ARROWHEAD RESEARCH CORP
Form 10-Q
May 11, 2015

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

FORM 10-Q

(Mark One)

x QUARTERLY REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended March 31, 2015

¨TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
Commission file number 000-21898

ARROWHEAD RESEARCH CORPORATION

(Exact name of registrant as specified in its charter)

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

225 S. Lake Avenue, Suite 1050

Pasadena, California 91101

(626) 304-3400

(Address and telephone number of principal executive offices)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 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 x No ¨

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No ¨

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

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ¨ No x

The number of shares of the registrant’s common stock outstanding as of May 8, 2015 was 59,498,362.

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

Arrowhead Research Corporation

Consolidated Balance Sheets

	(unaudited) March 31, 2015	September 30, 2014
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$96,447,301	$132,510,610
Prepaid expenses	3,811,096	588,626
Other current assets	327,384	48,502
Short term investments	19,561,172	21,653,032
TOTAL CURRENT ASSETS	120,146,953	154,800,770
Property and equipment, net	4,127,366	3,872,753
Intangible assets, net	25,701,657	1,013,473
Investments	12,361,068	23,088,346
Other assets	41,414	41,414
TOTAL ASSETS	$162,378,458	$182,816,756
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	$4,936,282	$2,579,478
Accrued expenses	2,041,174	1,399,486
Due to Novartis	3,000,000	-
Accrued payroll and benefits	1,272,001	3,268,506
Deferred revenue	65,625	103,125
Derivative liabilities	1,619,755	4,173,943
Capital lease obligation	215,762	213,991
Notes payable	-	50,000
Other current liabilities	59,762	58,495
TOTAL CURRENT LIABILITIES	13,210,361	11,847,024
LONG-TERM LIABILITIES		
Capital lease obligation, net of current portion	650,014	758,340
Contingent consideration obligations	3,970,931	3,970,931
Other non-current liabilities	350,798	255,206
TOTAL LONG-TERM LIABILITIES	4,971,743	4,984,477
Commitments and contingencies		
STOCKHOLDERS' EQUITY		
Arrowhead Research Corporation stockholders' equity:		
Preferred stock, $0.001 par value; 5,000,000 shares authorized; 15,652 and 18,300 shares issued and outstanding as of March 31, 2015 and September 30, 2014, respectively	16	18
Common stock, $0.001 par value; 145,000,000 shares authorized; 59,435,862 and 54,656,936 shares	151,805	147,026

issued and outstanding as of March 31, 2015 and September 30, 2014, respectively		
Additional paid-in capital	420,696,539	391,164,558
Accumulated other comprehensive income (loss)	(63,965)	-
Accumulated deficit	(276,032,853)	(224,771,159)
Total Arrowhead Research Corporation stockholders' equity	144,751,542	166,540,443
Noncontrolling interest	(555,188)	(555,188)
TOTAL STOCKHOLDERS’ EQUITY	144,196,354	165,985,255
TOTAL LIABILITIES AND STOCKHOLDERS’ EQUITY	$162,378,458	$182,816,756

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

Arrowhead Research Corporation

Consolidated Statements of Operations

(unaudited)

	Three Months ended March 31, 2015	Three Months ended March 31, 2014	Six Months ended March 31, 2015	Six Months ended March 31, 2014
REVENUE	$43,750	$43,750	$214,500	$87,500
OPERATING EXPENSES				
Research and development	11,640,794	5,216,446	29,387,524	8,349,460
Acquired in-process research and development	10,142,786	-	10,142,786	-
Salaries and payroll-related costs	3,541,652	3,097,902	6,692,268	5,179,693
General and administrative expenses	1,696,623	1,347,677	3,782,826	2,261,461
Stock-based compensation	2,205,079	1,198,444	4,219,935	1,719,582
Depreciation and amortization	449,559	395,779	739,598	799,184
TOTAL OPERATING EXPENSES	29,676,493	11,256,248	54,964,937	18,309,380
OPERATING LOSS	(29,632,743)	(11,212,498)	(54,750,437)	(18,221,880)
OTHER INCOME (EXPENSE)				
Equity in income (loss) of unconsolidated affiliates	-	(9,597)	-	(148,053)
Gain (loss) on sale of fixed assets, net	45,576	(5,316)	19,195	(58,878)
Interest income (expense), net	198,113	119,390	435,530	159,968
Change in value of derivatives	168,974	(2,951,225)	2,551,116	(6,470,803)
Other income (expense)	536,087	76,546	482,902	71,215
TOTAL OTHER INCOME (EXPENSE)	948,750	(2,770,202)	3,488,743	(6,446,551)
LOSS BEFORE INCOME TAXES	(28,683,993)	(13,982,700)	(51,261,694)	(24,668,431)
Provision for income taxes	-	-	-	-
NET LOSS	(28,683,993)	(13,982,700)	(51,261,694)	(24,668,431)
Net loss attributable to noncontrolling interests	-	40,179	-	97,600
NET LOSS ATTRIBUTABLE TO ARROWHEAD	$(28,683,993)	$(13,942,521)	$(51,261,694)	$(24,570,831)
NET LOSS PER SHARE ATTRIBUTABLE TO ARROWHEAD SHAREHOLDERS - BASIC & DILUTED:	$(0.51)	$(0.31)	$(0.93)	$(0.60)
Weighted average shares outstanding - basic and diluted	55,719,923	44,321,847	55,200,512	40,941,903
OTHER COMPREHENSIVE INCOME (LOSS), NET OF TAX				
Foreign Currency Translation Adjustments	(63,965)	-	(63,965)	-
COMPREHENSIVE LOSS ATTRIBUTABLE TO ARROWHEAD	$(28,747,958)	$(13,942,521)	$(51,325,659)	$(24,570,831)

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

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Arrowhead Research Corporation

Consolidated Statement of Stockholders' Equity

(unaudited)

	Preferred Stock		Common Stock			Accumulated Other Comprehensive			
	Shares	Amount ($)	Shares	Amount ($)	Additional Paid-In Capital	Income (loss)	Accumulated Deficit	Non-controlling Interest	Totals
Balance at September 30, 2013	9,900	$10	32,489,444	$124,859	$193,514,766	$-	$(166,140,969)	$(1,763,877)	$25,734,789
Exercise of warrants	-	-	2,911,919	2,911	10,145,133	-	-	-	10,148,044
Exercise of stock options	-	-	454,863	455	2,729,545	-	-	-	2,730,000
Stock-based compensation	-	-	-	-	5,696,173	-	-	-	5,696,173
Common stock issued @ $5.86	-	-	3,071,672	3,072	14,057,040	-	-	-	14,060,112
Common stock issued @ $18.95	-	-	6,325,000	6,325	112,575,234	-	-	-	112,581,559
Preferred stock issued @ $1,000 per share	46,000	46	-	-	45,999,954	-	-	-	46,000,000
Common stock issued to Galloway	-	-	131,579	132	499,868	-	-	-	500,000
Settlements related to derivative liability	-	-	-	-	5,956,079	-	-	-	5,956,079
Preferred stock converted to common stock	(37,600)	(38)	9,272,459	9,272	(9,234)	-	-	-	-
Deconsolidation of Calando Pharmaceuticals, Inc.	-	-	-	-	-	-	-	1,303,911	1,303,911
	-	-	-	-	-	-	(58,630,190)	(95,222)	(58,725,412)

Net loss for the year ended September 30, 2014									
Balance at September 30, 2014	18,300	$18	54,656,936	$147,026	$391,164,558	$-	$(224,771,159)	$(555,188)	$165,985,255
Exercise of warrants	-	-	53,578	54	270,571	-	-	-	270,625
Exercise of stock options	-	-	17,500	18	43,108	-	-	-	43,126
Stock-based compensation	-	-	-	-	4,219,935	-	-	-	4,219,935
Exercise of exchange rights	-	-	5,250	5	3,067	-	-	-	3,072
Preferred stock converted to common stock	(2,648)	(2)	1,316,215	1,316	(1,314)	-	-	-	-
Common stock-RSU vesting	-	-	65,000	65	(65)	-	-	-	-
Common stock issued to Novartis @ $7.53	-	-	3,321,383	3,321	24,996,679	-	-	-	25,000,000
Foreign currency translation adjustments	-	-	-	-	-	(63,965)	-	-	(63,965)
Net loss for the six months ended March 31, 2015	-	-	-	-	-	-	(51,261,694)	-	(51,261,694)
Balance at March 31, 2015	15,652	$16	59,435,862	$151,805	$420,696,539	$(63,965)	$(276,032,853)	$(555,188)	$144,196,354

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

Arrowhead Research Corporation

Consolidated Statements of Cash Flows

(unaudited)

	Six months ended March 31, 2015	Six months ended March 31, 2014
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$(51,261,694)	$(24,668,431)
Net loss attributable to non-controlling interests	-	97,600
Net loss attributable to Arrowhead	(51,261,694)	(24,570,831)
(Gain) loss on disposal of fixed assets	(19,195)	58,878
Change in value of derivatives	(2,551,116)	6,470,803
Acquired in-process research and development	10,142,786	-
Stock-based compensation	4,219,935	1,719,582
Depreciation and amortization	739,598	799,184
Amortization of note premiums	668,364	269,313
Non-controlling interest	-	(97,600)
Changes in operating assets and liabilities:		
Receivables	-	75,000
Other receivables	(279,500)	(611,360)
Other current assets	(3,223,118)	(206,011)
Accounts payable	2,402,381	1,311,947
Accrued expenses	(1,442,450)	275,370
Other	34,425	(214,329)
NET CASH USED IN OPERATING ACTIVITIES	(40,569,584)	(14,720,054)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Cash paid for acquisitions	(7,000,000)	-
Purchases of property and equipment	(852,063)	(607,772)
Proceeds from sale of fixed assets	500	-
Purchase of marketable securities	-	(46,365,528)
Proceeds from sale of marketable securities	12,150,774	5,010,238
NET CASH USED IN INVESTING ACTIVITIES	4,299,211	(41,963,062)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Principal payments on capital leases and notes payable	(106,554)	(204,448)
Proceeds from issuance of common stock and preferred stock, net	-	172,641,671
Proceeds from the exercise of warrants and stock options	313,618	7,979,309
NET CASH PROVIDED BY FINANCING ACTIVITIES	207,064	180,416,532
NET INCREASE (DECREASE) IN CASH	(36,063,309)	123,733,416
CASH AT BEGINNING OF PERIOD	132,510,610	19,114,444
CASH AT END OF PERIOD	$96,447,301	$142,847,860
Supplementary disclosures:		
Interest paid	$7,655	$17,105
Common stock issued to Novartis for asset acquisition	$25,000,000	$-

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

Arrowhead Research Corporation

Notes to Consolidated Financial Statements

(unaudited)

Unless otherwise noted, (1) the term “Arrowhead” refers to Arrowhead Research Corporation, a Delaware corporation, (2) the terms the “Company,” “we,” “us,” and “our,” refer to the ongoing business operations of Arrowhead and its Subsidiaries, whether conducted through Arrowhead or a subsidiary of Arrowhead, (3) the term “Subsidiaries” refers collectively to Arrowhead Madison Inc. (“Madison”), Arrowhead Australia Pty Ltd (“Arrowhead Australia”) and Ablaris Therapeutics, Inc. (“Ablaris”), (4) the term “Common Stock” refers to Arrowhead’s Common Stock, (5) the term “Preferred Stock” refers to Arrowhead’s Preferred Stock and the term “Stockholder(s)” refers to the holders of Arrowhead Common Stock.

NOTE 1. ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES

Nature of Business

Arrowhead Research Corporation develops novel drugs to treat intractable diseases by silencing the genes that cause them. Using the broadest portfolio of RNA chemistries and efficient modes of delivery, Arrowhead therapies trigger the RNA interference mechanism to induce rapid, deep and durable knockdown of target genes. Arrowhead’s most advanced drug candidate in clinical development is ARC-520, which is designed to treat chronic hepatitis B infection by inhibiting the production of all HBV gene products. The goal is to reverse the immune suppression that prevents the body from controlling the virus and clearing the disease. Arrowhead’s second clinical candidate is ARC-AAT, a treatment for a rare liver disease associated with a genetic disorder that causes alpha-1 antitrypsin deficiency.

Liquidity

Historically, the Company’s primary source of financing has been through the sale of securities of Arrowhead. Research and development activities have required significant capital investment since the Company’s inception. We expect our operations to continue to require cash investment as the Company pursues its research and development goals, as well as clinical trials and related drug manufacturing. Based upon the Company’s current cash resources and operating plan, the Company expects to have sufficient liquidity to fund operations for at least the next twelve months.

At March 31, 2015, the Company had $96.4 million in cash to fund operations. In addition to its cash resources, the Company has invested excess cash in investment grade commercial bonds maturing in less than 24 months. These bonds provide a source of liquidity, though the Company plans to hold them until maturity. At March 31, 2015, the Company had invested $31.9 million in bonds. During the six months ended March 31, 2015, the Company’s cash position decreased by $36.1 million which was primarily the result of cash outflows related to operating activities of $40.6 million, cash paid for the acquisition of certain RNAi assets from Novartis Institutes for Biomedical Research Inc. of $7.0 million (see footnote 2) and capital expenditures of $0.9 million, partially offset by maturities of fixed income investments totaling $12.2 million and proceeds from the exercise of warrants and options of $0.3 million.

Summary of Significant Accounting Policies

Principles of Consolidation—The consolidated financial statements include the accounts of Arrowhead and its Subsidiaries. Arrowhead’s primary operating subsidiary is Arrowhead Madison, which is located in Madison, Wisconsin, where the Company’s research and development facility is located. All significant intercompany accounts

and transactions are eliminated in consolidation.

Basis of Presentation and Use of Estimates—The preparation of financial statements in conformity with accounting principles generally accepted in the United States 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 revenues and expenses during the reporting period. In the opinion of management, all adjustments, consisting of normal recurring accruals, considered necessary for a fair presentation have been included. Actual results could materially differ from those estimates. Additionally, certain reclassifications have been made to prior period financial statements to conform to the current period presentation.

Cash and Cash Equivalents—The Company considers all liquid debt instruments purchased with a maturity of three months or less to be cash equivalents. The Company had no restricted cash at March 31, 2015 and September 30, 2014.

Concentration of Credit Risk—The Company maintains several bank accounts for its operations at two financial institutions. These accounts are insured by the Federal Deposit Insurance Corporation (FDIC) for up to $250,000 per account. Management believes the Company is not exposed to significant credit risk due to the financial position of the depository institutions in which these deposits are held.

Investments—The Company may invest excess cash balances in short-term and long-term marketable debt securities. Investments may consist of certificates of deposits, money market accounts, government-sponsored enterprise securities, corporate bonds and/or commercial paper. The Company accounts for its investment in marketable securities in accordance with FASB ASC 320, Investments – Debt and Equity Securities. This statement requires certain securities to be classified into three categories:

Held-to-maturity—Debt securities that the entity has the positive intent and ability to hold to maturity are reported at amortized cost.

Trading Securities—Debt and equity securities that are bought and held primarily for the purpose of selling in the near term are reported at fair value, with unrealized gains and losses included in earnings.

Available-for-Sale—Debt and equity securities not classified as either securities held-to-maturity or trading securities are reported at fair value with unrealized gains or losses excluded from earnings and reported as a separate component of shareholders' equity.

The Company classifies its investments in marketable debt securities based on the facts and circumstances present at the time of purchase of the securities. At March 31, 2015, the Company classified all of its investments as held-to-maturity.

Held-to-maturity investments are measured and recorded at amortized cost on the Company's Consolidated Balance Sheet. Discounts and premiums to par value of the debt securities are amortized to interest income/expense over the term of the security. No gains or losses on investment securities are realized until they are sold or a decline in fair value is determined to be other-than-temporary.

Property and Equipment—Property and equipment are recorded at cost, which may equal fair market value in the case of property and equipment acquired in conjunction with a business acquisition. Depreciation of property and equipment is recorded using the straight-line method over the respective useful lives of the assets ranging from three to seven years. Leasehold improvements are amortized over the lesser of the expected useful life or the remaining lease term. Long-lived assets, including property and equipment are reviewed for impairment whenever events or circumstances indicate that the carrying amount of these assets may not be recoverable.

Intangible Assets Subject to Amortization—At March 31, 2015, intangible assets subject to amortization include certain patents and license agreements. Intangible assets subject to amortization are reviewed for impairment whenever events or circumstances indicate that the carrying amount of these assets may not be recoverable.

In-Process Research & Development (IPR&D)—IPR&D assets represent capitalized on-going research projects that were acquired through business combinations. Such assets are initially measured at their acquisition date fair values. The amounts capitalized are being accounted for as indefinite-lived intangible assets, subject to impairment testing until completion or abandonment of R&D efforts associated with the project. Upon successful completion of a project, Arrowhead will make a determination as to the then remaining useful life of the intangible asset and begin amortization. Arrowhead tests its indefinite-lived assets for impairment at least annually, through a two-step process. The first step is a qualitative assessment to determine if it is more likely than not that the indefinite lived assets are impaired. Arrowhead considers relevant events and circumstances that could affect the inputs used to determine the fair value of the intangible assets. If the qualitative assessment indicates that it is more likely than not that the intangible assets are impaired, a second step is performed which is a quantitative test to determine the fair value of the intangible asset. If the carrying amount of the intangible assets exceeds its fair value, an impairment loss is recorded in the amount of that excess. If circumstances determine that it is appropriate, the Company may also elect to bypass step one, and proceed directly to the second step.

Contingent Consideration - The consideration for the Company's acquisitions often includes future payments that are contingent upon the occurrence of a particular event. For example, milestone payments might be based on the achievement of various regulatory approvals or future sales milestones, and royalty payments might be based on drug product sales levels. The Company records a contingent consideration obligation for such contingent payments at fair value on the acquisition date. The Company estimates the fair value of contingent consideration obligations through valuation models designed to estimate the probability of such contingent payments based on various assumptions and incorporating estimated success rates. Estimated payments are discounted using present value techniques to arrive at estimated fair value at the balance sheet date. Changes in the fair value of our contingent consideration obligations are recognized within the Company's Consolidated Statements of Operations. Changes in the fair value of the contingent consideration obligations can result from changes to one or multiple inputs, including adjustments to the discount rates, changes in the amount or timing of expected expenditures associated with product development, changes in the amount or timing of cash flows from products upon commercialization, changes in the assumed achievement or timing of any development milestones, changes in the probability of certain clinical events and changes in the assumed probability associated with regulatory approval. These fair value measurements are based on significant inputs not observable in the market. Substantial judgment is employed in determining the appropriateness of these assumptions as of the acquisition date and for each subsequent period. Accordingly, changes in assumptions could have a material impact on the amount of contingent consideration expense the Company records in any given period.

Revenue Recognition—Revenue from license fees are recorded when persuasive evidence of an arrangement exists, title has passed or services have been rendered, a price is fixed and determinable, and collection is reasonably assured. The Company may generate revenue from product sales, technology licenses, collaborative research and development arrangements, and research grants. Revenue under technology licenses and collaborative agreements typically consists of nonrefundable and/or guaranteed technology license fees, collaborative research funding and various milestone and future product royalty or profit-sharing payments.

Payments under collaborative research and development agreements are recognized as revenue ratably over the relevant periods specified in the agreement, generally the period during which research and development is conducted. Revenue from up-front license fees, milestones and product royalties are recognized as earned based on the completion of the milestones and product sales, as defined in the respective agreements. Payments received in advance of recognition as revenue are recorded as deferred revenue.

Allowance for Doubtful Accounts—The Company accrues an allowance for doubtful accounts based on estimates of uncollectible revenues by analyzing historical collections, accounts receivable aging and other factors. Accounts receivable are written off when all collection attempts have failed.

Research and Development—Costs and expenses that can be clearly identified as research and development are charged to expense as incurred in accordance with FASB ASC 730-10. Included in research and development costs are operating costs, facilities, supplies, external services, clinical trial and manufacturing costs, overhead directly related to the Company's research and development operations, and costs to acquire technology licenses.

Earnings (Loss) per Share—Basic earnings (loss) per share is computed using the weighted-average number of common shares outstanding during the period. Diluted earnings (loss) per share are 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 stock options and restricted stock units issued to employees and warrants to purchase Common Stock of the Company. All outstanding stock options, restricted stock units and warrants for the three and six months ended March 31, 2015 and 2014 have been excluded from the calculation of Diluted earnings (loss) per share due to their anti-dilutive effect.

Stock-Based Compensation—The Company accounts for share-based compensation arrangements in accordance with FASB ASC 718, which requires the measurement and recognition of compensation expense for all share-based payment awards to be based on estimated fair values. The Company uses the Black-Scholes option valuation model to estimate the fair value of its stock options at the date of grant. The Black-Scholes option valuation model requires the input of subjective assumptions to calculate the value of stock options. The Company uses historical data and other information to estimate the expected price volatility and the expected forfeiture rate. For performance-based stock awards, the value of the awards is measured at the grant date. Expense is recognized over the vesting period, commencing at the time the Company determines the achievement of such performance conditions is probable. This determination requires significant judgment by management.

Derivative Assets and Liabilities – The Company accounts for warrants and other derivative financial instruments as either equity or assets/liabilities based upon the characteristics and provisions of each instrument. Warrants classified as equity are recorded as additional paid-in capital on the Company's Consolidated Balance Sheet. Some of the Company's warrants were determined to be ineligible for equity classification because of provisions that may result in an adjustment to their exercise price. Warrants classified as derivative liabilities and other derivative financial instruments that require separate accounting as assets or liabilities are recorded on the Company's Consolidated Balance Sheet at their fair value on the date of issuance and are revalued on each subsequent balance sheet date until such instruments are exercised or expire, with any changes in the fair value between reporting periods recorded as other income or expense. The Company estimates the fair value of these assets/liabilities using option pricing models that are based on the individual characteristics of the warrants or instruments on the valuation date, as well as assumptions for expected volatility, expected life and risk-free interest rate.

Income Taxes—The Company accounts for income taxes under the liability method, which requires the recognition of deferred income tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements or tax returns. Under this method, deferred income taxes are recognized for the tax consequences in future years of differences between the tax bases of assets and liabilities and their financial reporting amounts at each period end based on enacted tax laws and statutory tax rates applicable to the periods in which the differences are expected to affect taxable income. Valuation allowances are established, when necessary, to reduce deferred income tax assets to the amount expected to be realized. The provision for income taxes, if any, represents the tax payable for the period and the change in deferred income tax assets and liabilities during the period.

NOTE 2. ACQUISITIONS

On March 3, 2015, the Company entered into an Asset Purchase and Exclusive License Agreement (the "RNAi Purchase Agreement") with Novartis Institutes for BioMedical Research, Inc., a Delaware corporation ("Novartis"), pursuant to which the Company acquired Novartis' RNAi assets and rights thereunder. Pursuant to the RNAi Purchase Agreement, the Company acquired or licensed certain patents and patent applications owned or controlled by Novartis related to RNAi therapeutics, assignment of a third-party license, rights to three pre-clinical RNAi candidates, and other related assets (collectively, the "Purchased Assets"). The acquisition of the Purchased Assets closed on March 3, 2015, concurrent with execution of the RNAi Purchase Agreement (the "Closing").

In consideration for the Purchased Assets, the Company made certain payments to Novartis, including: (a) an initial payment of $10,000,000 in cash of which $7,000,000 was paid during the Company's first fiscal quarter of 2015 to secure an exclusivity period whereby the Company was able to exclusively examine the Novartis RNAi assets prior to finalizing the purchase, and the remaining $3,000,000 was paid in April, and 3,321,383 shares of the Company's common stock (the "Shares") were issued during the Company's second fiscal quarter; (b) escalating royalties in the single digits based upon annual net sales thresholds for certain RNAi products sold by the Company; and (c) milestone payments tied to the achievement of certain development and sales milestones for each target being developed by the Company.

Pursuant to the RNAi Purchase Agreement, prior to initiation of a phase 2 Clinical Trial for a given RNAi Product or Arrowhead RNAi Product directed to an Initial Target, Novartis has an exclusive right to negotiate a license under any Intellectual Property Rights owned or exclusively licensed to the Company to make, sell or otherwise commercially exploit such RNAi Product or Arrowhead RNAi Product (as such italicized terms are defined in the RNAi Purchase Agreement). After initiation of a phase 2 Clinical Trial for a given Arrowhead RNAi Product ("ROFN Candidiate"), Novartis shall have a right of first negotiation on the ROFN Candidate developed by the Company and its affiliates relating to the purchased assets. If the Company proposes to out-license, or enters into substantive negotiations to out-license, any ROFN Candidate, the Company must give notice of the ROFN Candidate it proposes to out-license and negotiate exclusively and in good faith with Novartis for a period of time regarding the applicable out-license.

In addition to the consideration paid by the Company at the closing of the Transaction, the Company is obligated to make certain royalty and milestone payments to Novartis upon the occurrence of certain events. For sales of any RNAi Products for which Novartis and the Company do not enter into a licensing arrangement, the Company will be obligated to pay royalty rates ranging in the low to mid-single digits on Net Sales depending upon the type of RNAi Product provided that the royalty rate may be reduced or offset in certain circumstances. The obligation to pay royalties on such candidates will last until the later of (i) the expiration of the last to Valid Claim Covering such RNAi Product in such country and (ii) 11 years after the first commercial sale of such RNAi Product (as such italicized terms are defined in the RNAi Purchase Agreement).

The Company will also be obligated to make cash payments to Novartis upon the achievement of various milestones for any RNAi Products for which Novartis and the Company do not enter into a licensing arrangement. These milestones include the initiation of a phase 2 and 3 clinical trials, US and other regulatory approvals, and annual sales milestones. These milestone payments could amount to the mid to upper double digit millions of dollars.

The following table summarizes the estimated fair values of the assets acquired at the date of acquisition:

Intangible assets - patents	$21,728,334
Intangible assets – license	3,128,880
Acquired in-process research and development - Pre-Clinical Candidates	10,142,786
Total purchase consideration	$ 35,000,000

The purchase consideration was composed of the following:

Cash Paid Prior to March 31, 2015	$7,000,000
Cash Paid After March 31, 2015	3,000,000
Value of Shares Issued to Novartis during the three months ended March 31, 2015	25,000,000
Total purchase consideration	$35,000,000

The Company accounted for this transaction as an acquisition of RNAi assets, including patents, a third-party license and in process research and development for the pre-clinical candidates. The allocation of the purchase price to each asset was determined by estimating the relative fair value of each asset acquired and applying that to the total cost of the acquisition for the Company. The Company capitalized the patents and license acquired as Intangible Assets as they require no future development and will have alternative future uses as the Company expands its RNAi capabilities (see footnote 5 for additional discussion of the useful lives and amortization of these Intangible Assets). The Company expensed the portion of the purchase consideration allocated to the pre-clinical candidates as they will require future development in order to be commercialized. This expense is recorded in the "Acquired in-process research and development" line item of the Consolidated Statements of Operations.

NOTE 3. PROPERTY AND EQUIPMENT

The following table summarizes our major classes of property and equipment:

	March 31, 2015	September 30, 2014
Computers, office equipment and furniture	$372,401	$334,162
Research equipment	5,284,178	4,614,176
Software	94,848	69,623
Leasehold improvements	3,117,537	3,045,022
Total gross fixed assets	8,868,964	8,062,983
Less: Accumulated depreciation and amortization	(4,741,598)	(4,190,230)
Property and equipment, net	$4,127,366	$3,872,753

NOTE 4. INVESTMENTS

The Company invests a portion of its excess cash balances in short-term and long-term debt securities. Investments at March 31, 2015 consisted of corporate bonds with maturities remaining of less than two years. The Company may also invest excess cash balances in certificates of deposit, money market accounts, US Treasuries, US government agency obligations, corporate debt securities, and/or commercial paper. The Company accounts for its investments in accordance with FASB ASC 320, Investments – Debt and Equity Securities. At March 31, 2015, all investments were classified as held-to-maturity securities.

The following tables summarize the Company's short- and long-term investments as of March 31, 2015, and September 30, 2014.

	As of March 31, 2015			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Commercial notes (due within one year)	$19,561,172	$ 784	$(285,310)	$19,276,646
Commercial notes (due after one year through two years)	$12,361,068	—	$(127,628)	$12,233,440

Total	$31,922,240	$ 784	$ (412,938)	$31,510,086

	As of September 30, 2014			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Commercial notes (due within one year)	$21,653,032	$ —	$ (189,830)	$21,463,202
Commercial notes (due after one year through two years)	$23,088,346	—	$ (217,693)	$22,870,653
Total	$44,741,378	$ —	$ (407,523)	$44,333,855

NOTE 5. INTANGIBLE ASSETS

Intangible assets consist of in-process research and development (“IPR&D”) not subject to amortization, and patents and license agreements subject to amortization, which were capitalized as a part of an asset acquisition or business combination.

IPR&D represents projects that have not yet received regulatory approval and are required to be classified as indefinite assets until the successful completion or the abandonment of the associated R&D efforts. Accordingly, during the development period after the date of acquisition, these assets will not be amortized until approval is obtained in one or more jurisdictions which, individually or combined, are expected to generate a significant portion of the total revenue expected to be earned by an IPR&D project. At that time, the Company will determine the useful life of the asset, reclassify the asset out of IPR&D and begin amortization. If the associated R&D effort is abandoned the related IPR&D assets will likely be written off and the Company would record an impairment loss. Intangible assets not subject to amortization include IPR&D capitalized as part of a business combination from the acquisition of Roche Madison.

Intangible assets subject to amortization include patents and a license agreement capitalized as part of the Novartis RNAi asset acquisition and a business combination from the acquisition of Roche Madison. The license agreement associated with the Novartis RNAi asset acquisition is being amortized over the estimated life remaining at the time of acquisition which was 21 years, and the accumulated amortization of the asset is approximately $12,367. The license agreements associated with the acquisition of Roche Madison are being amortized over the estimated life remaining at the time of acquisition, which was 4 years, and the accumulated amortization of the assets is approximately $188,790. The patents associated with the Novartis RNAi asset acquisition are being amortized over the estimated life remaining at the time of acquisition which was 14 years, and the accumulated amortization of the assets is approximately $129,335. Amortization expense for the three and six months ended March 31, 2015 was $155,366 and $169,030, respectively. Amortization expense for the three and six months ended March 31, 2014 was $13,663 and $27,327, respectively. Amortization expense is expected to be approximately $877,541 for the remainder of fiscal year 2015, $1,714,313 in 2016, $1,700,429 in 2017, $1,700,429 in 2018, $1,700,429 in 2019, $1,700,429 in 2020, and $15,363,152 thereafter.

The following table provides details on the Company's intangible asset balances:

	Intangible assets not subject to amortization	Intangible assets subject to amortization	Total Intangible assets
Balance at September 30, 2013	$ 3,117,322	$ 123,191	$ 3,240,513
Impairment	(2,172,387)	-	(2,172,387)
Amortization	-	(54,653)	(54,653)
Balance at September 30, 2014	$ 944,935	$ 68,538	$ 1,013,473
Acquisition of Novartis RNAi Assets	-	24,857,214	24,857,214
Amortization	-	(169,030)	(169,030)
Balance at March 31, 2015	$ 944,935	$ 24,756,722	$ 25,701,657

NOTE 6. STOCKHOLDERS' EQUITY

At March 31, 2015, the Company had a total of 150,000,000 shares of capital stock authorized for issuance, consisting of 145,000,000 shares of Common Stock, par value $0.001 per share, and 5,000,000 shares of Preferred Stock, par value $0.001 per share.

At March 31, 2015, 59,435,862 shares of Common Stock were outstanding. Additionally, 15,652 shares of Series C Preferred Stock were outstanding, which are convertible into 2,670,990 shares of Common Stock. At March 31, 2015, 8,192,654 shares of Common Stock were reserved for issuance upon exercise of options and vesting of restricted stock units granted or available for grant under Arrowhead's 2004 Equity Incentive Plan and 2013 Incentive Plan, as well as for inducement grants made to new employees.

The Preferred Stock is convertible to Common Stock by its holder at its stated conversion price, though it is not convertible to the extent the holder would beneficially own more than 9.99% of the number of shares of outstanding Common Stock immediately after the conversion. The holders of Preferred Stock are eligible to vote with the Common Stock of the Company on an as-converted basis, but only to the extent they are eligible for conversion without exceeding the 9.99% ownership limitation. The Preferred Stock does not carry a coupon, but it is entitled to receive dividends on a pari passu basis with Common Stock, when and if declared. In any liquidation or dissolution of the Company, the holders of Preferred Stock are entitled to participate in the distribution of the assets, to the extent legally available for distribution, on a pari passu basis with the Common Stock.

On October 11, 2013, the Company sold 3,071,672 shares of Common Stock, at a price of $5.86 per share, and 46,000 shares of Series C Preferred Stock, at a price of $1,000 per share. The Preferred Shares are convertible into shares of common stock at a conversion price of $5.86. The aggregate purchase price paid by the purchasers for the Common Stock and Series C Preferred Stock was $64,000,000 and the Company received net proceeds of approximately $60,000,000, after advisory fees and offering expenses.

On February 24, 2014, the Company sold 6,325,000 shares of Common Stock, at a public offering price of $18.95 per share. Net proceeds were approximately $112.6 million after underwriting commissions and discounts and other offering expenses.

The following table summarizes information about warrants outstanding at March 31, 2015:

Exercise prices	Number of Warrants	Remaining Life in Years
$ 70.60	94,897	2.1
$ 5.00	390,625	0.5
$ 5.09	239,534	0.2
$ 1.38	24,324	0.7
$ 4.16	1,000	1.7
$ 3.25	334,347	1.4
$ 2.12	75,000	2.7
$ 1.83	277,284	2.7
Total warrants outstanding	1,437,011	

NOTE 7. COMMITMENTS AND CONTINGENCIES

Leases

The Company leases office space for its corporate headquarters in Pasadena, California. In March 2014, the Company signed a lease addendum to expand its corporate headquarters, and the new space became available in September 2014. The leases for the expansion space and the current space will expire in September 2019. Rental costs, including the expansion space, are approximately $23,000 per month, increasing approximately 3% annually.

The Company's research facility in Madison, Wisconsin is leased through February 28, 2019. Monthly rental expense is approximately $26,000. Other monthly rental expenses include common area maintenance and real estate taxes totaling approximately $18,000 per month. Utilities costs are approximately $16,000 per month. Total monthly costs are approximately $79,000 per month, including monthly payments recorded under a capital lease of approximately $19,000.

Facility rent expense for the three and six months ended March 31, 2015 was $191,000 and $362,000, respectively. Facility rent expense for the three and six months ended March 31, 2014 was $134,000 and $264,000, respectively.

As of March 31, 2015, future minimum lease payments due in fiscal years under capitalized leases are as follows:

2015 (remainder of)	$114,210
2016	228,420
2017	228,420
2018	228,420
2019	95,178
2020 and thereafter	-
Less interest	(28,872)
Principal	865,776
Less current portion	(215,762)
Noncurrent portion	$650,014

As of March 31, 2015, future minimum lease payments due in fiscal years under operating leases are as follows:

2015 (remainder of)	$292,119
2016	596,877
2017	613,664
2018	637,897
2019	459,633
2020 and thereafter	-
Total	$2,600,190

Litigation

The Company, its Chief Executive Officer and its Chief Operating Officer have been named as defendants in two securities class actions filed in the United States District Court for the Central District of California regarding certain public statements in connection with the Company's hepatitis B drug research. Both actions assert claims under Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 and seek damages in an unspecified amount. Two actions with similar claims under California State law are currently pending in Los Angeles Superior Court. Additionally, three putative stockholder derivative actions have been filed in the United States District Court for the Central District of California, alleging breach of fiduciary duty by the Company's Board of Directors in connection with the facts underlying the Securities Claims. Each of these seven suits seeks damages in unspecified amounts and some seek various forms of injunctive relief.

The Company and two of its former executives have been named as defendants in a complaint filed by William Marsh Rice University ("Rice University") currently pending in the United States District Court for the Southern District of Texas relating to alleged breaches of a license agreement between Rice University and the Company's former subsidiary, Unidym, Inc. The plaintiff has alleged that the Company and its former executives acted fraudulently with respect to Unidym's license from Rice University and seeks injunctive relief, damages, including unspecified compensatory and punitive damages, and attorneys' fees.

The Company believes it has meritorious defenses and intends to vigorously defend itself in each of the above matters. The Company makes provisions for liabilities when it is both probable that a liability has been incurred and the amount can be reasonably estimated. No such liability has been recorded related to these matters. The Company does not expect these matters to have any material effect on its Consolidated Financial Statements. With regard to legal fees, such as attorney fees related to these matters or any other legal matters, the Company's accounting policy is to recognize such cost as incurred.

Purchase Commitments

In the normal course of business, we enter into various purchase commitments for the manufacture of drug components, toxicology studies, and for clinical studies. As of March 31, 2015, these future commitments were approximately $49.7 million, of which approximately $29.5 million is expected to be incurred in the remainder of fiscal 2015, and $20.2 million is expected to be incurred beyond fiscal 2015.

Technology License Commitments

The Company has licensed from third parties the rights to use certain technologies that it uses in its research and development activities, as well as in any products the Company may develop using these licensed technologies. These agreements and other similar agreements often require milestone and royalty payments. Milestone payments, for example, may be required as the research and development process progresses through various stages of development, such as when clinical candidates enter or progress through clinical trials, upon NDA and upon certain sales level milestones. These milestone payments could amount to the mid to upper double digit millions of dollars. In certain agreements, the Company may be required to make mid to high single digit percentage royalty payments based on a percentage of the sales of the relevant products.

NOTE 8. STOCK-BASED COMPENSATION

Arrowhead has two plans that provide for equity-based compensation. Under the 2004 Equity Incentive Plan and 2013 Incentive Plan, as of March 31, 2015, 2,546,018 and 5,094,314 shares, respectively, of Arrowhead's Common Stock are reserved for the grant of stock options, stock appreciation rights, restricted stock awards and performance

unit/share awards by the Board of Directors to employees, consultants and others. No further grants may be made under the 2004 Equity Incentive Plan. As of March 31, 2015, there were options granted and outstanding to purchase 2,546,018 and 2,306,000 shares of Common Stock under the 2004 Equity Incentive Plan and the 2013 Incentive Plan, respectively, and there were 1,080,000 restricted stock units granted and outstanding under the 2013 Incentive Plan. Also, as of March 31, 2015, there were 547,322 shares reserved for options and 70,000 restricted stock units issued as inducement grants to new employees outside of equity compensation plans. During the three months ended March 31, 2015, no options were granted under the 2004 Equity Incentive Plan, 625,000 options and 675,000 restricted stock units were granted under the 2013 Incentive Plan, and no options and restricted stock units were granted as inducement awards to new employees outside of equity incentive plans. During the six months ended March 31, 2015, no options were granted under the 2004 Equity Incentive Plan, 1,489,000 options and 675,000 restricted stock units were granted under the 2013 Incentive Plan, and 120,000 options and 30,000 restricted stock units were granted as inducement awards to new employees outside of equity incentive plans. Additionally, the Company’s 2000 Stock Option Plan and the 38,000 stock options that were outstanding under the 2000 Stock Option Plan expired during the six months ended March 31, 2015.

The following tables summarize information about stock options:

	Number of Options Outstanding	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
Balance At September 30, 2013	3,419,285	$ 4.68		
Granted	1,039,000	14.05		
Cancelled	(152,582)	6.05		
Exercised	(454,863)	6.00		
Balance At September 30, 2014	3,850,840	6.99		
Granted	1,609,000	6.34		
Cancelled	(43,000)	17.01		
Exercised	(17,500)	2.46		
Balance At March 31, 2015	5,399,340	$ 6.73	8.3 years	$9,160,725
Exercisable At March 31, 2015	2,117,387	$ 5.98	7.2 years	$4,617,497

Stock-based compensation expense related to stock options for the three and six months ended March 31, 2015 was $1,198,891 and $2,180,290, respectively and for the three and six months ended March 31, 2014 was $627,737 and $1,148,875, respectively. The Company does not recognize an income tax benefit as the Company is currently operating at a loss and an actual income tax benefit may not be realized. For non-qualified stock options, the loss creates a timing difference, resulting in a deferred tax asset, which is fully reserved by a valuation allowance.

The fair value of the options granted by Arrowhead for the three and six months ended March 31, 2015 is estimated at $2,114,074 and $5,703,692, respectively, and for the three and six months ended March 31, 2014 was estimated at $7,085,676 and $7,617,186, respectively.

The intrinsic value of the options exercised during the three and six months ended March 31, 2015 was $89,954 and $113,728, respectively, and for the three and six months ended March 31, 2014 was $2,903,309 and $3,218,167, respectively.

As of March 31, 2015, the pre-tax compensation expense for all outstanding unvested stock options in the amount of approximately $13,982,343 will be recognized in our results of operations over a weighted average period of 3.1 years.

The fair value of each stock option award is estimated on the date of grant using the Black-Scholes option pricing model. The Black-Scholes option valuation model was developed for use in estimating the fair value of traded options, which do not have vesting restrictions and are fully transferable. The determination of the fair value of each stock option is affected by our stock price on the date of grant, as well as assumptions regarding a number of highly complex and subjective variables. Because the Company’s employee stock options have characteristics significantly different from those of traded options, and because changes in the subjective input assumptions can materially affect the fair value estimate, in management’s opinion, the existing models do not necessarily provide a reliable single measure of the fair value of its employee stock options.

The assumptions used to value stock options are as follows:

	Six months ended March 31,	
	2015	2014
Dividend yield	—	—
Risk-free interest rate	1.55 – 1.85%	1.9 – 2.26%
Volatility	75%	69%
Expected life (in years)	6 - 6.25	5.5 - 6.25
Weighted average grant date fair value per share of options granted	$3.54	$9.08

The dividend yield is zero as the Company currently does not pay a dividend.

The risk-free interest rate is based on the U.S. Treasury bond.

Volatility is estimated based on volatility average of the Company’s Common Stock price.

Restricted Stock Units

Restricted Stock Units (RSUs) were granted under the Company's 2013 Incentive Plan and as inducement grants granted outside of the Plan. During the three and six months ended March 31, 2015, the Company issued 675,000 and 705,000 restricted stock units, respectively, to certain members of management and during the three and six months ended March 31, 2014, the Company issued 470,000 and 470,000 restricted stock units, respectively. Of the restricted stock units granted during the six months ended March 31, 2015 and 2014, 30,000 and 0, respectively, were granted outside of the Plan as an inducement grant to a new employee. At vesting each RSU will be exchanged for one share of the Company's Common Stock. Restricted stock unit awards generally vest subject to the satisfaction of service requirements or the satisfaction of both service requirements and achievement of certain performance targets.

The following table summarizes the activity of the Company's Restricted Stock Units:

	Number of RSUs	Weighted-Average Grant Date Fair Value
Unvested at September 30, 2013	—	$ —
Granted	510,000	14.58
Vested	—	—
Forfeited	—	—
Unvested at September 30, 2014	510,000	$ 14.58
Granted	705,000	6.77
Vested	(267,500)	14.54
Forfeited	—	—
Unvested at March 31, 2015	947,500	$ 8.78

The Company recorded $1,006,188 and $2,039,645 of expense relating to restricted stock units during the three and six months ended March 31, 2015, respectively, and $570,707 and $570,707 during the three and six months March 31, 2014, respectively. Such expense is included in stock-based compensation expense in the Company's Consolidated Statement of Operations.

As of March 31, 2015, the pre-tax compensation expense for all unvested restricted stock units in the amount of approximately $6,147,120 will be recognized in the Company's results of operations over a weighted average period of 1.8 years.

NOTE 9. FAIR VALUE MEASUREMENTS

The Company measures its financial assets and liabilities at fair value. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (i.e., exit price) in an orderly transaction between market participants at the measurement date. Additionally, the Company is required to provide disclosure and categorize assets and liabilities measured at fair value into one of three different levels depending on the assumptions (i.e., inputs) used in the valuation. Level 1 provides the most reliable measure of fair value while Level 3 generally requires significant management judgment. Financial assets and liabilities are classified in their entirety based on the lowest level of input significant to the fair value measurement. The fair value hierarchy is defined as follows:

Level 1—Valuations are based on unadjusted quoted prices in active markets for identical assets or liabilities.

Level 2—Valuations are based on quoted prices for similar assets or liabilities in active markets, or quoted prices in markets that are not active for which significant inputs are observable, either directly or indirectly.

Level 3—Valuations are based on prices or valuation techniques that require inputs that are both unobservable and significant to the overall fair value measurement. Inputs reflect management's best estimate of what market participants would use in valuing the asset or liability at the measurement date.

The following table summarizes fair value measurements at March 31, 2015 and September 30, 2014 for assets and liabilities measured at fair value on a recurring basis:

March 31, 2015:

	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	$96,447,301	$ —	$—	$96,447,301
Derivative liabilities	$—	$ —	$1,619,755	$1,619,755
Acquisition-related contingent consideration obligations	$—	$ —	$3,970,931	$3,970,931

September 30, 2014:

	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	$132,510,610	$ —	$—	$132,510,610
Derivative liabilities	$—	$ —	$4,173,943	$4,173,943
Acquisition-related contingent consideration obligations	$—	$ —	$3,970,931	$3,970,931

The Company invests its excess cash balances in short- and long-term corporate bonds, generally with remaining maturities of less than two years. At March 31, 2015, the Company had short-term investments of $19,561,172, and long-term investments of $12,361,068, for a total of $31,922,240. The fair value of its investment at March 31, 2015 was $31,510,086. The Company expects to hold such investments until maturity, and thus unrealized gains and losses from the fluctuations in the fair value of the securities are not likely to be realized.

As part of an equity financing in June 2010, Arrowhead issued warrants to acquire up to 329,649 shares of Common Stock (the "2010 Warrants"), of which 24,324 warrants were outstanding at March 31, 2015. Similarly, as part of a financing in December 2012, Arrowhead issued warrants to acquire up to 912,543 shares of Common Stock (the "2012 Warrants") of which 265,161 warrants were outstanding at March 31, 2015. Further, as part of a financing in January 2013, Arrowhead issued warrants to acquire up to 833,530 shares of Common Stock (the "2013 Warrants") of which 12,123 warrants were outstanding at March 31, 2015 (collectively the "Warrants"). Each of the Warrants discussed above contains a mechanism to adjust the strike price upon the issuance of certain dilutive equity securities. If during the terms of the Warrants, the Company issues Common Stock at a price lower than the exercise price for the Warrants, the exercise price would be reduced to the amount equal to the issuance price of the Common Stock. As a result of these features, the Warrants are subject to derivative accounting as prescribed under ASC 815. Accordingly, the fair value of the Warrants on the date of issuance was estimated using an option pricing model and recorded on the Company's Consolidated Balance Sheet as a derivative liability. The fair value of the Warrants is estimated at the end of each reporting period and the change in the fair value of the Warrants is recorded as a non-operating gain or loss as change in value of derivatives in the Company's Consolidated Statement of Operations. During the three and six months ended March 31, 2015, the Company recorded a non-cash gain from the change in fair value of the derivative liability of $191,910 and $2,371,561, respectively. During the three and six months ended March 31, 2014, the Company recorded a non-cash loss of $2,910,116 and $6,417,612, respectively.

The assumptions used in valuing the derivative liability were as follows:

2010 Warrants	March 31, 2015	September 30, 2014
Risk-free interest rate	0.26%	0.13%
Expected life	0.7 Years	1.2 Years
Dividend yield	None	None
Volatility	75%	69%
2012 Warrants	March 31, 2015	September 30, 2014
Risk-free interest rate	0.89%	1.07%
Expected life	2.7 Years	3.2 Years
Dividend yield	None	None
Volatility	75%	69%
2013 Warrants	March 31, 2015	September 30, 2014
Risk-free interest rate	0.89%	1.07%

Expected life	2.8 Years	3.3 Years
Dividend yield	None	None
Volatility	75%	69%

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The following is a reconciliation of the derivative liability related to these warrants:

Value at September 30, 2013	$4,091,797
Issuance of instruments	—
Change in value	5,821,796
Net settlements	(5,956,079)
Value at September 30, 2014	$3,957,514
Issuance of instruments	—
Change in value	(2,371,561)
Net settlements	—
Value at March 31, 2015	$1,585,953

In conjunction with the financing of Ablaris in fiscal 2011, Arrowhead sold exchange rights to certain investors whereby the investors have the right to exchange their shares of Ablaris for a prescribed number of Arrowhead shares of Common Stock based upon a predefined ratio. The exchange rights have a seven-year term. During the first year, the exchange right allows the holder to exchange one Ablaris share for 0.06 Arrowhead shares. This ratio declines to 0.04 in the second year, 0.03 in the third year and 0.02 in the fourth year. In the fifth year and beyond the exchange ratio is 0.01. Exchange rights for 675,000 Ablaris shares were sold in fiscal 2011, and 500,000 remain outstanding at March 31, 2015. The exchange rights are subject to derivative accounting as prescribed under ASC 815. Accordingly, the fair value of the exchange rights on the date of issuance was estimated using an option pricing model and recorded on the Company’s Consolidated Balance Sheet as a derivative liability. The fair value of the exchange rights is estimated at the end of each reporting period and the change in the fair value of the exchange rights is recorded as a non-operating gain or loss in the Company’s Consolidated Statement of Operations. During the three and six months ended March 31, 2015, the Company recorded a non-cash loss and gain from the change in fair value of the derivative liability of $22,936 and $179,555, respectively. During the three and six months ended March 31, 2014, the Company recorded a non-cash loss of $41,109 and $53,191, respectively.

The assumptions used in valuing the derivative liability were as follows:

	March 31, 2015	September 30, 2014
Risk-free interest rate	1.00%	1.07%
Expected life	3.0 Years	3.3 Years
Dividend yield	None	None
Volatility	75%	100%

The following is a reconciliation of the derivative liability related to these exchange rights:

Value at September 30, 2013	$4,569
Issuance of instruments	—
Change in value	211,860
Net settlements	—
Value at September 30, 2014	$216,429
Issuance of instruments	—
Change in value	(179,555)

Net settlements	(3,072)
Value at March 31, 2015	$33,802

The derivative assets/liabilities are estimated using option pricing models that are based on the individual characteristics of the warrants or instruments on the valuation date, as well as assumptions for expected volatility, expected life and risk-free interest rate. Changes in the assumptions used could have a material impact on the resulting fair value. The primary input affecting the value of our derivatives liabilities is the Company's stock price. Other inputs have a comparatively insignificant effect.

As of March 31, 2015, the Company has a liability for contingent consideration related to its acquisition of Roche Madison Inc. The fair value measurement of the contingent consideration obligations is determined using Level 3 inputs. The fair value of contingent consideration obligations is based on a discounted cash flow model using a probability-weighted income approach. The measurement is based upon unobservable inputs supported by little or no market activity based on the Company's assumptions and experience. Estimating timing to complete the development and obtain approval of products is difficult, and there are inherent uncertainties in developing a product candidate, such as obtaining U.S. Food and Drug Administration (FDA) and other regulatory approvals. In determining the probability of regulatory approval and commercial success, the Company utilizes data regarding similar milestone events from several sources, including industry studies and its own experience. These fair value measurements represent Level 3 measurements as they are based on significant inputs not observable in the market. Significant judgment is employed in determining the appropriateness of these assumptions as of the acquisition date and for each subsequent period. Accordingly, changes in assumptions could have a material impact on the amount of contingent consideration expense the Company records in any given period. Changes in the fair value of the contingent consideration obligations are recorded in the Company's Consolidated Statement of Operations.

The following is a reconciliation of contingent consideration fair value.

Value at September 30, 2013	$1,595,273
Purchase price contingent consideration	—
Contingent consideration payments	—
Change in fair value of contingent consideration	2,375,658
Value at September 30, 2014	$3,970,931
Purchase price contingent consideration	—
Contingent consideration payments	—
Change in fair value of contingent consideration	—
Value at March 31, 2015	$3,970,931

The fair value of contingent consideration obligations is estimated through valuation models designed to estimate the probability of such contingent payments based on various assumptions and incorporating estimated success rates. Estimated payments are discounted using present value techniques to arrive at estimated fair value at the balance sheet date. Changes in the fair value of the contingent consideration obligations can result from changes to one or multiple inputs, including adjustments to the discount rates, changes in the amount or timing of expected expenditures associated with product development, changes in the amount or timing of cash flows from products upon commercialization, changes in the assumed achievement or timing of any development milestones, changes in the probability of certain clinical events and changes in the assumed probability associated with regulatory approval. Each of these assumptions can have a significant impact on the calculation of contingent consideration.

The carrying amounts of the Company's other financial instruments, which include accounts receivable, accounts payable, and accrued expenses approximate their respective fair values due to the relatively short-term nature of these instruments. The carrying value of the Company's debt obligations approximates fair value based on market interest rates.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This Quarterly Report on Form 10-Q contains certain 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, and we intend that such forward-looking statements be subject to the safe harbors created thereby. For this purpose, any statements contained in this Quarterly Report on Form 10-Q except for historical information may be deemed to be forward-looking statements. Without limiting the generality of the foregoing, words such as "may," "will," "expect," "believe," "anticipate," "intend," "could," "estimate," or "continue" or the negative or other variations thereof or comparable terminology are intended to identify forward-looking statements. In addition, any statements that refer to projections of our future financial performance, trends in our businesses, or other characterizations of future events or circumstances are forward-looking statements.

The forward-looking statements included herein are based on current expectations of our management based on available information and involve a number of risks and uncertainties, all of which are difficult or impossible to predict accurately and many of which are beyond our control. As such, our actual results may differ significantly from those expressed in any forward-looking statements. Readers should carefully review the factors identified in this report under the caption "Risk Factors" as well as the additional risks described in other documents we file from time to time with the Securities and Exchange Commission ("SEC"), including our most recent Annual Report on Form 10-K and subsequent quarterly reports on Form 10-Q. In light of the significant risks and uncertainties inherent in the forward-looking information included herein, the inclusion of such information should not be regarded as a representation by us or any other person that such results will be achieved, and readers are cautioned not to place undue reliance on such forward-looking information. Except as may be required by law, we disclaim any intent to revise the forward-looking statements contained herein to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.

Overview

Arrowhead Research develops novel drugs to treat intractable diseases by silencing the genes that cause them. Using the broadest portfolio of RNA chemistries and efficient modes of delivery, Arrowhead therapies trigger the RNA interference mechanism to induce rapid, deep and durable knockdown of target genes. Arrowhead's most advanced drug candidate in clinical development is ARC-520, which is designed to treat chronic hepatitis B infection by inhibiting the production of all HBV gene products. The goal is to reverse the immune suppression that prevents the body from controlling the virus and clearing the disease. Arrowhead's second clinical candidate is ARC-AAT, a treatment for a rare liver disease associated with a genetic disorder that causes alpha-1 antitrypsin deficiency.

Arrowhead operates a lab facility in Madison, Wisconsin, where the Company's research and development activities, including the development of its RNAi therapeutics, are based. The Company's principal executive offices are located in Pasadena, California.

During the first half of fiscal year 2015, the Company continued to develop its lead clinical candidate, ARC-520, for the treatment of chronic hepatitis B as well as its second clinical candidate, ARC-AAT, an RNAi therapeutic designed to treat liver disease associated with Alpha-1 antitrypsin deficiency (AATD). The Company continues its Phase 2a studies in ARC-520, with no dose-limiting toxicities or serious adverse events having been observed to date. The Company submitted an Investigational New Drug application to the U.S. Food and Drug Administration in December 2014 for ARC-520 to initiate phase 2b multi-dose studies to determine the depth of hepatitis B surface antigen (HBsAg) reduction following ARC-520 injection. The Company received feedback from the FDA, and based on that feedback the Company adjusted the protocol in order to begin the trial. In April 2015, the application was approved by the FDA. The Company also expects to file with Asian and European agencies to begin additional phase 2b studies in fiscal year 2015. Additionally, the Company has initiated dosing in a phase 1 clinical trial for ARC-AAT following successful completion of the Clinical Trial Notification (CTN) regulatory process in Australia.

In March 2015, the Company also completed the acquisition of Novartis' entire RNAi research and development portfolio and associated assets. The acquisition included assignment of certain patents and patent applications owned or controlled by Novartis related to RNAi therapeutics, an exclusive license in the RNAi field to other patents and patent applications owned or controlled by Novartis, assignment of a third party license, three pre-clinical RNAi candidates, and other related assets. This acquisition will significantly expand the Company's RNAi capabilities as the assets are integrated.

The Company continues to develop other clinical candidates for future clinical trials, focusing on intravenously-administered therapeutics targeting gene knockdown in the liver, as well as formulations for administering RNAi-based therapeutics by subcutaneous administration. Clinical candidates are tested internally and through GLP toxicology studies at outside laboratories, and drug materials for such studies, and for clinical trials, are contracted to third-party manufactures when cGMP production is required. The Company engages third-party contract research organizations (CROs) to manage clinical trials and works cooperatively with such organizations on all aspects of clinical trial management, including plan design, patient recruiting, and follow up. These outside costs, relating to the preparation for and administration of clinical trials, are referred to as program costs, and if the clinical candidates progress through human testing, program costs will increase.

Net losses were $28.7 million and $51.3 million during the three and six months ended March 31, 2015, respectively, and $14.0 million and $24.7 million during the three and six months ended March 31, 2014, respectively. Diluted losses per share were $0.51 and $0.93 during the three and six months ended March 31, 2015, respectively, and $0.31 and $0.60 during the three and six months ended March 31, 2014, respectively.

The Company also substantially strengthened its liquidity and financial position through two securities offerings completed in October 2013 and February 2014 which generated approximately $172.6 million of cash proceeds for the Company. These cash proceeds secured the funding needed to advance both ARC-520 and ARC-AAT through future clinical trials and will also assist as the Company expands its pipeline of other clinical candidates. The Company had $96.4 million of Cash and Cash Equivalents and $162.4 million of Total Assets as of March 31, 2015 as compared to $132.5 million and $182.8 million as of September 30, 2014, respectively. The decrease in Cash and Cash Equivalents and Total Assets reflects cash outflows associated with the Company’s research and development efforts for its clinical candidates and pipeline, as well as cash paid for the Novartis RNAi assets acquired. Based upon the Company’s current cash resources and operating plan, the Company expects to have sufficient liquidity to fund operations for at least the next twelve months.

Critical Accounting Policies and Estimates

Management makes certain judgments and uses certain estimates and assumptions when applying accounting principles generally accepted in the United States in the preparation of our Consolidated Financial Statements. We evaluate our estimates and judgments on an ongoing basis and base our estimates on historical experience and on assumptions that we believe to be reasonable under the circumstances. Our experience and assumptions form the basis for our judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may vary from what we anticipate and different assumptions or estimates about the future could change our reported results. We believe the following accounting policies are the most critical to us, in that they are important to the portrayal of our Consolidated Financial Statements and require our most difficult, subjective or complex judgments in the preparation of our consolidated financial statements. For further information, see Note 1, Organization and Significant Accounting Policies, to our Consolidated Financial Statements, which outlines our application of significant accounting policies.

Revenue Recognition

Revenue from product sales are recorded when persuasive evidence of an arrangement exists, title has passed and delivery has occurred, a price is fixed and determinable, and collection is reasonably assured.

We may generate revenue from technology licenses, collaborative research and development arrangements, research grants and product sales. Revenue under technology licenses and collaborative agreements typically consists of nonrefundable and/or guaranteed technology license fees, collaborative research funding, and various milestone and future product royalty or profit-sharing payments.

Revenue associated with research and development funding payments under collaborative agreements is recognized ratably over the relevant periods specified in the agreement, generally the research and development period. Revenue from up-front license fees, milestones and product royalties are recognized as earned based on the completion of the milestones and product sales, as defined in the respective agreements. Payments received in advance of recognition as revenue are recorded as deferred revenue.

Asset Acquisition

On March 3, 2015, the Company entered into an Asset Purchase and Exclusive License Agreement (the “RNAi Purchase Agreement”) with Novartis Institutes for BioMedical Research, Inc., a Delaware corporation (“Novartis”), pursuant to which the Company acquired Novartis’ RNAi assets and rights thereunder. Pursuant to the Agreement, the Company acquired or licensed certain patents and patent applications owned or controlled by Novartis related to RNAi therapeutics, assignment of a third-party license, rights to three pre-clinical RNAi candidates, and other related assets (collectively, the “Purchased Assets”). The acquisition of the Purchased Assets closed on March 3, 2015, concurrent with execution of the Agreement (the “Closing”).

In consideration for the Purchased Assets, the Company made certain payments to Novartis, including: (a) an initial payment of $10,000,000 in cash, of which $7,000,000 was paid during the Company's first fiscal quarter of 2015 to secure an exclusivity period whereby the Company was able to exclusively examine the Novartis RNAi assets prior to finalizing the purchase, and the remaining $3,000,000 was paid in the third fiscal quarter, and 3,321,383 shares of the Company's common stock (the "Shares") were issued during the Company's second fiscal quarter; (b) escalating royalties in the single digits based upon annual net sales thresholds for certain RNAi products sold by the Company; and (c) milestone payments tied to the achievement of certain development and sales milestones for each target being developed by the Company.

The Company accounted for this transaction as an acquisition of RNAi assets, including patents, a third-party license and in process research and development for the pre-clinical candidates. The allocation of the purchase price to each asset was determined by estimating the relative fair value of each asset acquired and applying that to the total cost of the acquisition for the Company. The Company capitalized the patents and license acquired as Intangible Assets as they require no future development and will have alternative future uses as the Company expands its RNAi capabilities. The Company expensed the portion of the purchase consideration allocated to the pre-clinical candidates as they will require future development in order to be commercialized. This expense is recorded in the "Acquired in-process research and development" line item of the Consolidated Statements of Operations.

Impairment of Long-lived Assets

We review long-lived assets for impairment whenever events or changes in business circumstances indicate that the carrying amount of assets may not be fully recoverable or that our assumptions about the useful lives of these assets are no longer appropriate. If impairment is indicated, recoverability is measured by a comparison of the carrying amount of an asset to the estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future cash flows, an impairment charge is recognized in the amount by which the carrying amount of the asset exceeds the fair value of the asset.

Impairment of Intangible assets

Intangible assets consist of patents and license agreements acquired in conjunction with asset and business acquisitions. Intangible assets are monitored for potential impairment whenever events or circumstances indicate that the carrying amount may not be recoverable, and are also reviewed annually to determine whether any impairment is necessary. Based on ASC 350, the annual review of intangible assets is performed via a two-step process. First, a qualitative assessment is performed to determine if it is more likely than not that the intangible asset is impaired. If required, a quantitative assessment is performed and, if necessary, impairment is recorded.

Stock-Based Compensation

We recognize stock-based compensation expense for stock options based on the grant date fair value using the Black-Scholes options pricing model, which requires us to make assumptions regarding certain variables including the risk-free interest rate, expected stock price volatility, assumed forfeitures, and the expected life of the award. The grant date fair value of restricted stock units granted is based upon the quoted closing market price per share on the date of grant, adjusted for assumed forfeitures. Expense for stock options and restricted stock units is recognized over the requisite service period. The assumptions used in calculating stock-based compensation expense represent management's best estimates, but these estimates involve inherent uncertainties, and if factors change or the Company used different assumptions, its stock-based compensation expense could be materially different in the future.

Derivative Assets and Liabilities

We account for warrants and other derivative financial instruments as either equity or assets/liabilities based upon the characteristics and provisions of each instrument. Warrants classified as equity are recorded as additional paid-in

capital on our Consolidated Balance Sheet and no further adjustments to their valuation are made. Some of our warrants were determined to be ineligible for equity classification because of provisions that may result in an adjustment to their exercise price. Warrants classified as derivative liabilities and other derivative financial instruments that require separate accounting as assets or liabilities are recorded on our Consolidated Balance Sheet at their fair value on the date of issuance and are revalued on each subsequent balance sheet date until such instruments are exercised or expire, with any changes in the fair value between reporting periods recorded as other income or expense. We estimate the fair value of these assets/liabilities using option pricing models that are based on the individual characteristics of the warrants or instruments on the valuation date, as well as assumptions for expected volatility, expected life and risk-free interest rate. Changes in the assumptions used could have a material impact on the resulting fair value. The primary input affecting the value of our derivatives liabilities is the Company’s stock price.

Contingent Consideration

The consideration for our acquisitions often includes future payments that are contingent upon the occurrence of a particular event. For example, milestone payments might be based on the achievement of various regulatory approvals or future sales milestones, and royalty payments might be based on drug product sales levels. The Company records a contingent consideration obligation for such contingent payments at fair value on the acquisition date. The Company estimates the fair value of contingent consideration obligations through valuation models designed to estimate the probability of the occurrence of such contingent payments based on various assumptions and incorporating estimated success rates. Estimated payments are discounted using present value techniques to arrive at estimated fair value at the balance sheet date. Changes in the fair value of our contingent consideration obligations are recognized within our Consolidated Statements of Operations. Changes in the fair value of the contingent consideration obligations can result from changes to one or multiple inputs, including adjustments to the discount rates, changes in the amount or timing of expected expenditures associated with product development, changes in the amount or timing of cash flows from products upon commercialization, changes in the assumed achievement or timing of any development milestones, changes in the probability of certain clinical events and changes in the assumed probability associated with regulatory approval. These fair value measurements are based on significant inputs not observable in the market. Substantial judgment is employed in determining the appropriateness of these assumptions as of the acquisition date and for each subsequent period. Accordingly, changes in assumptions could have a material impact on the amount of contingent consideration expense the Company records in any given period.

Results of Operations

The following data summarize our results of operations for the following periods indicated:

	Three Months Ended March 31, 2015	Three Months Ended March 31, 2014
Revenue	$43,750	$43,750
Operating Loss	(29,632,743)	(11,212,498)
Net Loss	(28,683,993)	(13,982,700)
Earnings per Share (Basic and Diluted)	$(0.51)	$(0.31)

	Six Months Ended March 31, 2015	Six Months Ended March 31, 2014
Revenue	$214,500	$87,500
Operating Loss	(54,750,437)	(18,221,880)
Net Loss	(51,264,694)	(24,668,431)
Earnings per Share (Basic and Diluted)	$(0.93)	$(0.60)

The increase in our Operating Expenses during the three and six months ended March 31, 2015, is primarily due to the continued development of our lead clinical candidate for HBV, ARC-520 and our second clinical candidate ARC-AAT for AATD. The primary costs incurred during fiscal 2015 related to manufacturing of clinical supplies for our clinical trials, toxicology studies, and the cost associated with the administration of clinical trials. In addition, the Company is incurring costs, primarily manufacturing costs and clinical trial administration costs, as we prepare for a phase 2b clinical trial of ARC-520, which is anticipated to begin in 2015. Lastly, the Company incurred $10.1 million in expense associated with the acquisition of in-process research and development pre-clinical candidates from the

Novartis asset acquisition.

Revenue

Total revenue was $43,750 and $214,500 for the three and six months ended March 31, 2015 and $43,750 and $87,500 for the three and six months ended March 31, 2014. Revenue is primarily related to licensed technology in both periods. In addition, the Company had collaboration revenue of $80,000 and earned $47,000 in revenue for delivering a materials study during the six months ended March 31, 2015.

Operating Expenses

The analysis below details the operating expenses and discusses the expenditures of the Company within the major expense categories. Certain reclassifications have been made to prior period operating expense categories to conform to the current period presentation. For purposes of comparison, the amounts for the three and six months ended March 31, 2015 and 2014 are shown in the tables below.

Research and Development Expenses – Three and six months ended March 31, 2015 compared to the three and six months ended March 31, 2014

R&D expenses are related to the Company's on-going research and development efforts, primarily related to program costs, composed primarily of outsourced costs related to the manufacturing of clinical supplies, toxicity/efficacy studies and clinical trial expenses. Internal costs primarily relate to operations at our research facility in Madison, Wisconsin, including facility costs and laboratory-related expenses. The following table provides details of research and development expense for the periods indicated:

(in thousands, except percentages)

	Three Months Ended March 31, 2015	% of Expense Category	Three Months Ended March 31, 2014	% of Expense Category	Increase (Decrease) $	Increase (Decrease) %
Laboratory supplies & services	$697	6 %	$467	9 %	$230	49 %
In vivo studies	139	1 %	111	2 %	28	25 %
Outside labs & contract services	105	1 %	174	3 %	(69)	-40 %
Toxicity/efficacy studies	2,028	17 %	1,171	23 %	857	73 %
Drug manufacturing	5,211	45 %	2,057	39 %	3,154	153 %
Clinical trials	2,174	19 %	926	18 %	1,248	135 %
License, royalty & milestones	1,012	9 %	8	0 %	1,004	12550 %
Facilities and related	246	2 %	286	6 %	(40)	-14 %
Other research expenses	29	0 %	16	0 %	13	81 %
Total	$11,641	100 %	$5,216	100 %	$6,425	123 %

	Six Months Ended March 31, 2015	% of Expense Category	Six Months Ended March 31, 2014	% of Expense Category	Increase (Decrease) $	Increase (Decrease) %
Laboratory supplies & services	$1,191	4 %	$856	10 %	$335	39 %
In vivo studies	199	1 %	173	2 %	26	15 %
Outside labs & contract services	231	1 %	296	4 %	(65)	-22 %
Toxicity/efficacy studies	4,096	14 %	1,692	20 %	2,404	142 %
Drug manufacturing	14,810	49 %	3,286	39 %	11,524	351 %
Clinical trials	7,240	25 %	1,509	18 %	5,731	380 %
License, royalty & milestones	1,035	4 %	20	0 %	1,015	5075 %

Facilities and related	452	1	%	479	6	%	(27)	-6	%
Other research expenses	133	1	%	38	1	%	95	250	%
Total	$29,387	100	%	$8,349	100	%	$21,038	252	%

Laboratory supplies and services expense increased by $230,000 from $467,000 during the three months ended March 31, 2014 to $697,000 during the current period. The expense also increased by $335,000 from $856,000 during the six months ended March 31, 2014 to $1,191,000 during the current period. The Company has expanded its laboratory facility and increased its R&D headcount. The increase in laboratory supplies and services is a result of the purchase of additional supplies necessary to support increased efforts in pre-clinical research as the Company supports ongoing clinical efforts and accelerates efforts to identify new clinical candidates.

In vivo studies expense increased by $28,000 from $111,000 during the three months ended March 31, 2014 to $139,000 during the current period. The expense also increased by $26,000 from $173,000 during the six months ended March 31, 2014 to $199,000 during the current period. In vivo expense can vary depending on the stage of preclinical candidates, the nature and amount of testing required and based on the varying costs of different in vivo testing models. The expense in both periods relates to studies related to development of new clinical candidates.

Outside labs and contract services expense decreased by $69,000 from $174,000 during the three months ended March 31, 2014 to $105,000 during the current period. The expense also decreased by $65,000 from $296,000 during the six months ended March 31, 2014 to $231,000 during the current period. The expense in both periods relates to services provided for oligonucleotide synthesis related to development of new clinical candidates.

Toxicity/efficacy studies expense increased by $857,000 from $1,171,000 during the three months ended March 31, 2014 to $2,028,000 during the current period. The expense also increased by $2,404,000 from $1,692,000 during the six months ended March 31, 2014 to $4,096,000 during the current period. This category includes IND-enabling toxicology studies as well as post-IND toxicology studies, such as long-term toxicology studies, and other efficacy studies. The current period expense primarily relates to IND-enabling toxicology studies related to ARC-AAT and studies related to ARC-520 to support our anticipated phase 2b clinical trial.

Drug manufacturing expense increased by $3,154,000 from $2,057,000 during the three months ended March 31, 2014 to $5,211,000 during the current period. The expense also increased by $11,524,000 from $3,286,000 during the six months ended March 31, 2014 to $14,810,000 during the current period. The current period expense relates to drug manufacturing to supply toxicology studies for our HBV Phase 2b clinical trial, clinical supplies for the HBV Phase 2b clinical trial, as well as clinical supplies for our clinical trial for ARC-AAT. The Phase 2b clinical trial for HBV will be a much larger study than previous clinical trials, and as such, the Company anticipates increased drug manufacturing expenses in future periods.

Clinical trials expense increased by $1,248,000 from $926,000 during the three months ended March 31, 2014 to $2,174,000 during the current period. The expense also increased by $5,731,000 from $1,509,000 during the six months ended March 31, 2014 to $7,240,000 during the current period. The increase is primarily driven by costs incurred in preparation for our anticipated phase 2b clinical trial for ARC-520. We expect clinical trial expenses to increase further throughout 2015 as enrollment in our clinical trials increases.

License, royalty and milestones expense increased by $1,004,000 from $8,000 during the three months ended March 31, 2014 to $1,012,000 during the current period. The expense also increased by $1,015,000 from $20,000 during the six months ended March 31, 2014 to $1,035,000 during the current period. This category can include milestone payments which can vary from period to period depending on the nature of our various license agreements, and the timing of reaching various development milestones requiring payment. During the three months ended March 31, 2015, we achieved a milestone by initiating a phase 1 clinical trial with ARC-AAT that required a $1 million payment.

Facilities expense decreased by $40,000 from $286,000 during the three months ended March 31, 2014 to $246,000 during the current period. The expense also decreased by $27,000 from $479,000 during the six months ended March 31, 2014 to $452,000 during the current period. The decrease relates to higher repairs and maintenance costs on our lab equipment incurred in fiscal 2014.

Other research expense increased by $13,000 from $16,000 during the three months ended March 31, 2014 to $29,000 during the current period. The expense also increased by $95,000 from $38,000 during the six months ended March 31, 2014 to $133,000 during the current period. The increase in the six month periods primarily relates to costs associated with a collaboration agreement to identify muscle targeting peptide molecules in fiscal 2015, for which the Company has been reimbursed from its collaboration partner.

Salaries – Three and Six months ended March 31, 2015 compared to the three and six months ended March 31, 2014

The Company employs scientific, technical and administrative staff at its corporate offices and its research facility. Salaries and payroll-related expense consists of salary, bonuses, payroll taxes and related benefits. Salary and payroll-related expenses include two major categories: general and administrative (G&A) compensation expense, and research and development (R&D) compensation expense, based on the primary activities of each employee. The

following table provides detail of salary and payroll-related expenses for the periods indicated:

(in thousands, except percentages)

	Three Months Ended March 31, 2015	% of Expense Category	Three Months Ended March 31, 2014	% of Expense Category	Increase (Decrease) $	Increase (Decrease) %
R&D - compensation-related	$ 2,511	71 %	$ 1,475	48 %	$ 1,036	70 %
G&A - compensation-related	1,031	29 %	1,623	52 %	(592)	-36%
Total	$ 3,542	100 %	$ 3,098	100 %	$ 444	14 %

	Six Months Ended March 31, 2015	% of Expense Category		Six Months Ended March 31, 2014	% of Expense Category		Increase (Decrease) $		
R&D - compensation-related	$4,876	73	%	$2,805	54	%	$2,071	74	%
G&A - compensation-related	1,816	27	%	2,375	46	%	(559)	-24	%
Total	$6,692	100	%	$5,180	100	%	$1,512	29	%

R&D compensation expense increased by $1,036,000 from $1,475,000 during the three months ended March 31, 2014 to $2,511,000 during the current period. The expense also increased by $2,071,000 from $2,805,000 during the six months ended March 31, 2014 to $4,876,000 during the current period. Increased headcount accounted for the majority of the change in compensation-related expense.

G&A compensation expense decreased by $592,000 from $1,623,000 during the three months ended March 31, 2014 to $1,031,000 during the current period. The expense also decreased by $559,000 from $2,375,000 during the six months ended March 31, 2014 to $1,816,000 during the current period. These decreases were due to the timing of bonus expenses in each period.

General & Administrative Expenses – Three and Six months ended March 31, 2015 compared to the three and six months ended March 31, 2014

The following table provides details of our general and administrative expenses for the periods indicated:

(in thousands, except percentages)

	Three Months Ended March 31, 2015	% of Expense Category		Three Months Ended March 31, 2014	% of Expense Category		Increase (Decrease) $		
Professional/outside services	$893	53	%	$590	44	%	$303	51	%
Patent expense	157	9	%	269	20	%	(112)	-42	%
Facilities and related	77	5	%	48	4	%	29	60	%
Travel	141	8	%	139	10	%	2	1	%
Business insurance	107	6	%	57	4	%	50	88	%
Communication and Technology	192	11	%	106	8	%	86	81	%
Office expenses	65	4	%	96	7	%	(31)	-32	%
Other	65	4	%	43	3	%	22	51	%
Total	$1,697	100	%	$1,348	100	%	$349	26	%

	Six Months Ended March 31,	% of Expense Category	Six Months Ended March 31,	% of Expense Category	Increase (Decrease) $	%

	2015			2014					
Professional/outside services	$2,136	57	%	$997	44	%	$1,139	114	%
Patent expense	334	9	%	401	18	%	(67)	-17	%
Facilities and related	153	4	%	94	4	%	59	63	%
Travel	328	9	%	239	11	%	89	37	%
Business insurance	213	6	%	112	5	%	101	90	%
Communication and Technology	357	9	%	164	7	%	193	118	%
Office expenses	145	4	%	153	7	%	(8)	-5	%
Other	117	3	%	101	5	%	16	16	%
Total	$3,783	100	%	$2,261	100	%	$1,522	67	%

Professional/outside services include legal, accounting, consulting and other outside services retained by the Company. All periods include normally recurring legal and audit expenses related to SEC compliance and other corporate matters. Professional/outside services expense increased by $303,000 from $590,000 during the three months ended March 31, 2014 to $893,000 during the current period. The expense also increased by $1,139,000 from $997,000 during the six months ended March 31, 2014 to $2,136,000 during the current period. The increase in professional fees primarily related to professional recruiting fees for the hiring of additional R&D personnel to support and expand our clinical pipeline. Additionally, the Company incurred higher attorney's fees related to recent litigation events. See Note 7 – Commitments and Contingencies for further discussion.

Patent expense decreased by $112,000 from $269,000 during the three months ended March 31, 2014 to $157,000 during the current period. The expense also decreased by $67,000 from $401,000 during the six months ended March 31, 2014 to $334,000 during the current period. The Company continues to invest in patent protection for its DPC technology, related product candidates and other RNAi technology through patent filings in multiple countries. The Company expects to extend and maintain protection for its current portfolios, as appropriate, and file new patent applications as technologies are developed and improved.

Facilities-related expense increased by $29,000 from $48,000 during the three months ended March 31, 2014 to $77,000 during the current period. The expense also increased by $59,000 from $94,000 during the six months ended March 31, 2014 to $153,000 during the current period. Facilities expense increased due to the expansion of our corporate headquarters in Pasadena.

Travel expense increased by $2,000 from $139,000 during the three months ended March 31, 2014 to $141,000 during the current period. The expense also increased by $89,000 from $239,000 during the six months ended March 31, 2014 to $328,000 during the current period. Travel expense increased due to travel in support of our R&D function, primarily our GMP manufacturing campaign and our clinical trials.

Business insurance expense increased by $50,000 from $57,000 during the three months ended March 31, 2014 to $107,000 during the current period. The expense also increased by $101,000 from $112,000 during the six months ended March 31, 2014 to $213,000 during the current period. Business insurance costs increased primarily related to added coverage related to the Company's clinical trials.

Communication and technology expense increased by $86,000 from $106,000 during the three months ended March 31, 2014 to $192,000 during the current period. The expense also increased by $193,000 from $164,000 during the six months ended March 31, 2014 to $357,000 during the current period. The increase was related to the cost associated with new equipment related to new employees as well as upgrades to the Company's networks.

Office expense decreased by $31,000 from $96,000 during the three months ended March 31, 2014 to $65,000 during the current period. The expense also decreased by $8,000 from $153,000 during the six months ended March 31, 2014 to $145,000 during the current period. These expenses relate to conferences/training, office supplies, miscellaneous administrative expenses, and expenses related to office expansions at our R&D facility in Madison and our corporate headquarters in Pasadena.

Other expense was $65,000 and $117,000 during the three and six months ended March 31, 2015 as compared to $43,000 and $101,000 during the three and six months ended March 31, 2014. This category consists primarily of conference attendance fees, franchise and property tax expenses and marketing expenses.

Acquired in-process research and development – Novartis pre-clinical candidates

Acquired in-process research and development expense for the Novartis pre-clinical candidates was $10,142,786 for the three and six months ended March 31, 2015 and zero for the previous periods. This expense pertains to the acquisition of the Novartis RNAi assets discussed above. The pre-clinical candidates were expensed during the period, while certain other patents and a third-party license were capitalized as intangible assets.

Stock-based compensation expense

Stock-based compensation expense, a noncash expense, was $2,205,079 and $4,219,935 during the three and six months ended March 31, 2015, compared to $1,198,444 and $1,719,582 during the comparable prior period. Stock-based compensation expense is based upon the valuation of stock options and restricted stock units granted to employees, directors, and certain consultants. Many variables affect the amount expensed, including the Company's stock price on the date of the grant, as well as other assumptions. Based on the additional options and restricted stock

units granted to new and existing employees in fiscal 2015, compensation expense has increased from the prior year.

Depreciation and amortization expense

Depreciation and amortization expense, a noncash expense, was $449,559 and $739,598 during the three and six months ended March 31, 2015, compared to $395,779 and $799,184 during the comparable prior period. The majority of depreciation and amortization expense relates to depreciation on lab equipment obtained as part of the acquisition of Roche Madison in 2011. In addition, the Company records depreciation on leasehold improvements at its Madison research facility and its Pasadena corporate headquarters as well as amortization of the recently intangible assets acquired in the Novartis asset acquisition.

Other income / expense

Other income / expense was income of $948,750 and $3,488,743 during the three and six months ended March 31, 2015, compared to expense of $2,770,202 and $6,446,551 in the comparable prior period. The primary component of other expense during each period was a change in the value of derivative liabilities related to certain warrants with a price adjustment feature, necessitating derivative accounting. The fluctuations in each period were primarily driven by changes in the Company's stock price, which had a corresponding impact to the valuation of the underlying warrants.

Liquidity and Cash Resources

Arrowhead has historically financed its operations through the sale of securities of Arrowhead and its Subsidiaries. Research and development activities have required significant capital investment since the Company's inception, and are expected to continue to require significant cash investment.

At March 31, 2015, the Company had cash on hand of approximately $96.4 million as compared to $132.5 million at September 30, 2014. Excess cash invested in fixed income securities was $31.9 million at March 31, 2015, compared to $44.7 million at September 30, 2014. The Company believes its current financial resources are sufficient to fund its operations through at least the next twelve months.

A summary of cash flows for the six months ended March 31, 2015 and 2014 is as follows:

	Six Months Ended March 31, 2015	Six Months Ended March 31, 2014
Cash Flow from Continuing Operations:		
Operating Activities	$(40,569,584)	$(14,720,054)
Investing Activities	4,299,211	(41,963,062)
Financing Activities	207,064	180,416,532
Net Increase (Decrease in Cash)	(36,063,309)	123,733,416
Cash at Beginning of Period	132,510,610	19,114,444
Cash at End of Period	$96,447,301	$142,867,860

During the six months ended March 31, 2015, the Company used $40.6 million in cash from operating activities, which represents the on-going expenses of its research and development programs and corporate overhead. Cash outlays were primarily composed of the following: research and development costs were $30.2 million, salary and payroll-related expenses were $6.7 million, and general and administrative costs were $3.8 million. Cash provided by investing activities was $4.3 million, primarily related to maturities on fixed income securities of $12.2 million, partially offset by cash paid for the acquisition of the Novartis RNAi assets of $7.0 million and capital expenditures of $0.9 million. Cash provided by financing activities of $0.2 million was driven by cash received from the exercise of warrants and stock options.

During the six months ended March 31, 2014, the Company used $14.7 million in cash from operating activities, which represents the on-going expenses of its research and development programs and corporate overhead. Cash outlays were primarily composed of the following: research and development costs were $7.2 million, salary and payroll-related expenses were $5.2 million, and general and administrative costs were $2.3 million. Cash used by investing activities was $42.0 million, primarily related to net cash investments in fixed income securities of $46.4 million and capital expenditures of $0.6 million, partially offset by maturities on fixed income securities of $5.0 milion. Cash provided by financing activities of $180.4 million includes $172.6 million of cash received from equity financings by the Company during 2013 as well as $8.0 million in cash received from the exercise of warrants and

stock options.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements or relationships.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

There has been no material change in our exposure to market risk from that described in Item 7A of our Annual Report on Form 10-K for the year ended September 30, 2014, filed with the Securities and Exchange Commission on November 25, 2014.

ITEM 4. CONTROLS AND PROCEDURES

Our Chief Executive Officer and our Chief Financial Officer, after evaluating our "disclosure controls and procedures" (as defined in Rules 13a-15(e) and 15d-15(e)) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") as of the end of the period covered by this Quarterly Report on Form 10-Q (the "Evaluation Date"), have concluded that, as of the Evaluation Date, our disclosure controls and procedures are effective to ensure that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and to ensure that information required to be disclosed by us in such reports is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer where appropriate, to allow timely decisions regarding required disclosure.

No change in the Company's internal controls over financial reporting (as defined in Rule 13a-15(f) and 15d-15(f) of the Exchange Act) occurred during the Company's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

From time to time, we may be involved in routine legal proceedings, as well as demands, claims and threatened litigation, which arise in the normal course of our business. We believe there is no litigation pending that, individually or in the aggregate, will have a material adverse effect on our results of operations or financial condition. The information contained in Note 7 to the Consolidated Financial Statements under the heading “Litigation” in Part I, Item 1 is incorporated herein by reference.

ITEM 1A. Risk Factors

There have been no material changes to the risk factors included in our Annual Report on Form 10-K for the year ended September 30, 2014. Please carefully consider the information set forth in this Quarterly Report on Form 10-Q and the risk factors discussed in Part I, “Item 1A. Risk Factors” in our Annual Report on Form 10-K for the year ended September 30, 2014, which could materially affect our business, financial condition or future results. The risks described in our Annual Report on Form 10-K, as well as other risks and uncertainties, could materially and adversely affect our business, results of operations and financial condition, which in turn could materially and adversely affect the trading price of shares of our Common Stock. Additional risks not currently known or currently material to us may also harm our business.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

All information under this Item has been previously reported on our Current Reports on Form 8-K.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not Applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

Exhibit Number	Document Description
2.1	Asset Purchase and Exclusive License Agreement between Arrowhead Research Corporation and Novartis Institutes for Biomedical Research, Inc., dated March 3, 2015*†
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002*
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002*
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**
101	The following materials from Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2015, formatted in XBRL (Extensible Business Reporting Language): (1) Consolidated Balance Sheets, (2) Consolidated Statements of Operations, (3) Consolidated Statement of Stockholders' Equity, (4) Consolidated Statements of Cash Flows, and (5) Notes to Consolidated Financial Statements. **

*Filed herewith

**Furnished herewith

†Certain schedules and exhibits to this agreement have been omitted pursuant to Item 601(b)(2) of Regulation S-K. A copy of any omitted schedule and/or exhibit will be furnished supplementally to the SEC upon request. Confidential treatment has been requested with respect to certain portions of this exhibit. Omitted portions have been filed separately with the Securities and Exchange Commission.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this Quarterly Report on Form 10-Q to be signed on its behalf by the undersigned, thereunto duly authorized.

Dated: May 11, 2015

ARROWHEAD RESEARCH CORPORATION

By: /s/ Kenneth A. Myszkowski
Kenneth A. Myszkowski
Chief Financial Officer

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