with any research project, there can be no assurance that a commercially viable technology will be developed as a result of any one or more of the projects that the Company has agreed to finance to date or may finance in the future.

On January 12, 2004, in connection with the transactions that resulted in the change in the Company's ownership and business, the Company acquired certain technology from San Diego Magnetics, Inc. ("SDM"). SDM is a corporation that was formed in 1998 to purchase from Eastman Kodak Company ("Kodak") the assets and properties then employed by Kodak in the ownership and activities of the Kodak San Diego Laboratories, a research and development operation in San Diego, California. The intellectual property acquired by the Company from SDM includes all know-how developed by SDM relating to thin film fabrication and design of thin film devices for magnetic sensing, nanoscale optical coatings and other thin film sensors (excluding know-how related to the sensing of currency or other documents containing stored monetary value). It also includes SDM's rights under a non-exclusive license from Kodak to use a total of 71 patents relating to thin film coatings, magnetic detectors, systems and other devices fabricated using thin film fabrication technologies. Management of the Company is continuing to evaluate, in consultation with members of its Scientific Advisory Board, whether any of the SDM technology may prove to have any meaningful value to the Company.

Management believes that the Company's success to date in raising capital to finance nanotechnology research and commercialization projects is attributable, in large part, to the belief that the plan of operations adopted by the Company is a novel one. Some companies with large R&D budgets fund early-stage, scientific research at universities, and venture capital funds invest in companies seeking to commercialize technology. However, there are few, if any, large companies that actively start new nanotech companies out of the technologies and intellectual property generated by university-sponsored research; and there are few, if any, venture capital funds that sponsor early-stage, nanoscience research at universities. Of those companies and venture funds involved in nanotechnology, few, if any, are funding research and commercialization projects in such diverse areas of nanotechnology. If the Company continues to be successful in attracting funding for research and commercialization projects, it is possible that competitors will emerge and replicate the business model. If a research project yields a technological success, other companies could compete to fund research that the Company might seek to fund.

The Company is not aware of any existing or probable governmental regulations that might have an effect on its business, except that in connection with the establishment of subsidiaries to commercialize technological developments, the provisions of the Investment Company Act of 1940, as amended, must be taken into account.

The Company, a Delaware corporation, was originally incorporated in South Dakota in 1989, and reincorporated in Delaware in 2000. Its principal executive offices are located at 1118 East Green Street, Pasadena, CA 91106, and its telephone number is (626) 792-5549. As of January 13, 2004, the Company had only one full-time employee.

Description of the Exchange Agreement

The transactions that resulted in the change in control of the Company on January 12, 2004, took place in accordance with a Stock Purchase and Exchange Agreement that originally was entered into on December 10, 2003 (the "Exchange Agreement"). Execution of the Exchange Agreement was publicly announced by joint press release on December 12, 2003, and reported by the Company in the Current Report on Form 8-K referred to under Item 13 below.

Pursuant to the Exchange Agreement, an aggregate of 5,730,000 shares of the Company's Common Stock were issued to acquire, in exchange therefor, all of the 5,730,000 shares of the common stock of Arrowhead Research Corporation (the "California corporation") then outstanding. In addition, warrants to purchase 5,909,500 additional shares of the Company's Common Stock, at the price of \$1.50 per share, were issued by the Company in exchange for warrants to purchase, at the same price per share, the same number of shares of the California corporation's common stock.

Prior to the issuance of these shares and warrants under the Exchange Agreement, the Company effected a 1-for-65 "reverse split" of its outstanding Common Stock and a 1-for-6.5 conversion of its Series A Preferred Stock into shares of Common Stock. As a result of the "reverse split" of the Common Stock and conversion of the Series A Preferred Stock, a total of 389,197 shares of Common Stock were then outstanding. An additional 316,332 shares of the Company's Common Stock, and warrants to purchase up to an additional 658,583 shares of Common Stock, at \$1.50 per share, were issued in connection with a program to reduce the total debt of the Company to not more than \$150,000, and to acquire the SDM Technology.

Pursuant to the Exchange Agreement, the Company agreed to register for resale under the Securities Act of 1933, as amended (the "Securities Act"), at the Company's cost and expense, all of the shares of the Company's Common Stock, and all of the warrants to purchase shares of the Company's Common Stock, that were issued in connection with the transactions contemplated by the Exchange Agreement, including the shares and warrants issued to the former shareholders of the California corporation, the shares and warrants issued in connection with the company's debt reduction program, and the shares and warrants issued to acquire the SDM Technology.

In December 2003, the California corporation commenced a private placement, in which it proposed to issue and sell up to 3,000,000 units, at the price of \$1.50 per unit, with each unit consisting of one share of common stock and a warrant to purchase an additional share of common stock for \$1.50. The Exchange Agreement provided that the number of shares of the Company's Common Stock, and warrants to purchase shares of the Company's Common Stock issuable at the Closing would be increased, on a share for share and warrant for warrant basis, at the completion of the Private Placement.

Item 2. Description of Property.

As of January 12, 2004, the Company's principal executive offices were located in an executive suite office that is leased, on a month-to-month basis, for a rental of \$750 per month, at 150 S. Los Robles, Suite 480, Pasadena, California 91101.

As of June 1, 2004, the Company entered into an eighteen-month lease for office space at 1118 East Green Street, Pasadena, CA 91106 for a monthly rate of \$6,125.

Item 3. Legal Proceedings.

Prior to the transactions contemplated by the Exchange Agreement, the Company was delinquent on its interest payments on its secured note and a portion of its trade accounts payable, and had several judgments against it as a result of its inability to pay its obligations to its unsecured trade creditors. In connection with the reduction of its debt as required by the terms and conditions of the Exchange Agreement, the Company has obtained releases or otherwise extinguished all claims and liens against it, except for those that total, in the aggregate, not more than \$150,000. These remaining claims and liens will be paid or otherwise satisfied in full using cash that became available to the Company as a result of the consummation of the transactions contemplated by the Exchange Agreement.

Item 4. Submission of Matters to a vote of Security Holders.

At a special meeting held on January 12, 2004, the Company's stockholders approved amendments to the Company's Certificate of Incorporation to (i) effect the 1-for-65 "reverse split" of the Company's outstanding Common Stock and the 1-for-6.5 conversion of the Company's outstanding Series A Preferred Stock into shares of the Company's Common Stock, and (ii) change the Company's corporate name from "InterActive Group, Inc." to "Arrowhead Research Corporation." All of the directors and officers of the Company, who together possessed, directly or through one or more affiliates, the power to vote at least a majority of all classes of the issued and outstanding voting securities of the Company as of the record date forthe special meeting, had indicated that they would vote, or cause to be voted, all of the securities over which they have voting control in favor of the approval of the amendments were required, and no proxies were solicited. However, all of the stockholders of record as of the record date for the special meeting were furnished a copy of the Information Statement on Schedule 14C dated December 22, 2003, that the Company filed with the U.S. Securities and Exchange Commission. Although management believes that the Information regarding the California corporation, including its financial statements, that may have been required to be included therein by the rules and regulations of the Securities and Exchange Commission.

PART II

Item 5. Market for Common Equity and Related Stockholder Matters.

Recent Market Prices

The Company's Common Stock is traded in the over-the-counter market and, through January 13, 2004 was quoted on the NASD Electronic Bulletin Board under the symbol "IACG". As a consequence of the change in the Company's name on January 12, 2004, the symbol under which the Common Stock subsequently will trade has been changed to "ARWR" During the year ended September 30, 2003, the average weekly trading volume was approximately 3,000 shares. The stock markets have experienced extreme price and volume fluctuations during certain periods. These broad market fluctuations and other factors may adversely affect the market price of the Company's Common Stock for reasons unrelated to the Company's operating performance.

The following table sets forth the high and low bid prices for a share of the Company's Common Stock during each period indicated, as quoted on the NASD Electronic Bulletin Board. Bid quotations reflect inter-dealer prices, without mark-up, mark-down or commission, and may not represent actual transactions.

	Fiscal	Fiscal Year Ended September 30,		
	20	03	2002	
	High	Low	High	Low
	.02	.005	.02	.015
er	.01	.005	.03	.01
	.015	.005	.08	.015
	.015	.005	.03	.005

On January 12, 2004, the Company effected a 65-for-1 "reverse split" of its Common Stock. The following table sets forth the high and low bid prices for a share of the Company's Common Stock during each period indicated, adjusted to give effect to the 65-for-1 "reverse split" as if it had occurred at the beginning of the first period indicated.

	Fiscal Year Ended September 30,			er 30,
-	2003		2002	
Ē	ligh	Low	High	Low
1	.30	.325	1.30	.975
	.65	.325	1.95	.65
	975	.325	5.20	.975
	975	.325	1.95	.325

On January 9, 2004, the high and low bid prices for a share of the Company's Common Stock, as quoted on the NASD Electronic Bulletin Board were both \$.045, or \$2.925 as adjusted to give effect to the 65-for-1 "reverse split" that occurred on January 12, 2004.

Shares Outstanding

At September 30, 2003, an aggregate of 5,276,039 shares of the Company's Common Stock were issued and outstanding, and owned by 441 stockholders of record, based on information provided by the Company's transfer agent. In addition, at September 30, 2003, 2,000,000 shares of Series A Preferred Stock were outstanding.

As a result in the transactions contemplated by the Exchange Agreement, including the 65-for-1 "reverse split" of the then outstanding shares of Common Stock and the 6.5-for-1 conversion of the Series A Preferred Stock into shares of Common Stock, followed by the issuance of a total of 316,332 shares of Common Stock in connection with the Company's debt reduction program and the acquisition of the SDM Technology, and the issuance of 5,730,000 shares of Common Stock to the former shareholders of the California corporation, an aggregate of 6,435,529 shares of the Company's Common Stock were outstanding as of January 12, 2004.

All of the shares of the Company's Common Stock issued in connection with the transactions contemplated by the Exchange Agreement were issued without registration under the Securities Act, in reliance upon the exemptions therefrom provided by Section 4(2) of the Securities Act and Regulation D thereunder. The Company did not receive any cash proceeds on account of any of such issuances.

Prior to the closing under the Exchange Agreement, the predecessor California corporation completed a private placement in which it raised net proceeds of \$2,393,500. See Item 6, "Management's Discussion and Analysis or Plan of Operations," below. These shares were issued without registration under the Securities Act, in reliance upon the exemptions therefrom provided by Section 4(2) of the Securities Act and Regulation D thereunder, as were the shares of Common Stock and stock purchase warrants issued to the founders of the California corporation in connection with its initial incorporation and organization.

Dividends

The Company has never paid dividends on its Common Stock and does not anticipate that it will do so in the foreseeable future. The future payment of dividends, if any, on the Common Stock is within the discretion of the Board of Directors and will depend on the Company's earnings, its capital requirements and financial condition and other relevant factors.

Description of Securities

The authorized capital stock of the Company consists of 50,000,000 shares of Common Stock, \$.001 par value, and 10,000,000 shares of Preferred Stock, \$.001 par value. As of January 12, 2004, 6,435,529 shares of the Company's Common Stock were outstanding, and no shares of the Company's Preferred Stock, were outstanding. In addition, warrants to purchase an aggregate of 6,568,083 shares of the Company's Common Stock, at the price of \$1.50 per share, were outstanding as of January 12, 2004.

Common Stock. Holders of the Company's Common Stock are entitled to receive ratably dividends out of funds legally available for that purpose if, as and when declared by the Board of Directors. The Company has never paid cash dividends on its Common Stock and the Board of Directors does not anticipate that the Company will pay cash dividends of its Common Stock in the foreseeable future. The future payment of dividends, if any, on the Company's Common Stock is within the discretion of the Board of Directors and will depend upon earnings, capital requirements, financial condition and other relevant factors. The dividend rights of the Company's Common Stock also are subject to the rights of any Preferred Stock which may be issued. Each holder of the Company's Common Stock is entitled to one vote for each share held on each matter presented for stockholder action, and there is no cumulative voting in the election of directors. Holders of the Company's Common Stock would be entitled to receive, pro rata, any assets distributable to common stockholders in respect of the number of shares held by them. The liquidation rights of the Company's Common Stock would be subject to the rights of holders of any Preferred Stock would be subject to the rights of holders of any Preferred Stock would be subject to the rights of holders of any Preferred Stock would be subject to the rights of holders of any Preferred Stock would be subject to the rights of holders of any Preferred Stock outstanding at the time of such liquidation. All outstanding shares of the Company's Common Stock are fully paid and nonassessable under the laws of the State of Delaware.

Preferred Stock. The Company is authorized to issue, subject to any limitations prescribed by the laws of the State of Delaware but without further action by the Company's stockholders, up to 10,000,000 shares of Preferred Stock from time to time in one or more series with such designations, powers, preferences and relative voting, distribution, dividend, liquidation, transfer, redemption, conversion and other rights, preferences, qualifications, limitations or restrictions as may be provided for the issue of such series by resolution adopted by the Company's Board of Directors. Such Preferred Stock could have priority over the Company's Common Stock as to dividends and as to the distribution of the Company's assets upon any liquidation, dissolution or winding up of the Company. In addition, the Company's Board of Directors may authorize and issue Preferred Stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the Company's Common Stock. The issuance of such Preferred Stock may have the effect of delaying, deferring or preventing a change in control of the Company.

Stock Purchase Warrants. All of the Common Stock purchase warrants (the "Warrants") that currently are outstanding are exercisable, on the same terms and conditions, to purchase one share of the Company's Common Stock at the price of \$1.50 per share. The Warrants are detachable from the Units and exercisable at any time, and from time to time, prior to June 30, 2013, on which date all unexercised Warrants will expire. The Warrants are redeemable at the Company's option, in whole but not in part, on 30 days' prior written notice, at the price of \$0.001 per Warrant, provided that the closing bid price for a share of the Company's Common Stock has equaled or exceeded \$3.00 per share for 20 consecutive trading days ending not more than 15 days prior to the date of the redemption notice. Holders will be required to exercise their Warrants within 30 days or accept the \$0.001 per Warrant redemption price.

Limitation of Liability; Indemnification.

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

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

Item 6. Management's Discussion and Analysis or Plan of Operations.

General

Statements contained in this Annual Report on Form 10-KSB, which are not purely historical, are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, including but not limited to statements regarding the Company's expectations, hopes, beliefs, intentions or strategies regarding the future. Actual results could differ materially from those projected in any forward-looking statements as a result of a number of factors, including those detailed in "Risk Factors" below and elsewhere in this Annual Report on Form 10-KSB. The forward-looking statements are made as of the date hereof, and the Company assumes no obligation to update the forward-looking statements, or to update the reasons why actual results could differ materially from those projected in the forward-looking statements.

Plan of Operations

The Company was incorporated in 1989 to develop multimedia hardware and software products, and introduced its first software product in July 1991. In November 1992, the Company introduced its first SoundXchange business audio hardware product, which was designed to be marketed to large and small businesses that have existing local and wide area networks of personal computers, and businesses that plan to connect existing personal computers into such a network. On July 16, 1993, the Company completed its initial public offering, selling 1,000,000 Units, each consisting of one share of Common Stock and one redeemable Common Stock purchase warrant, at the price of \$4.50 per Unit, raising gross proceeds of \$4,500,000.

Over the next two years, anticipated sales of SoundXchange products did not materialize and the Company sustained operating losses. In 1995, without additional sources of funding, the Company substantially reduced its operations and, except for sporadic sales of SoundXchange products out of existing inventories, subsequently did not conduct any significant business activities for several years.

In 2002, the Company created a Carlsbad Security Products Division in an effort to develop, market and sell networked monitoring and security systems that would incorporate third party security components, such as digital video recorders and video cameras, with the Company's SoundXchange products and proprietary software. In connection therewith, the Company obtained a \$100,000 loan to finance these efforts and defray general and administrative purposes. However, through September 30, 2003, the Company had not sold any networked security products, and had spent substantially all of the proceeds of the loan.

The Company had no significant source of revenue for the past several years, leading to sustained operating losses and significant working capital deficiencies. During the year ended September 30, 2003, the Company generated a loss of approximately \$286,000, on revenue of less than \$3,000. As of September 30, 2003, the Company's current liabilities exceeded its current assets by approximately \$1,840,000, the Company was not involved in the production of any products or providing services on a significant level, and it had no direct employees. At that time, the Company's management concluded that efforts to develop a securities products or other viable business were not likely to prove successful, in the absence of the availability of significant sources of financing, if at all. Consequently, after devoting more than ten years in various attempts to develop a profitable, ongoing business, and without realistic sources of additional financing in sight, management of the Company was receptive when approached by representatives of the California corporation concerning a possible business combination on some basis. Subsequent discussions led to the execution of the Exchange Agreement in December 2003, followed by the closing of the transactions contemplated thereby on January 12, 2004. See Item 1, "Description of Business," for additional information regarding the Exchange Agreement and the transactions consummated thereunder.

As a consequence of the change in control of the Company resulting from the transactions contemplated by the Exchange Agreement, the Company has adopted a new plan of operations. For a more detailed description of the Company's currently planned business activities, see Item 1, "Description of Business."

Financial Resources

In October 2003, prior to the Closing under the Exchange Agreement, the California corporation completed a private placement in which it issued and sold, for an aggregate purchase price of \$2,645,000, Units each consisting of one share of common stock and a warrant to purchase an additional share of common stock for the price of \$1.50. As of January 12, 2004, the Company used approximately \$324,000 of the net proceeds from this private placement to fund research projects and retained approximately \$1,900,000 in cash and marketable securities that can be used to finance additional research. Of these retained funds, a total of \$1,296,000 has been committed to meet the Company's future obligations over 4-year periods under the two research projects that it has already agreed to finance. See Item 1, "Description of Business" above.

In December 2003, the California corporation commenced a private placement, in which it proposed to issue and sell up to 3,000,000 units, at the price of \$1.50 per unit, with each unit consisting of one share of common stock and a warrant to purchase an additional share of common stock for \$1.50. The private placement was well over-subscribed, and was consummated on January 31, 2004, with the Company selling 6,965,017 units to raise \$9,456,207 in net proceeds.

Given the Company's minimal level of ongoing operational expense (with only one employee at January 12, 2004 and the limited amount of office space leased), the Company's cash requirements for the next twelve months are dependent primarily on whether or not the Company agrees to finance additional research projects, or establishes one or more subsidiaries to commercialize a developed technology. Since it is anticipated that the Company will not internally generate revenue or profits in the near term, the Company's plan of operations contemplates that the Company will seek to raise additional capital as necessary, if, as and when it has identified a suitable candidate or candidates for sponsorship that requires funding in excess of the Company's then available resources.

As a result of the transactions contemplated by the Exchange Agreement, and as a condition thereto, the Company was required to enter into agreements with the holders of its outstanding debt and other obligations, pursuant to which the total debt of the Company as of the date of the closing under the Exchange Agreement would be reduced to not more than \$150,000. The funds raised by the California corporation that became available to the combined companies as a consequence of the Exchange Agreement will be used by the Company to satisfy these remaining debt obligations.

Risk Factors

An investment in the Company should be considered speculative, and to involve a high degree of risk. In addition to the other information contained in this Annual Report on Form 10-KSB, prospective investors should carefully consider the following risk and speculative factors:

Unproven Plan of Operations. As a consequence of the change in the control of the Company on January 12, 2004, all efforts that were previously initiated in an attempt to develop a viable business plan have been abandoned. In place thereof, the Company has adopted, as a new plan of operations, the strategy that was only recently formulated by the California corporation following its formation in May 2003. To date, implementation of this strategy has been limited, with only two research projects having been selected for funding. Accordingly, the Company's business and operations should be considered to be in the development stage, subject to all of the risks inherent in the establishment of new business ventures. For this reason, the intended business and operations of the Company may not prove to be successful. Any future success that the Company might enjoy will depend upon many factors including factors which may be beyond the control of the Company, or which cannot be predicted at this time. The Company may encounter unforeseen difficulties or delays in the implementation of its plan of operations which could have a material adverse effect upon the financial condition, business prospects and operations of the Company and the value of an investment in the Company. The value of an investment in the Company can also be adversely affected by a number of external factors, such as conditions prevailing in the securities markets and/or the economy generally. Consequently, an investment in the Company is highly speculative and no assurance can be given that purchasers of the Company's securities will realize any return on their investment or that purchasers will not lose their entire investment.

Risks Inherent in Research Projects. As is the case with any research project, it is possible that no commercially viable technology will be developed as a result of any one or more of the projects that the Company has agreed to finance to date or may finance in the future. This is particularly true in the case of the projects that the Company typically will finance, since most of these projects are in the very early stage of research, well before they have generated sufficient results to attract the interest of traditional venture capital firms that focus in the high tech arena.

Lack of Revenue; No Assurance of Profitability; Need to Raise Additional Capital. To date, the Company has not generated any revenue as a result of its current plan of operations. Moreover, given its strategy of financing new, as yet unproven technology research, it should be expected that the Company would not realize significant revenue in the foreseeable future, if at all. For this reason, it is anticipated that the Company will be required to generate the funds needed to finance a growing number of research projects through future sales of securities, rather than out of profits generated internally. In the event that the Company were unable in the future to raise the level of additional capital sought, or on terms currently contemplated, if at all, it could be required to delay implementation of its plan of operations on the scale currently contemplated, and the Company might lose the opportunity to sponsor one or more research projects that management believed have substantial commercial promise.

Possibility of Competition. Management believes that the Company's success to date in raising capital to finance nanotechnology research and commercialization projects is attributable, in large part, to the belief that the plan of operations adopted by the Company is a novel one. If the Company continues to be successful in attracting funding for research and commercialization projects, it is possible that competitors could emerge and compete for financing. Should that occur, the Company could encounter difficulty in raising funds to finance its future operations and further research and commercialization projects. Some companies with large research and development budgets fund early-stage, scientific research at universities and venture capital funds invest in companies seeking to commercialize technology. It is possible that these companies and venture funds, as well as possible additional competitors, will emerge to finance similar research projects. Should that occur, the Company could encounter difficulty in obtaining the opportunity to finance research and commercialization projects that management believes could have significant potential for commercial returns to the Company. Furthermore, should any commercial undertaking by the Company, with respect to a particular product or technology, prove to be successful, there can no assurance that competitors with greater financial resources than the Company will not emerge that offer similar, and thus competitive, products and/or technologies.

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Limited Public Market for and Possible Fluctuations in the Market Price of the Common Stock. Prior to the change in control of the Company on January 12, 2004, trading in the Company's Common Stock was very sporadic. As a consequence of the 65-for-1 "reverse split" of the Common Stock on January 12, 2004, the number of shares of the Common Stock available for public sale has become extremely limited. Unless and until additional shares of Common Stock enter the public "float", through sales of shares acquired by the former shareholders of the California corporation under Rule 144 or pursuant to a registration statement filed under the Securities Act in accordance with registration rights granted to such shareholders, it may be expected that fluctuations will occur in the market prices for the Company's Common Stock. Sales of a number of the shares of Common Stock under Rule 144 or pursuant to such a registration statement, or even the possibility of such sales, could have a significant depressing effect on the market price for the Company's Common Stock and Warrants. In addition, the public markets for securities such as the Company's Common Stock and Warrants historically have experienced extreme price and volume fluctuations during recent periods. These broad market fluctuations, and other factors such as general economic conditions and trends in the investment markets, may adversely affect the market price of the Company's Common Stock and Warrants for reasons unrelated to the Company or its operating performance.

Dilution Through Sales of Additional Securities. The Company is authorized to issue an aggregate of 50,000,000 shares of Common Stock without approval of the Company's stockholders, on such terms and at such prices as the Board of Directors of the Company may determine. Of these shares, an aggregate of 6,435,529 shares of Common Stock had been issued as of January 13, 2004, 6,568,083 are reserved for issuance upon exercise of stock purchase warrants, and 3,000,000 are reserved for issuance upon exercise of stock options that may be granted by the Board of Directors to employees, consultants and others expected to provide significant services to the Company. More than 37,000,000 shares of Common Stock remain available for issuance by the Company to raise additional capital, in connection with prospective acquisitions, upon exercise of future stock option grants, or for other corporate purposes. Issuances of additional shares of Common Stock would result in dilution of the percentage interest in the Company's Common Stock of all stockholders ratably, and might result in dilution in the tangible net book value of a share of the Company's Common Stock, depending upon the price and other terms on which the additional shares are issued.

Market Overhang; Warrants. The Company has agreed to register for resale under the Securities Act, all of the shares of Common Stock and warrants issued in connection with the transactions contemplated by the Exchange Agreement. Sales of shares pursuant to such registration, or even the potential for such sales, could have a depressing effect upon the price at which the Common Stock may be traded in the over-the-counter market. In addition, the issuance of shares of Common Stock upon exercise of the warrants, or the prospect of such issuance, may be expected to have an effect on the market for the Common Stock, and may have an adverse impact on the price at which shares of Common Stock trade.

Arbitrary Determination of Warrant Exercise Price. The price at which the Warrants may be exercised to purchase shares of Common Stock was arbitrarily determined by the Company alone, and bears no relationship to earnings, asset values, book value or any other recognized criteria of value. No independent third party, such as an investment banking firm or other expert in the valuation of businesses or securities, has made an evaluation of the economic potential of the Company or the value of a share of the Company's Common Stock.

Early Call of Warrants for Redemption. The Warrants may be redeemed by the Company at any time following issuance, upon 30 day's prior written notice to the holders thereof, provided that a public market for the underlying shares of Common Stock then exists and the closing bid price for a share of the Company's Common Stock for 20 consecutive trading days ending not more than 15 days prior to the date of the redemption notice equals or exceeds \$3.00 per share. Redemption of the Warrants prior to their stated expiration would deprive purchasers of the opportunity to hold the Warrants to profit from a possible increase in the market price of the Company's Common Stock. In that event, the holders could be forced to exercise the Warrants and pay the exercise price at a time when it might be disadvantageous for the holders to do so, to sell the Warrants when they might otherwise wish to hold them, or to accept the redemption price, which may be substantially less than the market value of the Warrants at the time of redemption. Warrant holders who fail to exercise their Warrants will experience a corresponding decrease in their interest in the Company relative to the ownership interest of those Warrant holders who do exercise their Warrants.

Possible Issuance of Preferred Stock Having Preferences over the Common Stock; Possible Change in Control Provisions. Although no shares of Preferred Stock currently are outstanding, and the Company has no present plan to issue any shares of Preferred Stock, the issuance of Preferred Stock in the future could provide voting or conversion rights that would adversely affect the voting power or other rights of the holders of Common Stock and thereby reduce the value of the Common Stock. In addition, the issuance of Preferred Stock may have the effect of delaying, deferring or preventing a change in control of the Company. In particular, specific rights granted to future holders of Preferred Stock could be used to restrict the Company's ability to merge with or sell its assets to a third party, or otherwise delay, discourage or prevent a change in control of the Company.

No Dividends. The Company does not anticipate that it will pay dividends in the foreseeable future. Instead, the Company intends to apply any earnings to the development and expansion of its business.

Item 7. Financial Statements.

On January 12, 2004, the Company issued shares of its Common Stock, along with warrants to purchase additional shares of Common Stock, in exchange for all of the issued and outstanding securities of Arrowhead Research Corporation, a California corporation. As a result of this transaction, the California corporation became a wholly-owned subsidiary of the Company, and the former shareholders of the California corporation acquired approximately 88.9% of the Company's Common Stock outstanding immediately thereafter. Since the transaction resulted in such a significant change in control of the Company, it has been accounted for as though the California corporation acquired the Company, through a purchase of the net assets of the Company by the California corporation. Therefore, the financial statements of the Company, a Delaware corporation whose name has been changed to "Arrowhead Research Corporation," are deemed to be those of the California corporation from its inception, and will reflect consolidated operations of the two companies only from and after January 12, 2004. These financial statements, along with the notes thereto and the report of the Company's independent certified public accountant thereon, required to be filed in response to this Item 7 are attached hereto as Exhibits under Item 13 below.

Item 8. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

As reported in a Current Report on Form 8-K previously filed by the Company, on January 7, 2004, the Company's Board of Directors selected a new independent certified public accountant, Kevin G. Breard, CPA, An Accountancy Corporation, to replace the Company's previous accountants, McGladrey & Pullen LLP, in connection with the change in control of the Company resulting from the transactions provided for in the Exchange Agreement. The reports of McGladrey & Pullen LLP on the Company's financial statements as of September 30, 2002 and 2003, and for each of the fiscal years in the 2-year period ended September 30, 2003, contained an explanatory paragraph concerning substantial doubt about the Company's ability to remain a going concern. However, during this 2-year period, there were no disagreements with the former accountants on any matter of accounting principles and practices, financial statement disclosure, or auditing scope or procedure.

Item 8A. Controls and Procedures.

As of a date within 90 days of the date of this Annual Report on Form 10-KSB, the principal executive and financial officer of the Company conducted an evaluation of the effectiveness of the design and operation of the Company's disclosure controls and procedures pursuant to Rule 13a-14 under the Securities Exchange Act of 1934, as amended. Based upon that evaluation, the principal executive and financial officer concluded that the Company's disclosure controls and procedures are effective in timely alerting him to material information relating to the Company that is required to be included in its filings with the Securities and Exchange Commission. There have been no significant changes in the Company's internal controls or in other factors that could significantly affect these controls subsequent to the date this evaluation was carried out.

PART III

Directors, Executive Officers, Promoters and Control Persons; Compliance with Section 16(a) of the Exchange Act. Item 9.

Executive Officers and Directors

As described above, all of the officers and directors of the Company were replaced in connection with the change in control of the Company that occurred on January 12, 2004. As a consequence, the executive officers and directors of the Company currently are as follows:

Name	Age	Title
R. Bruce Stewart	66	President and Director
Edward W. Frykman	66	Director
James M. Phillips, Jr.	55	Secretary and Director
LeRoy T. Rahn	66	Director
Charles Patrick Collier	29	Director
Marc W. Bockrath	29	Director

R. Bruce Stewart devoted much of his time from February 2003 to the present to the formation of the California corporation and the 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 and as Chairman until April 2000. From August 1977 to March 1991, Mr. Stewart was the President of Annandale Corporation. He also was a licensed principal of Annandale Securities, Inc., a licensed broker-dealer. Mr. Stewart has served as a director of the Company since the inception of the predecessor California corporation in May 2003.

Edward W. Frykman has been an Account Executive with Crowell, Weedon & Co. since 1992. Previously, 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. He currently serves on the Board of Directors of Acacia Research Corporation. Mr. Frykman has served as a director of the Company since the inception of the predecessor California corporation in May 2003.

James M. Phillips, Jr. practiced corporate and securities law in Los Angeles and Orange Counties for 25 years, as an associate attorney with Gibson, Dunn & Crutcher and Paul, Hastings, Janofsky & Walker, a partner of Brobeck, Phleger & Harrison, and in his own corporate securities law firm. Since 1998, Mr. Phillips has served, on part-time basis, as general counsel for a Southern California high technology company, and as a principal owner and chief financial officer of a small Southern California manufacturer of industrial firefighting equipment and military aircraft components, primarily responsible for implementing an ongoing program of growth through acquisitions. Mr. Phillips has served as a director of the Company since the inception of the predecessor California corporation in May 2003.

LeRoy (Lee) T. Rahn was a partner with the intellectual property law firm of Christie, Parker & Hale for more than 30 years, whose practice focused on assisting clients in protecting their intellectual property through obtaining, maintaining and enforcing patents and other legal rights. He retired from the law firm's partnership in 2003, but remains affiliated with the firm on an "of counsel" basis. He is a former president of the Los Angeles Intellectual Property Association and frequently makes presentations on intellectual property law to legal and trade groups. Prior to becoming an attorney, Mr. Rahn obtained a degree in electrical engineering. He joined the Company's Board of Directors in December 2003.

Charles Patrick Collier has been a Professor in the Division of Chemistry and Chemical Engineering at Caltech since 2001, following completion of postdoctoral work at UCLA. He graduated from Oberlin College in 1991, and received his Ph.D from the University of California at Berkeley in 1998. Dr. Collier is a member of the American Chemical Society and the American Physical Society, and has served as a reviewer for articles published in numerous scientific publications. He received a U.S patent in 2001 for his work involved in "Electrically Addressable Volative Non-Volative Molecular-Based Switching Devices". Dr. Collier joined the Company's Board of Directors in December 2003.

Marc W. Bockrath became a Professor in 2002 in the Department of Applied Physics at CalTech. He received a B.S degree in 1993 from the Massachusetts Institute of Technology, his Ph.D in 1999 from the University of California at Berkeley, and completed post-doctoral research at Harvard University prior to joining the Caltech faculty. Dr. Bockrath is the author or co-author of numerous publications on subjects in the nanotechnology field, and has made a number of presentations to both domestic and international scientific associations. He joined the Company's Board of Directors in December 2003.

Directors of the Company are elected by the shareholders for a one-year term, and until their successors are elected at the next annual meeting of shareholders. Officers are appointed by and serve at the discretion of the Board of Directors.

Compensation of executive officers is determined, from time to time, by the Board of Directors. Each director of the Company who is not otherwise employed full time by the Company will be paid \$100.00 for each Board meeting attended, and will be reimbursed for their travel expenses in attending Board meetings.

As of January 12, 2004, the Company had not adopted a code of ethics as required by the rules and regulations of the Securities and Exchange Commission. Subsequently, the Company did adopt such a code of ethics, as reported in the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on March 31, 2004.

Item 10. Executive Compensation.

Summary Compensation Table

The following Summary Compensation Table sets forth all compensation paid or accrued by the Company for services rendered in all capacities during the fiscal year ended September 30, 2003, to each executive officer of the Company.

		Long-Term Compensation		sation				
		Annual Compensation		Awa	ards	Payouts		
					Sto	ock	LTIP	
Name and Principal Position	Year	Salary	Bonus	Other	Awards	Options	Payouts	l Other pensation
R. Bruce Stewart,	2003	\$25,000						
President ⁽¹⁾								
James M. Phillips, Jr.	2003		_			_	_	\$ 9,450
Secretary ⁽²⁾								

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⁽¹⁾ Mr. Stewart is paid an annual salary of \$60,000. Includes all amounts paid to Mr. Stewart by Arrowhead Research Corporation, the California corporation that was a predecessor of the Company.

⁽²⁾ During the year ended September 30, 2003, Mr. Phillips was paid a total of \$9,450 for services rendered in connection with the incorporation and organization of Arrowhead Research Corporation, the California corporation that was a predecessor of the Company, and its initial private placement. Commencing October 1, 2003, Mr. Phillips has agreed to provide administrative and legal services to the Company (and its predecessor) in exchange for a monthly retainer of \$2,250, increasing to \$4,500 on January 1, 2004.

Stock Options

Under the 2000 Stock Option Plan (the "2000 Plan") that was previously adopted by the Company's Board of Directors and approved by its stockholders, options to purchase up to 3,000,000 of the Company's Common Stock may be granted over a period of up to ten years. If an option granted under the 2000 Plan expires or terminates, the shares subject to any unexercised portion of that option will again become available for the issuance of further options under the 2000 Plan. Options may be granted under the 2000 Plan which are intended to qualify as incentive stock options ("ISO's") under Section 422A of the Internal Revenue Code of 1986, as amended (the "Code"), or, alternatively, as stock options which will not so qualify ("Nonstatutory Stock Options"). The 2000 Plan terminates on September 30, 2010, and no options would be granted under the 2000 Plan thereafter.

In connection with the transactions contemplated by the Exchange Agreement, all options previously granted under the 2000 Stock Option Plan were terminated by agreements with the holders thereof, and options to purchase 300,000 shares were granted under the 2000 Stock Option Plan to replace previous options to purchase shares of the California corporation's common stock. Included among these option grants were an option to purchase 150,000 shares, at \$.20 per share, granted to a consultant for providing financial, accounting and operational services to the Company, and options to purchase 50,000 shares, at \$1.00 per share, granted to each of Messrs. Rahn, Collier and Bockrath in connection with their election to the Company's Board of Directors in December 2003. In December 2003, the consultant exercised his option to purchase 75,000 of the shares subject thereto. Accordingly, as of January 12, 2004, options to purchase a total of 225,000 shares of Common Stock, at a weighted average exercise price of \$.0.73 per share, remained outstanding under the 2000 Stock Option Plan, as set forth in the following table:

Equity Compensation Plan Information

Plan	Number of Shares of Common Stock Issuable Upon Exercise of Outstanding Options	Exerc	ted Average ise Price of iding Options	Number of Shares of Common Stock Available for Future Grants
2000 Stock Option Plan	225,000	\$	0.73	2,700,000

Item 11. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The following table sets forth certain information as of January 12, 2004, with respect to the beneficial ownership of the Company's Common Stock by (i) each person or group known by the Company to be the beneficial owner of more than 5% of the then outstanding shares of the Company's Common Stock, (ii) each director of the Company, (iii) each executive officer of the Company named in the Summary Compensation Table in Item 10 below, and (iv) all directors and executive officers of the Company as a group. Unless otherwise indicated in the footnotes, each person listed below has sole voting and investment power with respect to the shares beneficially owned by such person, subject to applicable community property laws, and the address of each such person is care of the Company, 1118 East Green Street, Pasadena, CA 91106.

	Name and Address of Beneficial Owner	Shares Beneficially Owned ⁽¹⁾	Percent of Class ⁽¹⁾
Robert M. and Phyllis J. Ching Living Trust ⁽²⁾ 150 Limelight Way Oroville, CA 95966		1,500,000	23.6
Kreuzfeld Ltd ⁽³⁾ Frohalpstr. 20 Zurich 8038, Switzerland		1,300,000	18.8
TPR Group, Inc. ⁽⁴⁾ 6359 Paseo del Lago Carlsbad, California 92009		1,186,134	17.1
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Nicolas Rogivue ⁽⁵⁾ Bahnhofstr. 94 Zurich 8001, Switzerland	1,100,000	14.7
Robert B. Stewart ⁽⁶⁾ 2007 Altura Drive Corona del Mar, CA 92625	800,000	11.7
Thomas C. Stewart ⁽⁶⁾ 1112 40th Street Sacramento, CA 95819	800,000	11.7
Drake Revocable Trust ⁽⁷⁾ P.O. Box 1448 Chino, CA 95927	583,500	8.8
R. Bruce Stewart ⁽⁸⁾	711,500	10.8
James M. Phillips, Jr ⁽⁹⁾	400,000	6.1
Edward K. Frykman ⁽¹⁰⁾	100,000	1.6
LeRoy (Lee) T. Rahn (11)	50,000	*
Charles Patrick Collier (11)	50,000	*
Marc W. Bockrath ⁽¹¹⁾	50,000	*
All directors and officers (six individuals) ⁽⁸⁾⁽⁹⁾⁽¹⁰⁾⁽¹¹⁾	1,321,000	18.7

- * Less than one percent.
- ⁽¹⁾ Beneficial ownership is determined in accordance with the rules and regulations of the Securities and Exchange Commission, based on information furnished by each person listed. Beneficial ownership includes shares that each named stockholder has the right to acquire within sixty days. In calculating percentage ownership, all shares which a named stockholder has the right to so acquire are deemed outstanding for the purpose of computing the percentage ownership of that person, but are not deemed outstanding for the purpose of computing the percentage ownership of any other person. Listed persons may disclaim beneficial ownership of certain shares.
- ⁽²⁾ Includes 1,500,000 shares of Common Stock owned of record, but does not include warrants to purchase, at \$1.50 per share, an additional 1,500,000 shares of Common Stock that are not exercisable within 60 days of the date of this report. Robert M. and Phyllis Ching share voting and investment power with respect to all of these securities.
- ⁽³⁾ Includes 750,000 shares of Common Stock owned of record, plus warrants to purchase, at \$1.50 per share, an additional 550,000 shares of Common Stock.
- ⁽⁴⁾ Includes 350,805 shares of Common Stock owned of record by TPR Group, Inc., plus warrants to purchase, at \$1.50 per share, an additional 90,806 shares of Common Stock. Also includes 59,038 shares of Common Stock owned of record by Old TPR, Inc., an affiliate of TPR Group, Inc., plus warrants held by Old TPR, Inc. to purchase, at \$1.50 per share, an additional 112,196 shares of Common Stock. Also includes 116,118 shares of Common Stock, and warrants to purchase, at \$1.50 per share, an additional 242,329 shares of Common Stock, owned of record by William J. Hanson, 677 shares of Common Stock owned of record by J. Randolph Sanders, and 68,947 shares of Common Stock and warrants to purchase, at \$1.50 per share, an additional 145,218 shares of Common Stock owned of record by Richard Love, each of whom is a director of TPR Group, Inc. William J. Hanson, J. Randolph Sanders, and Richard Love, the directors, executive officers and principal shareholders of TPR Group, Inc., share voting and investment power with respect to all of these securities.
- ⁽⁵⁾ Includes 550,000 shares of Common Stock owned of record, plus warrants to purchase, at \$1.50 per share, an additional 500,000 shares of Common Stock
- ⁽⁶⁾ Includes, in each case, 300,000 shares of the Company's Common Stock owned of record, plus warrants to purchase, at \$1.50 per share, an additional 500,000 shares of Common Stock.

- ⁽⁷⁾ Includes 333,500 shares of Common Stock owned of record, plus warrants to purchase, at \$1.50 per share, an additional 250,000 shares of Common Stock.
- ⁽⁸⁾ Includes 471,500 shares of the Company's Common Stock owned of record by Mr. Stewart, plus warrants to purchase, at \$1.50 per share, an additional 240,000 shares of Common Stock. Does not include an aggregate of 600,000 shares of Common Stock, and warrants to purchase, at \$1.50 per share, an additional 1,000,000 shares of Common Stock that are owned of record by Robert B and Thomas C. Stewart, adult sons of Mr. Stewart, the beneficial ownership of all of which is disclaimed by Mr. Stewart.
- ⁽⁹⁾ Includes 150,000 shares of Common Stock owned of record by Mr. Phillips, plus warrants to purchase, at \$1.50 per share, an additional 250,000 shares of Common Stock.
- (10) Includes 50,000 shares of Common Stock owned of record by Mr. Frykman, plus warrants to purchase, at \$1.50 per share, an additional 50,000 shares of Common Stock.
- ⁽¹¹⁾ In each case, all of these shares are issuable upon exercise of a stock option to purchase, at \$1.00 per share, 50,000 shares of the Company's Common Stock.

Item 12. Certain Relationships and Related Transactions.

In connection with the incorporation and initial organization of the California corporation that was acquired by the Company pursuant to the terms and conditions of the Exchange Agreement, Messrs. Stewart, Phillips and Frykman purchased units consisting of shares of common stock and stock purchase warrants for the price of \$.001 per unit. The shares and warrants comprising these units were subsequently acquired by the Company in exchange for the shares of the Company's Common Stock and warrants to purchase shares of the Company's Common Stock currently held by each such individual. See Items 1 and 11 above.

Messrs. Rahn, Collier and Bockrath were each granted an option to purchase 50,000 shares of the California corporation's common stock upon becoming a director of the California corporation. In exchange for these options, each individual received an option to purchase 50,000 shares of the Company's Common Stock pursuant to the transactions contemplated by the Exchange Agreement. See Items 1 and 11 above. The Company had no preexisting relationship with either Professor Collier or Professor Bockrath prior to the time when the President of the Company was introduced to each by representatives of Caltech as potential recipients of research sponsorship.

On January 12, 2004, immediately prior to consummation of the transactions contemplated by the Exchange Agreement, TPR Group, Inc. (including its directors and affiliates) owned approximately 83% of the Company's outstanding Common Stock and 100% of the Company's Series A Preferred Stock then outstanding. In connection with the debt conversion program which was required by the Exchange Agreement, TPR Group, Inc. (including its directors and affiliates) received 272,936 shares of the Company's Common Stock (on a post "reverse split" basis) and warrants to purchase, at \$1.50 per share, an additional 574,865 shares of the Company's Common Stock. For a further description of the transactions contemplated by the Exchange Agreement, please see Item 1 above.

Each of the other stockholders identified in the beneficial ownership table set forth under Item 11 above acquired all of their respective shares of Common Stock and warrants to purchase shares of Common Stock as a consequence of the exchange of securities that occurred in connection with the closing of the transactions contemplated by the Exchange Agreement. See Item 1 above.

Prior to the negotiations that led to the change in control of the Company, there were no preexisting relationships between Arrowhead Research (the California corporation) and either TPR Group, Inc. or SDM. SDM was a majority owned subsidiary of TPR Group, Inc., the principal stockholder of InterActive Group, Inc., the Delaware corporation. However, when representatives of the California corporation learned that SDM possessed certain technology in the "nanotech" field, it was agreed that TPR Group would cause certain of the SDM technology to be acquired by InterActive Group prior to closing of the exchange transaction, in consideration of a small number of shares of Common Stock and Warrants.

Item 13. Exhibits and Reports on Form 8-K.

(a) Financial Statements, Financial Statement Schedules and Exhibits.

The following documents are filed herewith or incorporated herein by reference, as set forth in the Index to Financial Statements appearing on page F-1 and the Index to Exhibits appearing on page 23. As a result of the "reverse acquisition" of registrant by Arrowhead Research Corporation, a California corporation, the financial statements of the registrant, a Delaware corporation currently named Arrowhead Research Corporation, are deemed to be the historical financial statements of Arrowhead Research Corporation, the California corporation.

(1) Financial Statements

Report of Independent Public Accountants dated December 23, 2003.

Balance Sheet of Arrowhead Research Corporation, September 30, 2003.

Statement of Operations of Arrowhead Research Corporation for the period from May 7, 2003 (inception) through September 30, 2003. Statement of Shareholders' Equity of Arrowhead Research Corporation for the period from May 7, 2003 (inception) through September 30, 2003.

Statement of Cash Flows of Arrowhead Research Corporation for the period from May 7, 2003 (inception) through September 30, 2003.

Notes to Financial Statements of Arrowhead Research Corporation.

(2) Financial Statement Schedules

None

(3) Exhibits:

Exhibit No.	Description
2.1	Stock Purchase and Exchange Agreement dated December 10, 2003, by and among InterActive Group, Inc. and the several stock and warrant holders of Arrowhead Research Corporation, a California corporation. *
3.1	Certificate of Incorporation of InterActive Group, Inc., a Delaware corporation. (1)
3.2	Certificate of Amendment of Certificate of Incorporation of InterActive Group, Inc., providing for the "reverse split" of the corporation's outstanding common stock, the conversion of the outstanding preferred stock into shares of common stock, and the change of the corporation's name to "Arrowhead Research Corporation." (2)
3.3	Bylaws (1)
4.1	Registration Rights Agreement dated January 12, 2004 *
4.2	Standstill and Registration Rights Agreement dated January 12, 2004 *
10.1	2000 Stock Option Plan (1)
10.2	Research Agreement with California Institute of Technology regarding the research of C. Patrick Collier **
10.3	Research Agreement with California Institute of Technology regarding the research of Marc Bockrath **
21	Subsidiary *
31	Section 302 Certification **
32	Section 906 Certification **

* Previously filed as part of this Annual Report on Form 10-KSB.

- ** Filed herewith.
- (1) Incorporated by reference from the exhibits to the Schedule 14C filed by registrant on December 22, 2000.
- (2) Incorporated by reference from the exhibit to the Schedule 14C filed by registrant on December 22, 2003.
- (b) Reports on Form 8-K.

No reports on Form 8-K were filed by registrant during the last quarter of the fiscal year ended September 30, 2003. However, a Current Report on Form 8-K was filed by registrant on December 15, 2003, to report the execution and delivery of the Stock Purchase and Exchange Agreement by and among registrant and the several share and warrant holders of Arrowhead Research Corporation, a California corporation, and a second Current Report on Form 8-K was filed by registrant on January 9, 2004 to report the change in certifying accountants referred to in Item 8 above.

Item 14. Principal Accountant Fees and Services.

During the fiscal year ended September 30, 2003, no audit, audit-related, tax or other fees were paid for professional services rendered by the independent certified public accountant who audited the financial statements of the California corporation that are filed herewith as those of the Company. See Item 7, "Financial Statements", above.

During the fiscal year ended September 30, 2003, the California corporation did not have an audit committee that had adopted the pre-approval policies and procedures required by the rules and regulations of the Securities and Exchange Commission. Subsequently, the Company's Board of Directors did establish such an audit committee as reported in the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on March 31, 2004.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Issuer has caused this Annual Report on Form 10-KSB/A to be signed on its behalf by the undersigned, thereunto duly authorized.

Dated: July 7, 2004

ARROWHEAD RESEARCH CORPORATION.

/s/ R. BRUCE STEWART

R. Bruce Stewart, President Chief executive, financial and accounting officer

BY:

INDEX TO FINANCIAL STATEMENTS

As a result of the "reverse acquisition" of registrant by Arrowhead Research Corporation, a California corporation, the financial statements of the registrant, a Delaware corporation currently named Arrowhead Research Corporation, are deemed to be the historical financial statements of Arrowhead Research Corporation, the California corporation.

Arrowhead Research Corporation,	
Report of Independent Public Accountants dated December 23, 2003.	F-1
Balance Sheet of Arrowhead Research Corporation, September 30, 2003	F-2
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Independent Auditor's Report

To the Board of Directors Arrowhead Research Corporation Pasadena, California

I have audited the accompanying balance sheet of Arrowhead Research Corporation (A Development Stage Company) as of September 30, 2003 and the related statements of operations and stockholders' equity, and cash flows for the period from May 7, 2003 (inception), to September 30, 2003. These financial statements are the responsibility of the Company's management. My responsibility is to express an opinion on these financial statements based on my audit.

I have conducted my audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that I plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. I believe that my audit provides a reasonable basis for my opinion.

In my opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Arrowhead Research Corporation (A Development Stage Company) as of September 30, 2003, and the results of its operations and its cash flows from May 7, 2003 (inception), to September 30, 2003, in conformity with accounting principles generally accepted in the United State of America

Kevin G. Breard Certified Public Accountant

Northridge, California December 23, 2003

Arrowhead Research Corporation (A Development Stage Company) Balance Sheet

	September, 30 2003
Assets	
Cash	\$ 1,355,289
Prepaid expenses	158,625
Office equipment, net of accumulated depreciation of \$90	2,025
Total assets	\$ 1,515,939
Liabilities & Stockholders' Equity	
Liabilities	
Accounts payable	\$ 92,688
Payroll tax payable	2,689
Income tax payable	800
Total liabilities	96,177
Commitments and contingencies	_
Stockholders' equity	
Common stock, \$0.001 par value, 20,000,000 shares authorized, 4,680,000 shares issued and outstanding	4,680
Additional paid-in capital	1,510,320
Accumulated deficit during the development stage	(95,238)
Total stockholders' equity	1,419,762
Total liabilities & stockholders' equity	\$ 1,515,939

The accompanying notes are an integral part of these financial statements.

Arrowhead Research Corporation (A Development Stage Company) Statement of Operations For the period from May 7, 2003 (inception) through September 30, 2003

Costs and expenses	
Salaries	\$ 25,000
Consulting	25,000
General and administrative expenses	41,063
Research and development	3,375
Total costs and expenses	94,438
Net ordinary income (loss) before income tax provision	(94,438)
Provision for income taxes	800
Income tax provision	800
Net income (loss)	\$ (95,238)
Earnings (losses) per share	\$ (0.06)

The accompanying notes are an integral part of these financial statements.

Arrowhead Research Corporation (A Development Stage Company) Statement of Stockholders' Equity For the period from May 7, 2003 (inception) through September 30, 2003

	Common	Stock	4 4 4 4 4 4 4 4 4 4	Accumulated Deficit During the Development Stage	
	Shares	Amount	Additional Paid-in Capital		Totals
Common stock issued for cash at \$0.001 per share	3,000,000	\$3,000	\$ —	\$ —	\$ 3,000
Common stock issued for cash at \$1 per share	1,680,000	1,680	1,678,320		1,680,000
Stock issuance costs charged to additional paid-in capital	_	_	(168,000)		(168,000)
Net income (loss)	—	_		(95,238)	(95,238)
Balances as of September 30, 2003	4,680,000	\$4,680	\$1,510,320	\$ (95,238)	\$1,419,762

The accompanying notes are an integral part of these financial statements.

Arrowhead Research Corporation (A Development Stage Company) Statement of Cash Flows For the period from May 7, 2003 (inception) through September 30, 2003

Cash flows from operating activities	
Net income (loss)	\$ (95,238)
Adjustments to reconcile net income (loss) to net cash used in operating activities:	
Depreciation	90
(Decrease) increase in:	
Prepaid expenses	(158,625)
Income taxes payable	800
Accounts payable and accrued expenses	95,377
Total adjustments	(62,358)
, ,	
Net cash used by operating activities	(157,596)
Cash flow from investing activities	()
Purchase of property and equipment	(2,115)
Net cash used in investing activities	(2,115)
Net cash flows from financing activities	
Proceeds from issuance of common stock	4,680
Proceeds from additional paid-in capital, net	1,510,320
Net cash provided by financing activities	1,515,000
Net increase (decrease) in cash	1,355,289
Cash at the beginning of period	
Cash at the end of the period	\$1,355,289
Supplemental disclosures of cash flow information	
Cash paid during the period for	
Interest	\$ —
Income taxes	\$ —

The accompanying notes are an integral part of these financial statements.

NOTE 1: ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES

General

Arrowhead Research Corporation (the Company) is a development stage company that was incorporated under the laws of the State of California on May 7, 2003 for the primary purpose of seeking favorable opportunities to make investments in, or acquisition of, publicly or privately owned businesses. It is anticipated that most candidates will appear to have the potential, if adequately financed, for rapid growth in sales and profitability, or possess other attributes that management believes offer prospects for substantial returns to the Company and an increase in the value of the Company's investment. The company's principle executive offices are located in Pasadena, California.

As part of its effort to identify emerging technologies and markets, the Company has had extensive discussions with various representatives of the California Institute of Technology and members of its faculty. Management has selected nano-technology as the Company's initial area of focus. Nano-technology is the science of building machines and materials at the molecular level. Prospective applications will impact fields that include information technology, medicine, manufacturing, advanced materials and environmental control. Should one or more of the projects financed by the Company result in the discovery of technology having commercial applications, it is anticipated that the Company will either establish a majority-owned subsidiary to pursue the commercial opportunity or license the technology to one or more third parties on a royalty-bearing basis.

Arrowhead Research Corporation is in the development stage as its operations principally involve research and development, and other business planning activities. The company has no revenue from product sales.

Summary of Significant Accounting Policies

The presentation of financial statements in conformity with accounting principles generally accepted in the Unite States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

Property and equipment are recorded at cost. Depreciation of property and equipment is recorded on the straight-line method over the respective useful lives of the assets.

Basic earnings (losses) per share is computed using the weighted-average number of common shares outstanding during the period. Diluted earnings (losses) per share is computed using the weighted-average number of common shares and dilutive potential common shares outstanding during the period. Dilutive potential common shares primarily consist of employee stock options and warrants. For the year ended September 30, 2003, their effect is anti-dilutive.

NOTE 1: ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES

(Continued)

On July 10, 2003, the Company had a Private Placement offering for 3,000,000 units at \$1.00 per unit, with each unit consisting of one share of the Company's common stock and one warrant exercisable to purchase an additional share of the common stock. The securities were offered pursuant to an exemption provided by Regulation 504 of the Securities Exchange Act of 1933. As of September 30, 2003, the Company incurred certain issuance costs of \$168,000, with the sale of the stock, such as legal fees and finder fees. The Company did not use an underwriter, so there were no discounts or commissions paid. These issuance costs, associated with the sale of common stock to the public, were charged to additional paid-in capital.

The Company has a stock option plan (the "Plan") which provides for the granting of non-qualified stock options or incentive stock options. Under the Plan, 1,200,000 shares of the Company's common stock are reserved for issuance upon exercise of stock options or stock purchase warrants that may be granted by the Board of Directors to employees, consultants and others expected to provide significant services to the Company.

In connection with its initial private placement of common stock, the Company issued 3,000,000 common stock purchase warrants. Each warrant entitled the holder to purchase one share of common stock at a price of \$1.50 any time following issuance and prior to June 30, 2013, on which date all unexercised warrants will expire. The warrants are redeemable by the Company at any time following issuance, upon 30 days prior written notice, provided that a public market for the underlying shares of common stock then exists and that the closing bid price for a share of the Company's common stock, for 20 consecutive trading days ending not more than 15 days prior to the date of the redemption notice, equal or exceeds \$3.00 per share. Holders will be required to exercise their warrants within 30 days or accept the \$0.001 per warrant redemption price.

The Company maintains one bank account at a financial institution. This account is insured by the Federal Deposit Insurance Corporation (FDIC), up to \$100,000. At September 30, 2003 the Company had deposits with this financial institution with uninsured cash balances totaling \$1,255,289. The Company has not experienced any losses in such accounts and management believes it places its cash on deposit with financial institutions which are financially stable.

Research and development costs are expensed as incurred and consist primarily of product development and application research. Financial accounting standards require the capitalization of certain software costs after technological feasibility is established. These costs are not applicable to the Company.

Rent expense was \$2,732 for the year ended September 30, 2003.

Prepaid expenses consist of \$158,625 incurred under contract agreement with Caltech. See Note 5.

NOTE 2: OFFICE EQUIPMENT, NET

The office equipment is recorded at cost.

		Depreciable Life Years
Office equipment	\$2,115	7
	2,115	
Less accumulated depreciation	(90)	
Net furniture and equipment	\$2,025	

Depreciation expense for the year ended September 30, 2003 was \$90.

Note 3: INCOME TAXES

The income tax provision consists of the California Franchise Tax Board minimum of \$800, no provision for federal income taxes have been provided as the Company incurred a loss for the year ended September 30, 2003. The Company has elected to carry forward the loss to offset future taxable income. The loss for the year ended September 30, 2003 can be carried forward until it expires at September 30, 2023. Thus, the Company has certain deferred tax assets related to the net operating loss carryforward. There is no assurance that future taxable income will be sufficient to realize the net asset or utilize the tax carryforward. The Company has determined that it is more likely than not that the deferred tax asset may not be realizable. Therefore, a 100% valuation allowance has been recorded.

NOTE 4 : COMMITMENTS AND CONTINGENCIES

On September 24, 2003, the Company entered into a contract agreement to use California Institute of Technology, of Pasadena (Caltech) as an independent third party to research, develop, and manufacture its nano-scale products. The research shall be conducted during the period of October 1, 2003 to September 30, 2008. The Company will reimburse Caltech for all direct and indirect costs incurred in the performance of the research which shall not exceed \$162,000 per year of the total estimated project cost of \$810,000. If the Agreement is extended, the dollar value of costs that will be reimbursed may be increased by mutual agreement to cover additional work performed during the extension.

As of September 30, 2003, the Company had advanced Caltech \$158,625 for research costs. Since no work has been preformed as of that date, the balance is being carried as a prepaid expense on the balance sheet.

NOTE 5: SUBSEQUENT EVENTS

On December 1, 2003, the Company initiated a private placement of 3,000,000 units at \$1.50 per unit, with each unit consisting of one share of the Company's common stock and one warrant exercisable to purchase an additional share of the common stock at any time prior to June 30, 2013.

On December 11, 2003, the Company announced the execution of the Exchange Agreement with InterActive Group, Inc., a Delaware corporation whose common stock is traded in the over-the-counter market. At the closing of the transactions contemplated by the Exchange Agreement, which is expected to occur on or before January 12, 2004, the Company's current shareholders would acquire approximately 88.9% of the then outstanding common stock of InterActive, whose name would be changed to "Arrowhead Research Corporation". In that event, prospective investors in the offering made by the Company's confidential private placement dated December 1, 2003 would acquire shares and warrants in a publicly-owned entity. The Company is subject to the reporting requirements of the Securities Exchange Act and, as of the date hereof, has filed all reports and other information required to be filed with the Securities and Exchange Commission (SEC) pursuant to the rules and regulations of the SEC under the Securities Exchange Act.

In connection with its initial private placement of common stock, in October, 2003 the Company accepted 80,255 shares of Acacia Research, valued at \$500,000, and \$475,000 in cash from its shareholders in exchange for 975,000 shares of the Company's common stock. There were also \$96,000 of finder's fees for these securities.

In connection with the nano-technology research and development, on November 12, 2003, the company has entered into a second contract agreement with Caltech. The research shall be conducted during the period of January 1, 2004 to December 31, 2008. The Company will reimburse Caltech for all direct and indirect costs incurred in the performance of the research, which shall not exceed \$162,000 per year of the total estimated project cost of \$810,351.

NOTE 6: RECENTLY ISSUED ACCOUNTING STANDARDS

In January 2003, the FASB issued Interpretation 46, *Consolidation of Variable Interest Entities*. In general, a variable interest entity is a corporation, partnership, trust, or any legal structure used for business purposes that either (a) does not have interest entity investors with voting rights or (b) has equity investors that do not provide sufficient financial resources for the entity to support its activities. Interpretation 46 requires a variable interest entity to be consolidated by a company if that company is subject to a majority of the risk of loss from the variable interest entity's activities or entitled to receive a majority of the entity's residual returns or both. The consolidation requirements of Interpretation 46 apply immediately to variable interest entities created after January 31, 2003. The consolidation requirements apply to transactions entered into prior to February 1, 2003 in the first fiscal year or interim period beginning after June 15, 2003. Certain of the disclosure requirements apply in all financial statements issued after January 31, 2003, regardless of when the variable interest entity was established. The adoption of the Interpretation on July 1, 2003 did not have a material impact on the Company's financial statements.

NOTE 6: RECENTLY ISSUED ACCOUNTING STANDARDS

(Continued)

In April 2003, the FASB issued SFAS 149, *Amendment of Statement 133 on Derivative Instruments and Hedging Activities*, which amends and clarifies accounting for derivative instruments, including certain derivative instruments embedded in other contracts, and for hedging activities under SFAS 133. The Statement is effective for contracts entered into or modified after June 30, 2003. The adoption of this Statement did not have a material impact on the Company's financial statements.

In May 2003, The FASB issued SFAS 150, *Accounting for Certain Financial Instruments with Characteristic of both Liabilities and Equity*. The Statement establishes standards for how an issuer classifies and measure certain financial instruments with characteristics of both liabilities and equity. It requires that an issuer clarify a financial instrument that is within it scope as a liability (or an asset in some circumstances). It is effective for financial instruments entered into or modified after May 31, 2003, and otherwise is effective at the beginning of the first interim period beginning after June 15, 2003. The adoption of this Statement did not have a material impact on the Company's financial statements.

NOTE 7: SEGMENT INFORMATION

Industry Segment Data

The Company is still in the development stage, and no revenues have been earned.

Geographic Area Data No revenues have been earned.

RESEARCH AGREEMENT

RESEARCH AGREEMENT between the CALIFORNIA INSTITUTE OF TECHNOLOGY, of Pasadena, California, U.S.A., hereinafter referred to as "Institute," and Arrowhead Research Corporation of 150 South Los Robles Avenue, Suite 480, Pasadena, CA 91101, hereinafter referred to as "Sponsor."

WHEREAS, the research program relating to the works of Dr. Charles Patrick Collier, hereinafter referred to as "Investigator", and the Sponsor, and will further the instructional and research objectives of the Institute in a manner consistent with its status as a nonprofit, tax-exempt, educational institution.

NOW, THEREFORE, the parties hereto agree as follows:

1. STATEMENT OF WORK. The Institute agrees to use its best effort to carry out the work defined in the Statement of Work attached as Exhibit I.

2. PRINCIPAL INVESTIGATOR. The research will be supervised by Dr. Charles Patrick Collier. If, for any reason, he/she is unable to continue to serve as Principal Investigator, and a successor acceptable to both the Institute and the Sponsor is not available, this Agreement shall be terminated as provided in Article 11.

3. PERIOD OF PERFORMANCE. The research shall be conducted during the period of 10/1/2003 — 9/30/2008. This Agreement and the period of performance may be extended by mutual agreement of the parties.

4. REIMBURSEMENT OF COSTS. In consideration of the foregoing, the Sponsor will reimburse the Institute for all direct and indirect costs incurred in the performance of the research which shall not exceed \$162,000 per year of the total estimated project cost of \$810,000 without written authorization from the Sponsor. If the Agreement is extended the dollar value of costs to be reimbursed may be increased by mutual agreement to cover additional work performed during the extension.

5. PAYMENT. Payment shall be made as follows: \$162,000 per year, for five (5) years. All payments to the Institute shall be net, and free and clear of all taxes, duties and other levies,

6. ACCOUNTS AND RECORDS. The Institute agrees to maintain books, records, documents, and other evidence pertaining to all costs and expenses to the extent and in such detail as will properly reflect all net costs, direct and indirect, of labor, materials, equipment, supplies and services, and other costs, and expenses of whatever nature incurred in the performance of this research.

7. TRAVEL. Travel costs shall be paid in accordance with applicable Institute policies.

8. PERSONAL PROPERTY. Title to all personal property to be used in the performance of this research and purchased with funds supplied under this Agreement, shall vest in the Institute upon delivery.

9. TECHNICAL DATA.

a. Ownership of, and the right to register copyright to documents related to computer hardware and software and associated documentation (hereinafter "Documents") shall remain in the Institute. The Sponsor shall be granted a nonexclusive, nontransferable, royalty-free license to use Documents, but only for Sponsor's own internal purposes. The Sponsor further agrees not to provide or otherwise make available Documents, or any copy or modification thereof in any form to any third party, except as may be permitted in writing by the Institute. As used herein "modification" shall mean any source tapes, listings or other documentation in any identifiable or separately usable form included in any program developed by Sponsor in machine readable or printed form, where such source tapes, listings, or other documentation remains essentially the same in both form and function as when originally provided by the Institute to the Sponsor.

b. All technical data other than Documents resulting from the research program under this Agreement shall be the property of the Institute; however, a copy of all such technical data shall be provided to the Sponsor upon request, and, subject to Article 12 hereof, Sponsor shall have the right to use and disclose all such technical data as it sees fit.

10. PUBLICATIONS. It is anticipated that the Principal Investigator may publish information regarding technical developments and/or research findings made by Institute employees under this Agreement. For such publications Principal Investigator agrees to submit a copy of the proposed publication to the Sponsor, preferably at least thirty (30) days prior to, but in no case later than simultaneously with submission for publication. Sponsor may request reasonable changes and/or deletions be made in any proposed publication. The Principal investigator will consider such changes but retains the sole right to determine whether such changes or deletions will be made. If Sponsor believes that the subject matter to be published warrants patent protection, it will identify the subject matter requiring protection and notify the Institute. Institute agrees to use its best efforts to file a U. S. patent application prior to any date that would result in preventing the obtaining of a valid patent rights throughout the world when the Sponsor so identifies subject matter requiring patent protection from a review of the planned publication. Notwithstanding any other provision of this Article 10, if the Institute is unable to file a U.S. nonprovisional patent application in accordance with the preceding sentence, Institute shall file a U.S. provisional patent application, at its expense, prior to any date that would result in preventing the obtaining of valid patent rights throughout the world when Sponsor so identifies subject matter requiring patent protection from a review of a planned publication.

11. TERMINATION. The Principal Investigator or the Sponsor shall have the right to terminate this Agreement upon sixty (60) calendar days' written notice. In the event of termination by the Sponsor, the Institute shall make no further commitments and must take all

reasonable action to cancel outstanding obligations. The Institute shall be entitled to reimbursement for all costs incurred including reasonable cancellation charges for any purchase orders, subcontracts or other commitments made prior to notice of termination. The Office of Management and Budget Circular A-21 shall be used in determining the allowable costs.

In the event the Institute employs personnel specifically for this work, it shall be entitled to fill reimbursement for the salaries, benefits, and overhead for such personnel for a period of up to one (1) year (the balance of the one-year term). It is agreed by the PI and the Sponsor, that an updated Statement of Work will be mutually agreed upon at the end of each year.

12. USE OF NAME. The Sponsor agrees that it will not use the name of the California Institute of Technology in any advertising or publicity material, or make any form of presentation or statement in relation to research or testing done at the Institute which would constitute an express or implied endorsement by the Institute of any commercial product or service, and that it will not authorize others to do so, without first having obtained written approval from the Institute. Similarly, the Institute agrees that it will not use Sponsor's Corporate name without its prior written concurrence.

13. PATENTS,

a. <u>Definition</u>: "Subject Invention" means any invention or discovery, whether or not patentable, conceived or first actually reduced to practice in the course of, or under this Agreement. "Joint Subject Invention" means any invention or discovery, whether or not patentable, (a) conceived or first actually reduced to practice in the course of, or under this Agreement, jointly by institute and Sponsor Employees, (b) first actually reduced to practice by Institute Employees using Sponsor's facilities and equipment, or (c) first actually reduced to practice by Sponsor Employees using Institute facilities and equipment. The term "Subject Invention" includes, but is not limited to, any art, method, process, machine, manufacture, design or composition of matter, or any new and useful improvement thereof, or any variety of plant, which is or may be patentable under the patent laws of the United States of America.

b. <u>Reporting of Inventions</u>. The Institute shall report each Subject Invention to the Sponsor as soon as possible after becoming aware of the conception or reduction to practice thereof.

c. Filing of Applications.

1. The Institute shall retain title to each institute Subject Invention. As to each such Institute Subject Invention, Sponsor can request Institute to file a patent application and Institute agrees to do so provided Sponsor covers the cost of filing and maintaining the patent application, patents issuing therefrom and foreign counterparts, if any. The Institute shall have the right thereafter to elect whether or not it will file a patent application covering Subject Invention. Patent applications relating to such Subject Invention(s) shall be filed by the institute in its name.

2. Joint Subject Inventions shall be jointly owned by Institute and Sponsor. Patent

applications relating to a Subject Invention made jointly by Institute personnel and other persons participating in the work supported by this Agreement shall be filed as mutually agreed by the parties, at Sponsor's expense unless Sponsor has not initiated the filing of such patent applications, and Institute and Sponsor shall together select independent patent counsel satisfactory to both parties to prepare and prosecute any such applications. Patent applications relating to Joint Subject Inventions shall be filed in the names of Institute and the Sponsor.

3. Subject Inventions made solely by person(s) who are not Institute personnel shall be owned by Sponsor provided such personnel do not first actually reduce to practice a Subject Invention using institute facilities and equipment, in which case the Subject Invention shall be a Joint Subject invention as defined above. Patent applications owned by Sponsor shall be filed by Sponsor.

4. As regards 13.c.1. and 13.c.2., both parties shall have the right to review and comment upon applications and correspondence with the Patent Office and shall be provided with drafts thereof sufficiently in advance to reasonably allow, for such review and comment.

5. Institute agrees that it will cause to be signed by concerned Institute personnel all documents necessary to obtain patent protection as set forth above, and that Institute will do whatever Sponsor reasonably requests to obtain and maintain such patent rights, at the expense of Sponsor.

6. If Sponsor is not interested in having a patent application filed with respect to a particular Subject Invention made solely by Institute personnel or jointly, Sponsor shall advise Institute of such fact within sixty (60) days from the date the Subject Invention was disclosed to Sponsor by Institute, or sooner if necessary to avoid loss of patent rights. Institute may then at its own expense, file and prosecute such patent application, and such patent application and any patents issuing therefrom shall not be included within the rights licensed to Sponsor pursuant to this Agreement, and Institute shall be free to license its rights in such patent to any party.

d. Licenses.

1. For any Subject Invention for which Institute has any rights, Sponsor shall receive a nonexclusive, royalty-free, irrevocable license to use the invention covered by the license for its own internal purposes. However, such a nonexclusive license will not include the right to sublicense and is nontransferable, except in the event of the transfer or sale of all or substantially all of Sponsor's assets to a third party.

2. Sponsor shall have the option to acquire, upon mutually agreeable terms, a royalty bearing, exclusive, or nonexclusive world-wide license in the Field, including the right to sublicense, to make, have made, use, lease and sell products embodying or produced through the use of any Subject invention. Said option must be exercised by written notice to Institute within six (6) months after receiving from Institute written notice of the filing of a patent application. If Sponsor elects to exercise its option to acquire a license on mutually agreeable terms within the prescribed time period, both parties agree to negotiate license terms on fair and reasonable terms in good faith at prevailing market rates. All such negotiations including the execution of a license

agreement shall be completed within six (6) months of written notice to Institute of Sponsor's exercise of said option. If Sponsor fails to agree to terms and conditions within the six (6) month time period, Sponsor shall be deemed to have waived said option, and the Institute shall be free to license a third party; provided, however, that for a period of three (3) years after written notice of Sponsor's exercise of its option to Subject Invention(s), the Institute shall not agree to license a third party on more favorable terms than were offered to Sponsor without first offering Sponsor a license on those more favorable terms and providing Sponsor with ninety (90) days in which to accept such offer. If Sponsor fails to notify Institute within the ninety (90) days that it has accepted such terms, Sponsor shall be deemed to have rejected the offer and Institute shall, thereafter, be free to license its rights in the Subject Invention(s) to other parties. If Sponsor notifies Institute within the ninety (90) days that it accepts such an offer, Institute shall be deemed to have entered into a binding license agreement with respect to such terms.

3. Any license granted to Sponsor pursuant to paragraph 13.d.2. shall be subject to the California Institute of Technology Patent Policy and Institute's prior agreements with other sponsors and shall provide: (a) for a reasonable royalty on net sales of products utilizing the licensed technology to be paid to the Institute; (b) for Institute to retain a nonexclusive license, with the right to grant sublicenses, for research purposes only; (c) if and to the extent applicable to the licensed Subject Invention, that the rights of the United. States of America as set forth in Public Laws 96-517 and 98-620 (codified at 35 U.S.C. 200 <u>et seq</u>.) are especially reserved, and that Sponsor shall comply with the provisions, of 35 U.S.C. 204, as amended from time to time; and (d) that nothing contained in this clause shall imply a license to the Sponsor under any patent, patent application or other invention other than a Subject Invention as defined herein.

e. <u>Government Rights</u>. Under certain circumstances, it is possible that the research may he supported in part by one or more agencies of the U.S. Government. If this should occur, the reporting of inventions or discoveries and the disposition of title to patent applications or patents resulting therefrom will be subject to the terms and conditions: of the Institute's contractual agreements with any such agency and agencies. If such circumstance develops and if the Sponsor desires to acquire rights, the Institute agrees to make every possible effort to acquire title to such inventions and to offer the Sponsor the option for acquisition of rights as outlined in the preceding paragraph, subject to the prior rights of, or conditions imposed thereon by, the U.S. Government.

14. CONFIDENTIALITY OF SPONSOR'S INFORMATION. Sponsor may wish, front time to time, in connection with work contemplated under this Agreement, to disclose confidential information to Institute personnel. To protect the confidentiality of such information, Sponsor may request the Principal Investigator, who has the right to refuse to accept such information, to sign a confidentiality agreement with Sponsor, in the form of Exhibit 2 hereto. Such a request shall not extend to other research personnel. Institute will not be responsible for any failure of individual performance under such confidentiality agreement

15. LIABILITY.

a. <u>Indemnification</u>. Sponsor shall defend, indemnify and hold harmless Institute, and its trustees, officers, employees and agents and their respective successors, heirs and assigns (the

"Indemnitees"), against any and all liability, damage, loss, or expense (including' attorneys' fees and expenses of litigation) that may be incurred by or imposed upon the Indemnitees or any of them, in connection with any claim, suit, demand, action or judgment arising out of the following:

1. the design, production, manufacture, sale, use in commerce, lease or promotion by Sponsor or by an Affiliate or sublicensee of the Sponsor of any product, process or service relating to or developed pursuant to this Agreement; or

2. any other activities to be carried out pursuant to this Agreement.

Sponsor's indemnity under 1. shall apply to any liability, damage, or loss or expense whether or not it is attributable to the negligent activities cit the Indemnitees. Sponsor's indemnification under 2. shall not. apply to any liability damage, loss or expense to the extent that it is attributable to the negligence or willful misconduct of the Indemnitees.

b. <u>Warranties</u>. Institute makes no warranties, express or implied, as to any matter whatsoever, including, without limitation, the condition of the research or any invention(s) or product(s), whether tangible, conceived, discovered, or developed under this Agreement; or the merchantability, or fitness for a particular purpose of the research or any such invention or product. Institute shall not be liable for any direct, consequential, or other damages suffered by Sponsor, any licensee, or any others resulting from the use of the research or any such invention or product.

16. INDEPENDENT CONTRACTOR. For the purpose of this Agreement and all services to be provided hereinunder, the parties shall be, and shall be deemed to be, independent contractors and not agents or employees of the other party. Neither party shall have the authority to make any statements, representations or commitments of any kind, or to take any action that shall be binding on the other party, except as may be explicitly provided for herein or authorized in writing.

17. GENERAL.

a. This Agreement may not be assigned by either party without the prior written consent of the other party.

b. This Agreement constitutes the entire and only agreement between the parties relating to the work that is covered by the attached Statement of Work and supported with funds provided by this Agreement, and all prior negotiations, representations, agreements and understandings are superseded hereby. No agreements altering or supplementing the terms hereof may be made except by means of a written document signed by the duly authorized representatives of the parties.

18. NOTICES. All notices or other administrative documents shall be directed as follows:

To: Sponsor Arrowhead Research Corporation 150 South Los Robles Avenue Suite 480 Pasadena, CA 91101 Phone: (626) 792-5549 Fax: (626)449-6299

SPONSOR

NAME: R. Bruce Stewart

SIGN: /s/ R. Bruce Stewart

DATE: September 21, 2003

To: California Institute of Technology Office of Sponsored Research (M/C 213-6) California Institute of Technology 1200 E. California Blvd Pasadena, CA 91125 Phone: (626) 395-6357 Fax: (626) 584-0963

CALIFORNIA INSTITUTE OF TECHNOLOGY

NAME:	DAVID J. MAYO
	Associate Director of Sponsored
	Research
	California Institute of Technology
SIGN:	/s/ David J. Mayo

DATE: September 29, 2003

EXHIBIT I

Pat Collier, Division of Chemistry and Chemical Engineering, California Institute of Technology Re: Research Agreement with Arrowhead Research

OUTLINE OF RESEARCH OBJECTIVES AND PLAN OF WORK

My group is interested in understanding and controlling assemblies of dynamically interacting biomolecules. In particular, we are interested in the diverse class of biological functions involved in information transfer. For example, we are striving to learn how to control collective effects at the <u>molecular</u> level that, in cells, give rise to coordinated behavior displayed by signaling pathways and biochemical reaction networks that are important for cellular functioning, such as signal amplification. As a means toward achieving this vision, we have spent our initial efforts at developing new tools that are combinations of single-molecule fluorescence spectroscopy and scanning probe microscopy. To date, we have received two grant awards for this project.

Our work involves developing the means for controlling the spatial positioning and chemical coupling between fully functioning proteins, and sensitively detecting signatures of emergent behavior in biochemical reactions. We are taking two complementary approaches toward this goal. In one approach, we are adapting the use of organofunctional silane chemistry, a flexible and general method for capturing biomolecules on silicon oxide surfaces, including fabricating DNA, small-molecule and protein microarrays, with dip-pen nanolithography in order to pattern fully functional enzymes on a chip with nanoscopic precision (*J Am. Chem. Soc.*, in press). We look for collective behavior from a "circuit" of coupled enzymatic reactions using fluorescence imaging.

Another critical tool that we need for this project is a method for continuous interrogation and control of biochemical reaction dynamics with single molecule sensitivity. Along these lines, we are attaching, imaging with and chemically and biologically functionalizing single-wall carbon nanotubes (SWNTs) to atomic force microscope (AFM) tips as true molecular-scale manipulation tools in physiologically relevant environments. We have developed robust, high-yield methods for constructing SWNT tips suitable for imaging single macromolecules in both dry and wet environments at a resolution better than 3 nm. We are designing nanotube probes that have a novel role: to trigger specific biochemical reactions. To do this, we are learning how to functionalize the very ends of nanotube tips with redox-active enzymatic cofactors in order to electrically trigger specific enzymatic reactions at surfaces, in reconstituted bilayer membranes and in cells. The consequences of these triggering events can then be read out in real time by single-molecule fluorescence and/or AFM sensing. This introduces a method for studying the initiation and propagation of biochemical reaction pathways using molecular triggers which are precisely defined in spatial and temporal coordinates, as well as chemical magnitude.

DELIVERABLES TO ARROWHEAD RESEARCH

The deliverables will consist of a technical report supplied to Arrowhead Research at each anniversary of the start date of this research agreement. Each technical report will include details of scientific progress and results covered by the work outlined in the research agreement, as well

as highlighting specifically those results that may be of possible commercial interest to Arrowhead Research. In addition, at the end of each year, Collier agrees to submit a follow-on Statement of Work, mutually agreeable to both parties, that will reflect any changes in research goals or that identifies new opportunities that both Collier and Arrowhead Research wish to pursue. Caltech will also provide reprints of any publications in scientific journals resulting from the work outlined in the research agreement. In addition, brief (one page), nontechnical reports on our research progress, intended for a general audience including stockholders of Arrowhead Research, will be supplied on request.

BUDGET JUSTIFICATION

Budget Request Summary: The PI is requesting a total dollar amount of \$810,000 for the full five year period of the research agreement with Arrowhead Research. The amount of \$162,000 per year includes direct costs such as salaries and benefits for two post-doctoral researchers, domestic travel, and supplies and expenses, and indirect costs, at the Indirect Cost Rate of 62%.

Salaries: The salaries of two full-time postdoctoral research associates, at \$32,000 per person per year, will be supported by this research agreement. Postdoctoral associates receive fringe benefits amounting to 27% of their yearly salary.

Supplies and Expenses: The requested amount of \$16,720 per year for routine supplies and expenses is based on an estimate of \$8,360 per person per year. These funds will be used to purchase items such as chemical reagents, optical supplies (lenses, mirrors, and opto-mechanical components such as kinematic mounts and translation stages), glassware, silicon and silicon-nitride AFM tips, machine shop, electrical shop and glass shop charges, computers, monitors and printers. The funds also estimate yearly charges from the microfabrication user facility in the Applied Physics Department and the TEM facility in the Materials Science Department at Caltech.

Equipment: There is no equipment component to this budget.

Domestic Travel: Funds of \$2000 per year will be used to pay for expenses incurred for three conference visits to meetings such as (but not limited to) the American Chemical Society, the American Physical Society, the Biophysical Society and Gordon Research Conferences. These funds cover travel expenses, conference fees and lodging.

EXHIBIT 2

CONFIDENTIALITY AGREEMENT

The undersigned investigator, ______ ("Investigator") declares that he or she has read and is familiar with the provisions of the agreement dated ______ between ______ ("Sponsor") and the Institute, and hereby agrees to be bound by the terms and conditions thereof. Investigator further agrees to keep confidential any proprietary information received from Sponsor, which is designated in writing by Sponsor as being confidential, for a period of three (3) years from the date it is received, provided that this obligation shall not apply to any information which:

a. was already known to the Investigator as evidenced by his/her written records;

b. is or later becomes publicly known under circumstances involving no breach of this agreement by the Investigator;

c. is lawfully disclosed to the Investigator by a third party free of restrictions upon disclosure.

The confidentiality obligations of Investigator will not preclude disclosure pursuant to a valid subpoena, court order or requirements of applicable law.

Signature

ature

Printed Name of Investigator, Title

WITNESSED BY:

Signature Date

Date

Printed Name of Witness

Amendment 1 to Research Agreement between Arrowhead Research Corporation and California Institute of Technology (Pat Collier, Principal Investigator)

The purpose of this amendment is to modify the Agreement to reflect additional effort on the part of project personnel. Specifically, an additional postdoctoral researcher will be hired to work on the research. This additional effort is estimated to cost \$478,764, for the remainder of the existing agreement period.

Therefore, the following changes are made to the Agreement:

Article I - Statement Work, replace with the following:

The Institute agrees to use its best effort to carry out the work as defined in the Statement of Work attached as Exhibit 1, and as modified on February 19, 2004.

Article 4 - Reimbursement of costs, replace with the following:

In consideration of the foregoing, the Sponsor will reimburse the Institute for all direct and indirect costs incurred in the performance of the research, which shall not exceed the following annual amounts:

Year 1: \$235,894 (\$162,000 +\$ 73,894);Year 4: \$263,218;Year 2: \$263,218;Year 5: \$263,218Year 3: \$263,218;Year 5: \$263,218

or the total estimated project cost of \$1,288,764, without written authorization from the Sponsor. If the Agreement is extended, the dollar value of costs to be reimbursed may be increased by mutual agreement to cover additional work performed during the extension.

Article 5 - Payment, replace with the following:

Institute shall submit invoices annually, on or shortly after the anniversary date of this agreement and in accordance with the amounts specified in Article 4. Sponsor shall make payment within thirty (30) days of receipt of invoice. All payments to the Institute shall be net, and free and clear of all taxes, duties and other levies.

All other terms and conditions remain the same

ARROWHEAD RESEARCH		CALIFORNIA INSTITUTE OF TECHNOLOGY	
Name:	R. Bruce Stewart	Name:	David J. Mayo
Title:	President	Title:	Assc. Director of Sponsored Research
Sign:	/s/ R. Bruce Stewart	Sign:	/s/ David J. Mayo
Date:	February 26, 2004	Date:	February 26, 2004

RESEARCH AGREEMENT

RESEARCH AGREEMENT between the CALIFORNIA INSTITUTE OF TECHNOLOGY, of Pasadena, California, U.S.A., hereinafter referred to as "Institute", and Arrowhead Research Corporation, hereinafter referred to as "Sponsor".

WHEREAS, the research program relating to the works of Dr. Marc Bockrath, hereinafter referred to as "Investigator", and the Sponsor, and will further the instructional and research objectives of the Institute in a manner consistent with its status as a nonprofit, tax-exempt, educational institution.

NOW, THEREFORE, the parties hereto agree as follows:

1. STATEMENT OF WORK. The Institute agrees to use its best effort to carry out the work defined in the Statement of Work attached as Exhibit I.

2. PRINCIPAL INVESTIGATOR. The research will be supervised by Dr. Marc Bockrath. If for any reason, he/she is unable to continue to serve as Principal Investigator, and a successor acceptable to both the Institute and the Sponsor is not available, this Agreement shall be terminated as provided in Article 11.

3. PERIOD OF PERFORMANCE. The research shall be conducted during the period of 1/1/04 through 12/31/08. This Agreement and the period of performance may be extended by mutual agreement of the parties.

4. REIMBURSEMENT OF COSTS. In consideration of the foregoing, the Sponsor will reimburse the Institute for all direct and indirect costs incurred in the performance of the research which shall not exceed \$162,070 per year of the total estimated project cost of \$810,351, without written authorization from the Sponsor. If the Agreement is extended, the dollar value of costs to be reimbursed may be increased by mutual agreement to cover additional work performed during the extension.

5. PAYMENT. Payment shall be made as follows: \$162,000 per year for 5 years. Full payment for the first year shall be made within thirty (30) days of execution of this Agreement. Subsequent annual payments shall be made within thirty (30) days of the anniversary of the commencement date of this Agreement. All payments to the Institute shall be net, and free and clear of all taxes, duties and levies.

6. ACCOUNTS AND RECORDS. The Institute agrees to maintain books, records, documents, and other evidence pertaining to all costs and expenses to the extent and in such detail as will properly reflect all net costs, direct and indirect, of labor, materials, equipment, supplies and services, and other costs, and expenses of whatever nature incurred in the performance of this research.

7. TRAVEL. Travel costs shall be paid in accordance with applicable Institute policies.

8. PERSONAL PROPERTY. Title to all personal property to be used in the performance of this research and purchased with funds supplied under this Agreement, shall vest in the Institute upon delivery.

9. TECHINCAL DATA.

a. Ownership of, and the right to register copyright to documents related to computer hardware and software and associated documentation (hereinafter "Documents") shall remain in the Institute. The Sponsor shall be granted a nonexclusive, nontransferable, royalty-free license to use Documents, but only for Sponsor's own internal purposes. The Sponsor further agrees not to provide or otherwise make available Documents, or any copy of modification thereof in any form to any third party, except as may be permitted in writing by the Institute. As used herein "modification" shall mean any source tapes, listings or other documentation remains essentially the same in both form and function as when originally provided by the Institute to the Sponsor.

b. All technical data other than Documents resulting from the research program under this Agreement shall be the property of the Institute; however, a copy of all such technical data shall be provided to the Sponsor upon request, and, subject to Article 12 hereof; Sponsor shall have the right to use and disclose all such technical data as it sees fit.

10. PUBLICATIONS. It is anticipated that the Principal Investigator may publish information regarding technical developments and/or research findings made by Institute employees under this Agreement. For such publication Principal Investigator agrees to submit a copy of the proposed publication to the Sponsor, preferably at least (30) days prior to, but in no case later than simultaneously with submission for publication. Sponsor may request reasonable changes and/or deletions be made in any proposed publication. The Principal Investigator will consider such changes but retains the sole right to determine whether such changes or deletions will be made. If Sponsor believes that the subject matter to be published warrants patent protection, it will identify the subject matter requiring protection and notify the Institute. Institute agrees to use its best efforts to file a U.S. patent application prior to any date that would result in preventing the obtaining of a valid patent rights throughout the world when the Sponsor so identifies subject matter requiring patent protection. Notwithstanding any other provisions of this Article 10, if the Institute is unable to file a U.S. nonprovisional patent application, at its expense, prior to any date that would result in preventing the obtaining of valid patent right throughout the world when the requiring patent protection from a review of a planned publication.

11. TERMINATION. The Principal Investigator or the Sponsor shall have the right to terminate this Agreement upon sixty (60) calendar days' written notice. In the even of termination by the Sponsor, the Institute shall make no further commitments and must take all reasonable action to cancel outstanding obligations. The Institute shall be entitled to reimbursement for all costs incurred including reasonable cancellation charges for any purchase orders, subcontracts or other commitments made prior to notice of termination. The Office of Management and Budget Circular A-21 shall be used in determining the allowable costs.

In the event the Institute employs personnel specifically for this work, it shall be entitled to full reimbursement for the salaries, benefits and overhead for such personnel for a period of 60 days.

12. USE OF NAME. The Sponsor agrees that it will not use the name of the California Institute of Technology in any advertising or publicity material, or make any form of presentation or statement in relation to research or testing done at the Institute which would constitute an express or implied endorsement by the Institute of any commercial product or service, and it will not authorize other to do so, without first having obtained written approval from the Institute, Similarly, the Institute agrees that it will not use Sponsor's Corporate name without its prior written concurrence.

13. PATENTS.

a. <u>Definition</u>: "Subject Invention" means any invention or discovery, whether or not patentable, conceived or first actually reduced to practice in the course of, or under this Agreement. "Joint Subject Invention" means any invention or discovery, whether or not patentable, (a) conceived or first actually reduced to practice in the course of, or under this Agreement, jointly by the Institute and Sponsor Employees, (b) first actually reduced to practice by Institute Employees using Sponsor's facilities and equipment, or (c) first actually reduced to practice by Sponsor Employees using Institute facilities and equipment. The term "Subject Invention" includes, but is not limited to, any art, method, process, machine, manufacture, design or composition or matter, or any new and useful improvement thereof; or any variety of plant, which is or may be patentable under the patent laws of the United States of America.

b. <u>Reporting of Inventions</u>. The Institute shall report each Subject Invention to the Sponsor as soon as possible after becoming aware of the conception or reduction to practice thereof

c. Filing of Applications.

1. The Institute shall retain title to each Institute Subject Invention. As to each such Institute Subject Invention, Sponsor can request Institute to file a patent application and Institute agrees to do so provided Sponsor covers the cost of filing and maintaining the patent application, patents issuing therefrom and foreign counterparts, if any. The Institute shall have the right thereafter to elect whether of not it will file a patent application covering Subject Invention. Patent applications relating to such Subject Invention(s) shall be filed by the Institute in its name.

2. Joint Subject Inventions shall be jointly owned by Institute and Sponsor. Patent applications relating to a Subject Invention made jointly by Institute personnel and other persons participating in the work supported by this Agreement shall be filed as mutually agreed by the parties, at Sponsor's expense unless Sponsor has not initiated the filing of such patent applications, and Institute and Sponsor shall together select independent patent counsel satisfactory to both parties to prepare and prosecute any such applications. Patent applications relating to Joint Subject Inventions shall be filed in the names of Institute and the Sponsor.

3. Subject Inventions made solely by person(s) who are not Institute personnel shall be owned by Sponsor provided such personnel do not first actually reduce to practice a Subject Invention shall be a Joint Subject Invention as defined above. Patent applications owned by Sponsor shall be filed by Sponsor.

4. As regards 13.c.1 and 13.c.2., both parties shall have the right to review and comment upon applications and correspondence with the Patent Office and shall be provided with drafts thereof sufficiently in advance to reasonably allow for such review and comment.

5. Institute agrees that it will cause to be signed by concerned Institute personnel all documents necessary to obtain patent as set forth above, and that Institute will do whatever Sponsor reasonably requests to obtain and maintain such patent rights, at the expense of Sponsor.

6. If Sponsor is not interested in having a patent application filed with respect to a particular Subject Invention made solely by Institute personnel or jointly, Sponsor shall advise Institute of such fact within sixty (60) days from the date the Subject Invention was disclosed to Sponsor by Institute, or sooner if necessary to avoid loss of patent rights. Institute may then at its own expense, file and prosecute such patent application, and patent application and any patents issuing therefrom shall not be included within the rights licensed to Sponsor pursuant to this Agreement, and Institute shall be free to license its rights in such patent to any party.

d. Licenses.

1. For any Subject Invention for which Institute has any right, Sponsor shall receive a nonexclusive, royalty-free, irrevocable license to use the invention covered by the license for its own internal purposes. However, such a nonexclusive license will not include the right to sublicense and is nontransferable, except in the event of the transfer or sale of all or substantially all of Sponsor's assets to a third party.

2. Sponsor shall have the option to acquire, upon mutually agreeable terms, a royalty bearing, exclusive or nonexclusive, world-wide license in the Field, including the right to sublicense, to make, have made, use, lease and sell products embodying or produce through the use of any Subject Invention. Said option must be exercised by written notice to Institute within six (6) months after receiving from Institute written notice of the filing of a patent application. If Sponsor elects to exercise its option to acquire a license on mutually agreeable terms within the prescribed time period, both parties agree to negotiate license terms in good faith but not to exceed 2%. All such negotiations including the execution of a license agreement shall be completed within six (6) months of written notice to Institute of Sponsor's exercise of said option. If Sponsor fails to agree to terms waived said option, and the Institute shall be free to license a third party; provided, however, that for a period of three (3) years after written notice of Sponsor's exercise of its option to Subject Invention(s), the Institute shall not agree to license a third party on more favorable terms than were offered to Sponsor without first offering Sponsor a license on those more favorable terms and providing Sponsor with ninety (90) days in which to accept such offer. If Sponsor fails to notify Institute within the ninety (90) days that is has accepted such terms, Sponsor shall be deemed to have rejected the offer, and Institute shall, thereafter, be free to license its rights in the Subject Invention(s) to other parties. If Sponsor notifies Institute within ninety (90) days that it accepts such an offer, Institute shall be deemed to have entered into a binding license agreement with respect to such terms.

3. Any license granted to Sponsor pursuant to paragraph 13.d.2. shall be subject to the California Institute of Technology Patent Policy and Institute's prior agreements with other sponsors and shall provide: (a) for a reasonable royalty on net sales of products utilizing the licensed technology to be paid to the Institute; (b) for Institute to retain a nonexclusive license, with the right to grant sublicenses, for research purposes only; (c) if and to the extent applicable to the licensed Subject Invention, that the rights of the Unites States of America as set forth in Public Laws 96-517 and 98-620 (codified at 35 U.S.C. 200 et seq.) are especially reserved, and that Sponsor shall comply with the provision of 35 U.S.C. 204, as amended from time to time; and (d) that nothing contained in this clause shall imply a license to the Sponsor under any patent, patent application or other invention other than a Subject Invention as defined herein.

e. <u>Government Rights</u>. Under certain circumstances, it is possible that the research may be supported in part by one or more agencies of the U.S. Government. If this should occur, the reporting of inventions or discoveries and the disposition of title to patent applications or patents resulting therefrom will be subject to the terms and conditions of the institute's contractual agreement with any such agency or agencies. If such a circumstance develops and if the Sponsor desires to acquire rights, the institute agrees to make every possible effort to acquire title to such inventions and to offer the Sponsor the option for acquisition of rights as outlined in the preceding paragraph, subject to the prior rights of, or conditions imposed thereon by, the U.S. Government.

14. CONFIDENTIALITY OF SPONSOR'S INFORMATION. Sponsor may wish, from time to time, in connection with work contemplated under this Agreement, to disclose confidential information to Institute personnel. To protect the confidentiality of such information, Sponsor may request the Principal Investigator, who has the right to refuse to accept such information, to sign a confidentiality agreement with Sponsor, in the form of Exhibit 2 hereto. Such a request shall not extend to other research personnel. Institute will not be responsible for any failure of individual performance under such confidentiality agreement.

15. LIABILITY.

a. <u>Indemnification</u>. Sponsor shall defend, indemnify and hold harmless Institute, and its trustees, officers, employees and agents and their respective successors, heirs and assigns (the "Indemnitees"), against any and all liability, damage, loss or expense (including attorneys' fees and expenses of litigation) that may be incurred by or imposed upon the Indemnitees, or any of them, in connection with any claim, suit, demand, action or judgment arising out of the following:

1. the design, production, manufacture, sale, use in commerce, lease or promotion by Sponsor or by and Affiliate or sublicensee of the Sponsor or any product, process or service relating to or developed pursuant to this Agreement; or

2. any other activities to be carried out pursuant to this Agreement.

Sponsor's indemnity under 1. shall apply to any liability, damage, or loss or expense whether or not it is attributable to the negligent activities of the Indemnitees. Sponsor's indemnification under 2. shall not apply to any liability damage, loss or expense to the extent that it is attributable to the negligence or willful misconduct of the Indemnitees. b. Warranties. Institute makes no warranties, express or implied, as to any matter whatsoever, including, without limitation, the condition of the research or any invention(s) or product(s), whether tangible, conceived, discovered, or developed under this Agreement; or the merchantability, or fitness for particular purpose of the research or any such invention or product. Institute shall not be liable for any direct, consequential, or other damages suffered by Sponsor, any licensee, or any other resulting from the use of the research or any such invention or product.

16. INDEPENDENT CONTRACTOR. For the purpose of this Agreement and all services to be provided hereinunder, the parties shall be, and shall be deemed to be, independent contractors and not agents or employees of the other part. Neither party shall have authority to make any statement, representations or commitments or any kind, or to take any action that shall be binding on the other party, except as may be explicitly provided for herein or authorized in writing.

17. GENERAL.

a. This Agreement may not be assigned by either party without the prior written consent of the other party.

b. This Agreement constitutes the entire and only agreement between the parties relating to the work that is covered by the attached Statement of Work and supported with funds provided by this Agreement, and all prior negotiations, representations, agreement and understandings are superseded hereby. No agreements altering or supplementing the terms hereof may be made except by means of a written document signed by the duly authorized representatives of the parties.

18. NOTICES. All notices or other administrative documents shall be directed as follows:

To: Sponsor	To: California Institute of Technology		
Arrowhead Research Corporation	Office of 'Sponsored Research		
150 South Los Robles Avenue'	(M/C 213-6)		
Suite 480	California Institute of Technology		
Pasadena, CA 91l01	1200 E. California Blvd		
Phone: (626) 792-5549	Pasadena, CA 91125		
Fax: (626)449-6299	Phone: (626) 395-6357		
	Fax: (626) 584-Q963		
SPONSOR	CALIFORNIA INSTITUTE OF TECHNOLOGY		
NAME: R. Bruce Stewart	NAME: DAVID J. MAYO Associate Director of Sponsored Research California Institute of Technology		
SIGN: /s/ R. Bruce Stewart	SIGN: /s/ David J. Mayo		
DATE: September 21, 2003	DATE: September 29, 2003		

Bockrath — Arrowhead Research

OUTLINE OF RESEARCH OBJECTIVES AND PLAN OF WORK FOR

The goal of my research program is to investigate, exploit and manipulate novel phenomena that emerge in nano-scaled materials. In particular, this program aims to identify and understand new transport phenomena in nano-scaled systems, to create devices such as memories and logic gates that operate on new principles, and to find new ways to control and detect the motion of matter on the nanometer scale.

The study of matter that is patterned on the nanometer length scale is an exciting and fascinating frontier of science. The behavior of ultra-small objects often differ in remarkable ways from their bulk counterparts, and can lead to surprising new phenomena differing sharply from what might be expected by simply considering scaled-down versions of the laws governing bulk matter. Investigating the properties of nanometer scaled matter thus leads to the observation of new phenomena and requires new concepts to understand them, comprising a rich and dynamic facet of the scientific enterprise. In turn, this new understanding promises to provide a coherent and unified understanding of the disparate fields of condensed-matter physics, biology and chemistry.

Aside from yielding such fundamental knowledge, the manipulation and control of matter at the nanometer length scale promises to have a wide variety of technological applications. These applications range from nano-scale optoelectronic components to chemical and biological sensors and electronic circuits. In particular, the area of information technology promises to benefit greatly from the enhanced device speed and integration density afforded by nanometer scale devices. However, we must understand the new transport phenomena that emerge in nano-scale materials in order to enable the rational design of devices such as memory elements and logic gates. This research area comprises the burgeoning field of nanoelectronics, a sub-field of nano-scale technology that generated a great deal of excitement. We will fabricate these devices using a combination of "bottom-up" chemical or biological synthesis and "top-down" conventional lithographic techniques, comprising a variety of materials ranging from carbon nanotubes to individual molecules, and we will perform a variety of transport and scanned-probe experiments to elucidate and exploit their properties. An example of this technique is shown in Fig. I, which shows an AFM image of a multi-walled nanotube incorporated into a field-effect transistor geometry.

Moreover, we will fabricate devices with novel principles of operation based on the interplay between the electronic and mechanical degrees of freedom of nanometer scale objects. In the simplest case these devices may yield faster and more compact versions of conventional micro-electromechanical (MEMS) devices. More importantly, for sufficiently small structures, novel electromechanical properties emerge, in analogy to the new electronic properties that emerge in nanoelectronic systems. Ultimately, from these devices we will endeavor to both develop novel approaches to controlling and detecting the motion of matter at the nanometer scale and exploit new physical phenomena to create nanoscale devices with unique functionality. Examples of such nanoelectromechanical devices could potentially include ultra-small resonators, oscillators, and mixers operating at microwave frequencies.

Indeed, the revolutionary possibilities afforded by gaining control and understanding of the

behavior of matter at nanometer length scales seem nearly limitless. Our research group aims to create a synergistic enterprise to explore, understand, and exploit this abundantly fertile area with the goal of producing a wealth of novel and useful devices and concepts.

DELIVERABLES TO ARROWHEAD RESEARCH

The deliverables will consist of a technical report supplied to Arrowhead Research at each anniversary of the start date of this research agreement. Each technical report will include details of scientific progress and results covered by the work outlined in the research agreement, as well as highlighting specifically those results that may be of possible commercial interest to Arrowhead Research. In addition, at the end of each year, Bockrath agrees to submit a follow-on Statement of Work, mutually agreeable to both parties, that will reflect any changes in research goals or that identifies new opportunities that both Bockrath and Arrowhead Research wish to pursue. Caltech will also provide reprints of any publications in scientific journals resulting from the work outlined in the research agreement. In addition, brief (one page), non-technical reports on our research progress, intended for a general audience including stockholders of Arrowhead Research, will be supplied on request.

BUDGET JUSTIFICATION

Budget Request Summary: The PI is requesting a total dollar amount of \$810,351 for the full five year period of the research agreement with Arrowhead Research. The amount of \$162,070 per year includes direct costs such as salaries and benefits for two graduate and undergraduate students, administrative support, domestic travel, and supplies and expenses, and indirect costs, at the Indirect Cost Rate of 62%.

Salaries: The salaries of two full-time graduate students, at \$22,000 per person per year, will be supported by this research agreement. In addition, graduate students require tuition costs of \$13,970 per person per year. An amount for administrative support of \$10,000 along with \$2,650 in fringe benefits is also requested.

Supplies and Expenses: The requested amount of \$15,000 per year for routine supplies and expenses is based on an estimate of \$7,500 per person per year. These funds will be used to purchase items such as helium gas and liquid, glassware, silicon and silicon-nitride AFM tips, machine shop, electrical shop and glass shop charges, computers, monitors and printers. The funds also estimate yearly charges from the microfabrication user facility in the Applied Physics Department and the TEM facility in the Materials Science Department at Caltech.

Equipment: An amount of \$5000 is requested to acquire a computer along with specialized hardware to perform transport measurements.

Domestic Travel: Funds of \$3060 per year will be used to pay for expenses incurred for three conference visits to meetings such as (but not limited to) the American Chemical Society, the American Physical Society, and Gordon Research Conferences. These funds cover travel expenses, conference fees and lodging.

EXHIBIT 2

CONFIDENTIALITY AGREEMENT

The undersigned investigator, ______("Investigator") declares that he or she has: read and is familiar with the provisions of the agreement dated ______ between ______("Sponsor") and the Institute, and hereby agrees to be bound by the terms and conditions thereof. Investigator Further agrees to keep confidential any proprietary information received from Sponsor, which is designated in writing by Sponsor as being confidential, for a period of three (3) years from the date it is received, provided that this obligation shall not apply to any information which:

a. was already known to the Investigator as evidenced by his/her written records;

b. is or later becomes publicly known under circumstances involving no breach of this agreement by the Investigator;

c. is lawfully disclosed to the Investigator by a third party free of restrictions upon disclosure.

The confidentiality obligations of Investigator will not preclude disclosure pursuant to a valid subpoena, court order or requirements of applicable law.

Signature Date

Printed Name of Investigator, Title

WITNESSED BY:

Signature

Date

Printed Name of Witness

SECTION 302 CERTIFICATION

I, R. Bruce Stewart, certify that:

1. I have reviewed this Annual Report on Form 10-KSB of Arrowhead Research Corporation;

2. Based on my knowledge, this Annual Report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this Annual Report;

3. Based on my knowledge, the financial statements, and other financial information included in this Report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this Annual Report;

4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)), for the registrant and we have:

(a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this Annual Report is being prepared;

(b) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this Annual Report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by this report based on such evaluation; and

(c) disclosed in this Annual Report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):

(a) all significant deficiencies in the design or operation of internal controls over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: July 7, 2004

/s/ R. BRUCE STEWART

R. Bruce Stewart, President Chief executive, financial and accounting officer

SECTION 906 CERTIFICATION

In connection with the Annual Report on Form 10-KSB of Arrowhead Research Corporation (the "Company") for the fiscal year ended September 30, 2003, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, R. Bruce Stewart, the chief executive officer and chief financial officer of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: July 7, 2004

/s/ R. BRUCE STEWART

R. Bruce Stewart, President Chief executive, financial and accounting officer

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.