ARROWHEAD PHARMACEUTICALS, INC.
Form 10-Q
May 10, 2016

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, 2016

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

ARROWHEAD PHARMACEUTICALS, INC.

(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	¨	Accelerated filer	x
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 9, 2016 was 59,960,711.

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

Arrowhead Pharmaceuticals, Inc.

Consolidated Balance Sheets

	(unaudited) March 31, 2016	September 30, 2015
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$50,300,847	$81,214,354
Prepaid expenses	3,772,643	3,293,285
Other current assets	909,561	823,620
Short term investments	11,160,442	17,539,902
TOTAL CURRENT ASSETS	66,143,493	102,871,161
Property and equipment, net	4,381,628	4,526,848
Intangible assets, net	23,960,017	24,824,116
Other assets	122,333	45,789
TOTAL ASSETS	$94,607,471	$132,267,914
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	$7,542,498	$5,031,706
Accrued expenses	3,834,269	5,376,119
Accrued payroll and benefits	1,395,004	3,824,062
Deferred revenue	65,625	103,125
Derivative liabilities	955,193	1,301,604
Capital lease obligation	219,349	217,548
Other current liabilities	46,407	46,407
TOTAL CURRENT LIABILITIES	14,058,345	15,900,571
LONG-TERM LIABILITIES		
Capital lease obligation, net of current portion	430,665	540,792
Contingent consideration obligations	5,862,464	5,862,464
Other non-current liabilities	329,760	342,453
TOTAL LONG-TERM LIABILITIES	6,622,889	6,745,709
Commitments and contingencies		
STOCKHOLDERS' EQUITY		
Arrowhead Pharmaceuticals, Inc. stockholders' equity:		
Preferred stock, $0.001 par value; 5,000,000 shares authorized; 15,652 shares issued and outstanding as of March 31, 2016 and September 30, 2015	16	16
Common stock, $0.001 par value; 145,000,000 shares authorized; 59,960,711 and 59,544,677 shares issued and outstanding as of March 31, 2016 and September 30, 2015, respectively	152,330	151,914
Additional paid-in capital	431,061,481	426,873,358
Accumulated other comprehensive income (loss)	59,913	(136,425)

Accumulated deficit	(356,792,315)	(316,712,041)
Total Arrowhead Pharmaceuticals, Inc. stockholders' equity	74,481,425	110,176,822
Noncontrolling interest	(555,188)	(555,188)
TOTAL STOCKHOLDERS’ EQUITY	73,926,237	109,621,634
TOTAL LIABILITIES AND STOCKHOLDERS’ EQUITY	$94,607,471	$132,267,914

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

Arrowhead Pharmaceuticals, Inc.

Consolidated Statements of Operations

(unaudited)

	Three Months ended March 31, 2016	Three Months ended March 31, 2015	Six Months ended March 31, 2016	Six Months ended March 31, 2015
REVENUE	$43,750	$43,750	$87,500	$214,500
OPERATING EXPENSES				
Research and development	10,020,826	11,640,794	20,359,659	29,387,524
Acquired in-process research and development	-	10,142,786	-	10,142,786
Salaries and payroll-related costs	4,248,693	3,541,652	8,168,579	6,692,268
General and administrative expenses	3,818,335	1,696,623	5,769,944	3,782,826
Stock-based compensation	2,416,839	2,205,079	4,797,182	4,219,935
Depreciation and amortization	803,912	449,559	1,598,261	739,598
TOTAL OPERATING EXPENSES	21,308,605	29,676,493	40,693,625	54,964,937
OPERATING LOSS	(21,264,855)	(29,632,743)	(40,606,125)	(54,750,437)
OTHER INCOME (EXPENSE)				
Gain (loss) on sale of fixed assets, net	-	45,576	-	19,195
Interest income (expense), net	79,060	198,113	179,440	435,530
Change in value of derivatives	369,935	168,974	346,411	2,551,116
Other income (expense)	-	536,087	-	482,902
TOTAL OTHER INCOME (EXPENSE)	448,995	948,750	525,851	3,488,743
LOSS BEFORE INCOME TAXES	(20,815,860)	(28,683,993)	(40,080,274)	(51,261,694)
Provision for income taxes	-	-	-	-
NET LOSS	(20,815,860)	(28,683,993)	(40,080,274)	(51,261,694)
Net loss attributable to non-controlling interests	-	-	-	-
NET LOSS ATTRIBUTABLE TO ARROWHEAD	$(20,815,860)	$(28,683,993)	$(40,080,274)	$(51,261,694)
NET LOSS PER SHARE ATTRIBUTABLE TO ARROWHEAD SHAREHOLDERS - BASIC & DILUTED:	$(0.35)	$(0.51)	$(0.67)	$(0.93)
Weighted average shares outstanding - basic and diluted	$59,779,128	$55,719,923	$59,663,270	$55,200,512
OTHER COMPREHENSIVE INCOME (LOSS), NET OF TAX				
Foreign Currency Translation Adjustments	150,520	(63,965)	196,338	(63,965)
COMPREHENSIVE LOSS ATTRIBUTABLE TO ARROWHEAD	$(20,665,340)	$(28,747,958)	$(39,883,936)	$(51,325,659)

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

2

Arrowhead Pharmaceuticals, Inc.

Consolidated Statement of Stockholders' Equity

(unaudited)

	Preferred Stock	Amount ($)	Common Stock	Amount ($)	Additional Paid-In Capital	Accumulated Other Comprehensive Income (loss)	Accumulated Deficit	Non-controlling Interest	Totals
Balance at September 30, 2015	15,652	$16	59,544,677	$151,914	$426,873,358	$(136,425)	$(316,712,041)	$(555,188)	$109,621,634
Exercise of stock options	-	-	4,687	5	25,539	-	-	-	25,544
Stock-based compensation	-	-	-	-	4,797,182	-	-	-	4,797,182
Common stock-Restricted Stock Unit vesting	-	-	411,347	411	(634,598)	-	-	-	(634,187)
Foreign currency translation adjustments	-	-	-	-	-	196,338	-	-	196,338
Net loss for the six months ended March 31, 2016	-	-	-	-	-	-	(40,080,274)	-	(40,080,274)
Balance at March 31, 2016	15,652	$16	59,960,711	$152,330	$431,061,481	$59,913	$(356,792,315)	$(555,188)	$73,926,237

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

Arrowhead Pharmaceuticals, Inc.

Consolidated Statements of Cash Flows

(unaudited)

	Six months ended March 31, 2016	Six months ended March 31, 2015
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$(40,080,274)	$(51,261,694)
(Gain) loss on disposal of fixed assets	-	(19,195)
Change in value of derivatives	(346,411)	(2,551,116)
Acquired-in-process research and development	-	10,142,786
Stock-based compensation	4,797,182	4,219,935
Depreciation and amortization	1,598,261	739,598
Amortization of note premiums	179,460	668,364
Changes in operating assets and liabilities:		
Prepaid expenses and Other Current Assets	(641,840)	(3,502,618)
Accounts payable	2,510,792	2,402,381
Accrued expenses	(4,103,354)	(1,442,450)
Other	190,280	34,425
NET CASH USED IN OPERATING ACTIVITIES	(35,895,904)	(40,569,584)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of property and equipment	(500,634)	(852,063)
Proceeds from sale of fixed assets	-	500
Proceeds from sale of marketable securities	6,200,000	12,150,774
Cash paid for acquisitions	-	(7,000,000)
NET CASH PROVIDED BY INVESTING ACTIVITIES	5,699,366	4,299,211
CASH FLOWS FROM FINANCING ACTIVITIES:		
Principal payments on capital leases and notes payable	(108,326)	(106,554)
Payments of taxes for net share settled restricted stock unit issuances	(634,187)	-
Proceeds from the exercise of warrants and stock options	25,544	313,618
NET CASH PROVIDED BY (USED IN) FINANCING ACTIVITIES	(716,969)	207,064
NET INCREASE (DECREASE) IN CASH	(30,913,507)	(36,063,309)
CASH AT BEGINNING OF PERIOD	81,214,354	132,510,610
CASH AT END OF PERIOD	$50,300,847	$96,447,301
Supplementary disclosures:		
Interest paid	$(5,797)	$(7,655)
Income Tax Credits Refunded	$1,365,288	$-
Income Taxes Paid	$(2,400)	$(2,400)
Common Stock issued to Novartis for asset acquisition	$-	$25,000,000

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

4

Arrowhead Pharmaceuticals, Inc.

Notes to Consolidated Financial Statements

(unaudited)

Unless otherwise noted, (1) the term “Arrowhead” refers to Arrowhead Pharmaceuticals, Inc., a Delaware corporation and formerly known as Arrowhead Research 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. (“Arrowhead 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 Pharmaceuticals, Inc. develops novel drugs to treat intractable diseases by silencing the genes that cause them. Using a broad 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. RNA interference (RNAi) is a mechanism present in living cells that inhibits the expression of a specific gene, thereby affecting the production of a specific protein. Arrowhead’s RNAi-based therapeutics leverage this natural pathway of gene silencing. The company's pipeline includes ARC-520 and ARC-521 for chronic hepatitis B virus, ARC-AAT for liver disease associated with alpha-1 antitrypsin deficiency, ARC-F12 for hereditary angioedema and thromboembolic disorders, ARC-LPA for cardiovascular disease, and ARC-HIF2 for renal cell carcinoma.

In April 2016, the Company changed its name from Arrowhead Research Corporation to Arrowhead Pharmaceuticals, Inc., which reflects the Company’s transition to and focus on advancing products through clinical development to bring innovative new medicines to patients.

Liquidity and Going Concern

The Consolidated Financial Statements have been prepared in conformity with the accounting principles generally accepted in the United States of America which contemplate the continuation of the Company as a going concern. The Company has reported recurring losses from operations and negative cash flows from operations. This may indicate that the Company may be unable to continue as a going concern. Historically, the Company’s primary source of financing has been through the sale of its securities. Research and development activities have required significant capital investment since the Company’s inception. The Company expects its operations to continue to require cash investment to pursue its research and development goals, including clinical trials and related drug manufacturing. Based upon the Company’s rate of expenditure to advance its primary clinical candidates through clinical trials, the Company’s current cash resources may not provide sufficient liquidity to fund operations for at least the next twelve months. The Company plans to secure additional sources of funds through several options including potential collaborative research and development partnership agreements and/or sales of the Company’s securities, the latter of which could be dilutive to shareholders. These financial statements do not include any adjustments that might result from the outcome of that uncertainty.

At March 31, 2016, the Company had $50.3 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 12 months. These bonds provide a source of liquidity, though the Company plans to hold them until maturity. At March 31, 2016, the Company had invested $11.2 million in bonds. During the six months ended March 31, 2016, the Company's cash position decreased by $30.9 million which was primarily the result of cash outflows related to operating activities of $35.9 million, partially offset by maturities of fixed income investments totaling $6.2 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 facilities are 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, 2016 and September 30, 2015.

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 institution. 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, 2016, 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—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 the contingent consideration obligations are recognized within the Company's Consolidated Statements of Operations and Comprehensive Loss. 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 product sales is 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.

The Company 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.

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, 2016 and 2015 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. For restricted stock units, the value of the award is based on the Company's stock price at the grant date. For performance-based restricted stock unit awards, the value of the award is based on the Company's stock price at the grant date, with consideration given to the probability of the performance condition being achieved. The Company uses historical data and other information to estimate the expected price volatility for stock option awards and the expected forfeiture rate for all awards. Expense is recognized over the vesting period for all awards, and commences at the grant date for time-based awards and upon the Company's determination that the achievement of such performance conditions is probable for performance-based awards. 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 due to 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.

Recent Accounting Pronouncements

In March 2016, the FASB issued ASU No. 2016-02, Leases. Under ASU 2016-02, lessees will be required to recognize a right-of-use asset and a lease liability for virtually all of their leases (other than leases that meet the definition of a short-term lease). For income statement purposes, a dual model was retained, requiring leases to be classified as either operating or finance. Operating leases will result in straight-line expense (similar to current operating leases) while finance leases will result in a front-loaded expense pattern (similar to current capital leases). ASU 2016-02 becomes effective for the Company in the first quarter of fiscal 2020. The Company expects the adoption of this update to have a material effect on the classification and disclosure of its leased facilities in Madison, Wisconsin.

In March 2016, the FASB issued ASU No. 2016-09, Compensation - Stock Compensation: Improvements to Employee Share-Based Payment Accounting. ASU 2016-09 eliminates additional paid in capital ("APIC") pools and requires excess tax benefits and tax deficiencies to be recorded in the income statement when the awards vest or are settled. The accounting for an employee's use of shares to satisfy the employer's statutory income tax withholding obligation and the accounting for forfeitures is also changing. ASU 2016-09 becomes effective for the Company in the first quarter of 2018. The Company early adopted ASU 2016-09 during the three months ended March 31, 2016, and the adoption of this update is not expected to have a material effect on its Consolidated Financial Statements.

NOTE 2. PROPERTY AND EQUIPMENT

The following table summarizes the Company's major classes of property and equipment:

	March 31, 2016	September 30, 2015
Computers, office equipment and furniture	$419,705	$404,964
Research equipment	6,863,762	6,354,584
Software	110,428	110,428
Leasehold improvements	3,175,004	3,117,537
Total gross fixed assets	10,568,899	9,987,513
Less: Accumulated depreciation and amortization	(6,187,271)	(5,460,665)
Property and equipment, net	$4,381,628	$4,526,848

NOTE 3. INVESTMENTS

The Company invests a portion of its excess cash balances in short-term debt securities and may, from time to time, also invest in long-term debt securities. Investments at March 31, 2016 consisted of corporate bonds with maturities remaining of less than one year. The Company may also invest excess cash balances in certificates of deposit, money market accounts, U.S. Treasuries, U.S. 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, 2016, 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, 2016, and September 30, 2015.

	As of March 31, 2016			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Commercial notes (due within one year)	$11,160,442	$ —	$ (122,512)	$11,037,930
Commercial notes (due after one year through two years)	$—	—	$—	$—
Total	$11,160,442	$ —	$ (122,512)	$11,037,930

	As of September 30, 2015			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Commercial notes (due within one year)	$17,539,902	$ —	$ (304,942)	$17,234,960
Commercial notes (due after one year through two years)	$—	—	$—	$—
Total	$17,539,902	$ —	$ (304,942)	$17,234,960

NOTE 4. 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 the Roche RNAi business in 2011.

Intangible assets subject to amortization include patents and a license agreement capitalized as part of the Novartis RNAi asset acquisition in March 2015 and license agreements capitalized from the acquisition of the Roche RNAi business in 2011. 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 $160,772. The license agreements associated with the acquisition of the Roche RNAi business were amortized over the estimated life remaining at the time of acquisition, which was 4 years, and the accumulated amortization of the assets is approximately $230,000. These assets have been fully amortized as of March 31, 2016. 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 $1,681,359. Amortization expense for the three and six months ended March 31, 2016 was $425,107 and $864,099, respectively, and amortization expense for the three and six months ended March 31, 2015 was $155,366 and $169,030, respectively. Amortization expense is expected to be approximately $850,214 for the remainder of fiscal year 2016, $1,700,429 in 2017, $1,700,429 in 2018, $1,700,429 in 2019, $1,700,429 in 2020, $1,700,429 in 2021, and $13,662,723 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, 2015	$ 944,935	$ 23,879,181	$ 24,824,116
Amortization	-	(864,099)	(864,099)
Balance at March 31, 2016	$ 944,935	$ 23,015,082	$ 23,960,017

NOTE 5. STOCKHOLDERS' EQUITY

At March 31, 2016, 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, 2016, 59,960,711 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, 2016, 8,753,473 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.

The following table summarizes information about warrants outstanding at March 31, 2016:

Exercise prices	Number of Warrants	Remaining Life in Years
$ 70.60	94,897	1.1
$ 5.00	364,375	0.2
$ 5.09	239,534	0.2
$ 4.16	1,000	0.7
$ 3.25	334,347	0.4
$ 2.12	75,000	1.7
$ 1.83	277,284	1.7
$ 7.14	80,000	2.2
Total warrants outstanding	1,466,437	

NOTE 6. COMMITMENTS AND CONTINGENCIES

Leases

The Company leases approximately 8,500 square feet of office space for its corporate headquarters in Pasadena, California. The lease will expire in September 2019. Rental costs are approximately $24,000 per month, increasing approximately 3% annually.

On January 8, 2016, the Company entered into a new lease for a Madison, Wisconsin research facility. The 10-year office building lease between the Company's subsidiary, Arrowhead Madison Inc., and University Research Park, Incorporated is for approximately 60,000 square feet of office and laboratory space located at 502 South Rosa Road, Madison, Wisconsin. This lease will replace the Company's current research facility lease, also with University Research Park, Incorporated for property located at 465 Science Drive, Madison Wisconsin. The larger facility is designed to accommodate increased research and development personnel for the Company's expanding pipeline of current and future drug candidates.

The initial term of the lease commenced on January 1, 2016 with expected occupancy in late 2016, after certain leasehold improvements have been completed. The lease payments, which begin on October 1, 2016, will be approximately $15.4 million over the initial 10-year term. We also estimate payments for the Company's pro rata share of certain real estate taxes, operating expenses and common area maintenance expenses to be approximately $0.9 million for the first year of the lease, and these payments will

continue throughout the initial 10-year term. The Company expects to pay approximately $7.3 million for leasehold improvements, net of tenant improvement allowances. Pursuant to the lease, within six months of the expiration of the initial 10-year term, the Company has the option to extend the lease for up to two additional five-year terms, with certain annual increases in base rent.

Additionally, on January 8, 2016 and in conjunction with signing the new lease agreement as discussed above, the Company entered into an amendment to the Company's current research facility lease for property located at 465 Science Drive Suite C, Madison, Wisconsin with University Research Park, Incorporated that provides for an early termination of such lease effective on October 31, 2016.

Current rental expense is approximately $26,000. Other monthly rental expenses include common area maintenance and real estate taxes totaling approximately $20,000 per month. Utilities costs are approximately $18,000 per month. Total monthly costs are approximately $83,000 per month, including monthly payments recorded under a capital lease of approximately $19,000.

The Company leased additional research facility space in Middleton, Wisconsin, and this space is leased through December 2016. Monthly rental expense for the additional space is approximately $13,000. Other monthly rental expenses include common area maintenance and real estate taxes totaling approximately $4,000 per month.

Facility rent expense for the three and six months ended March 31, 2016 was $228,400 and $427,000, respectively. Facility rent expense for the three and six months ended March 31, 2015 was $191,000 and $362,000, respectively.

As of March 31, 2016, future minimum lease payments due in fiscal years under capitalized leases are as follows:

2016 (remainder of)	$114,209
2017	228,420
2018	228,420
2019	95,175
2020	-
2021 and thereafter	-
Less interest	(16,210)
Principal	650,014
Less current portion	(219,349)
Noncurrent portion	$430,665

As of March 31, 2016, future minimum lease payments due in fiscal years under operating leases are as follows:

2016 (remainder of)	$380,279
2017	1,330,839
2018	1,303,345
2019	1,340,234
2020	1,044,431
2021 and thereafter	6,836,991
Total	$12,236,119

Litigation

The Company and certain of its officers and directors have been named as defendants in a consolidated class action pending before 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. The consolidated class action, initially filed as Wang v. Arrowhead Research Corp., et al., No. 2:14-cv-07890 (C.D. Cal., filed Oct. 10, 2014), and Eskinazi v. Arrowhead Research Corp., et al., No. 2:14-cv-07911 (C.D. Cal., filed Oct. 13, 2014), asserts claims under Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 and seeks damages in an unspecified amount. Additionally, three putative stockholder derivative actions captioned Weisman v. Anzalone et al., No. 2:14-cv-08982 (C.D. Cal., filed Nov. 20, 2014), Bernstein (Backus) v. Anzalone, et al., No. 2:14-cv-09247 (C.D. Cal., filed Dec. 2, 2014); and Johnson v. Anzalone, et al., No. 2:15-cv-00446 (C.D. Cal., filed Jan. 22, 2015), were 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. An additional consolidated derivative action asserting similar claims is pending in Los Angeles County Superior Court, initially filed as Bacchus v. Anzalone, et al., (L.A. Super., filed Mar. 5, 2015); and Jackson v. Anzalone, et al. (L.A. Super., filed Mar. 16, 2015). Each of these suits seeks damages in unspecified amounts and some seek various forms of injunctive relief. The Company believes it has a meritorious defense and intends to vigorously defend itself in this matter. 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 this matter. The Company does not expect this matter to have a material effect on its Consolidated Financial Statements. With regard to legal fees, such as attorney fees related to this matter or any other legal matters, the Company's recognizes such costs as incurred.

The Company and two of its former executives have been named as defendants in a complaint filed on November 11, 2014 and captioned William Marsh Rice University vs. Unidym, Inc. and Arrowhead Research Corporation, No. 2014-66088, 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. During April and May 2016, a liability for the case became both probable and reasonably estimable, and as such, the Company recorded an amount in the financial statements for the three months ended March 31, 2016. The amount recorded did not have a material effect on the Company's Consolidated Financial Statements.

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, 2016, these future commitments were approximately $49.0 million, of which approximately $17.0 million is expected to be incurred in the remainder of fiscal 2016, and $32.0 million is expected to be incurred beyond fiscal 2016.

Technology License Commitments

The Company has licensed from third parties the rights to use certain technologies for 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 7. 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, 2016, 2,537,018 and 5,625,166 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 award to employees, consultants and others. No further grants may be made under the 2004 Equity Incentive Plan. As of March 31, 2016, there were options granted and outstanding to purchase 2,537,018 and 3,642,131 shares of Common Stock under the 2004 Equity Incentive Plan and the 2013 Incentive Plan, respectively, and there were 1,323,334 restricted stock units granted and outstanding under the 2013 Incentive Plan. Also, as of March 31, 2016, there were 544,622 shares reserved for options and 46,666 restricted stock units issued as inducement grants to new employees outside of equity compensation plans. During the six months ended March 31, 2016, no options or restricted stock units were granted under the 2004 Equity Incentive Plan, 1,380,000 options and 830,000 restricted stock units were granted under the 2013 Incentive Plan, and no options or restricted stock units were granted as inducement awards to new employees outside of equity incentive plans.

The following table summarizes 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, 2015	5,435,640	$ 6.71		
Granted	1,380,000	6.12		
Cancelled	(87,182)	8.77		
Exercised	(4,687)	5.45		
Balance At March 31, 2016	6,723,771	$ 6.57	7.8 years	$3,002,814
Exercisable At March 31, 2016	3,250,256	$ 6.15	6.7 years	$2,262,299

Stock-based compensation expense related to stock options for the three and six months ended March 31, 2016 was $1,511,812 and $2,729,029, respectively. 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. 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 grant date fair value of the options granted by Arrowhead for the three and six months ended March 31, 2016 was estimated at $5,963,356 and $6,329,232, respectively. The grant date fair value of the options granted by Arrowhead for the three and six months ended March 31, 2015 was estimated at $2,114,074 and $5,703,692, respectively.

The intrinsic value of the options exercised during the three and six months ended March 31, 2016 was $0 and $3,515, 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.

As of March 31, 2016, the pre-tax compensation expense for all outstanding unvested stock options in the amount of approximately $15,177,215 will be recognized in the Company’s results of operations over a weighted average period of 2.8 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 the Company’s 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,	
	2016	2015
Dividend yield	—	—

Risk-free interest rate	1.44 – 1.89%	1.55 – 1.85%
Volatility	89%	75%
Expected life (in years)	6.25	6 - 6.25
Weighted average grant date fair value per share of options granted	$4.59	$3.54

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

The risk-free interest rate is based on that of 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), including time-based and performance-based awards, were granted under the Company's 2013 Incentive Plan and as inducement grants granted outside of the Plan. During the six months ended March 31, 2016, the Company issued 830,000 restricted stock units to certain members of management. Of the restricted stock units granted during the six months ended March 31, 2016, 0 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, 2015	934,167	$ 9.18
Granted	830,000	6.15
Vested	(394,167)	11.06
Forfeited	—	—
Unvested at March 31, 2016	1,370,000	$ 6.80

The Company recorded $905,027 and $2,068,153 of expense relating to restricted stock units during the three and six months ended March 31, 2016, respectively. 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. Such expense is included in stock-based compensation expense in the Company's Consolidated Statement of Operations and Comprehensive Loss.

For restricted stock units, the grant date fair value of the award is based on the Company's closing stock price at the grant date, with consideration given to the probability of achieving performance conditions for performance based awards.

As of March 31, 2016, the pre-tax compensation expense for all unvested restricted stock units in the amount of approximately $3,375,432 will be recognized in the Company's results of operations over a weighted average period of 2.0 years.

NOTE 8. 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, 2016 and September 30, 2015 for assets and liabilities measured at fair value on a recurring basis:

March 31, 2016:

	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	$50,300,847	$ —	$—	$50,300,847
Derivative liabilities	$—	$ —	$955,193	$955,193
Acquisition-related contingent consideration obligations	$—	$ —	$5,862,464	$5,862,464

September 30, 2015:

	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	$81,214,354	$ —	$—	$81,214,354
Derivative liabilities	$—	$ —	$1,301,604	$1,301,604
Acquisition-related contingent consideration obligations	$—	$ —	$5,862,464	$5,862,464

The Company invests its excess cash balances in short- and long-term corporate bonds, generally with remaining maturities of less than one year. At March 31, 2016, the Company had short-term investments of $11,160,442. The fair value of its investments at March 31, 2016 was $11,037,930. 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 a financing in December 2012, Arrowhead issued warrants to purchase up to 912,543 shares of Common Stock (the “2012 Warrants”) of which 265,161 warrants were outstanding at March 31, 2016. Further, as part of a financing in January 2013, Arrowhead issued warrants to purchase up to 833,530 shares of Common Stock (the “2013 Warrants” and, together with the 2012 Warrants, the “Warrants”) of which 12,123 Warrants were outstanding at March 31, 2016. Each of the Warrants 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 and Comprehensive Loss. During the three and six months ended March 31, 2016, the Company recorded a non-cash gain/(loss) from the change in fair value of the derivative liability of $363,285 and $341,711, respectively. During the three and six months ended March 31, 2015, the Company recorded a non-cash gain/(loss) from the change in fair value of the derivative liability of $191,910 and $2,371,561, respectively. Additionally, as part of an equity financing in June 2010, Arrowhead issued warrants to purchase up to 329,649 shares of Common Stock (the “2010 Warrants”), and the remaining unexercised 24,324 of these warrants expired during the six months ended March 31, 2016.

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

2012 Warrants	March 31, 2016	September 30, 2015
Risk-free interest rate	0.73%	0.6%
Expected life	1.7 Years	2.2 Years
Dividend yield	—	—
Volatility	89%	75%
2013 Warrants	March 31, 2016	September 30, 2015
Risk-free interest rate	0.73%	0.6%
Expected life	1.8 Years	2.3 Years
Dividend yield	—	—
Volatility	89%	75%

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

Value at September 30, 2015	$1,272,802
Issuance of instruments	—
Change in value	(341,711)
Net settlements	—
Value at March 31, 2016	$931,091

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, 2016. 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 and Comprehensive Loss. During the three and six months ended March 31, 2016, the Company recorded a non-cash gain/(loss) from the change in fair value of the derivative liability of $6,650 and $4,700, respectively. 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.

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

	March 31, 2016	September 30, 2015
Risk-free interest rate	0.73%	1.00%
Expected life	1.9 Years	2.5 Years
Dividend yield	—	—

Volatility	89%	75%

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

Value at September 30, 2015	$28,802
Issuance of instruments	—
Change in value	(4,700)
Net settlements	—
Value at March 31, 2016	$24,102

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 the Company's derivatives liabilities is the Company's stock price. Other inputs have a comparatively insignificant effect.

As of March 31, 2016, the Company has liabilities for contingent consideration related to its acquisition of the Roche RNAi business completed in 2011. 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 and Comprehensive Loss.

The following is a reconciliation of contingent consideration fair value.

Value at September 30, 2015	$5,862,464
Purchase price contingent consideration	—
Contingent consideration payments	—
Change in fair value of contingent consideration	—
Value at March 31, 2016	$5,862,464

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 other long-term liabilities 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 Pharmaceuticals, Inc. develops novel drugs to treat intractable diseases by silencing the genes that cause them. Using a broad 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. RNA interference (RNAi) is a mechanism present in living cells that inhibits the expression of a specific gene, thereby affecting the production of a specific protein. Arrowhead's RNAi-based therapeutics leverage this natural pathway of gene silencing. The company's pipeline includes ARC-520 and ARC-521 for chronic hepatitis B virus, ARC-AAT for liver disease associated with alpha-1 antitrypsin deficiency, ARC-F12 for hereditary angioedema and thromboembolic disorders, ARC-LPA for cardiovascular disease, and ARC-HIF2 for renal cell carcinoma

In April 2016, the Company changed its name from Arrowhead Research Corporation to Arrowhead Pharmaceuticals, Inc., which reflects the Company's transition to and focus on advancing products through clinical development to bring innovative new medicines to patients.

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

During the first half of fiscal year 2016, 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 continued its Phase 2 studies in ARC-520, with no dose-limiting toxicities or serious adverse events having been observed to date. In connection with its Phase 2a study, the Company reported data showing that ARC-520 effectively reduced HBV viral antigens derived from cccDNA. The data showed that HBV surface antigen (HBsAg) was reduced substantially with a maximum reduction of 1.9 logs (99%) and a mean maximum reduction of 1.5 logs (96.8%) in treatment naïve

e-antigen (HBeAg)-positive patients. The Company also discussed data from an ARC-520 chimpanzee study showing that in chronically HBV-infected chimpanzees treated with ARC-520 in combination with nucleoside analogs, 7 of 9 (78%) exhibited signs of immune reactivation, which is likely a necessary step for achieving a functional cure of chronic HBV. The Company believes these data strongly support advancement of ARC-520 into Phase 2 and later-stage clinical studies. In January 2016, the Company announced that it had dosed the first patient in its Phase 2 combination study for ARC-520 and is continuing to enroll patients at multiple centers in Australia and New Zealand. The Company submitted an Investigational New Drug application to the FDA which was approved in April 2015 and the Company also received regulatory clearance in Germany for two additional Phase 2 multiple-dose studies of ARC-520 to be conducted in parallel. The Company has also received regulatory clearance in South Korea and Hong Kong. The sites are actively recruiting and treating patients.

Regarding ARC-AAT, the Company recently completed protocol-required dosing of healthy volunteers in an on-going Phase 1 study and initiated dosing of patients in Part B of that same study. The study recently received regulatory clearance in the United Kingdom, Australia, Germany, and the Netherlands, and is currently recruiting patients at several sites in those countries. In January

2016, the European Medicines Agency (EMA) granted orphan drug designation to ARC-AAT, consistent with the previous designation granted by the FDA.

The Company continues to progress on its expanded pipeline of additional pre-clinical candidates including ARC-521, a complementary candidate to ARC-520 for the treatment of chronic hepatitis B infection, ARC-F12, a treatment for factor 12 (F12) mediated angioedemic and thromboembolic diseases, ARC-HIF2, a treatment for clear cell renal cell carcinoma (ccRCC), and ARC-LPA, a treatment designed to reduce production of Lp(a), which has been genetically linked with increased risk of cardiovascular disease.

The Company continues to develop other clinical candidates for future clinical trials, including 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 as the clinical candidates progress through human testing, program costs will increase.

In January 2016, the Company entered into a new lease for a Madison, Wisconsin research facility. The 10-year office building lease between the Company's subsidiary, Arrowhead Madison Inc. and University Research Park, Incorporated is for approximately 60,000 square feet of office and laboratory space located at 502 South Rosa Road, Madison, Wisconsin. This lease will replace the Company's current research facility office lease, also with University Research Park, Incorporated, for the facility located at 465 Science Drive, Madison Wisconsin. The larger facility is designed to accommodate increased research and development personnel for the Company's expanding pipeline of current and future drug candidates.

The initial term of the lease commenced on January 1, 2016 with expected occupancy in late 2016, after certain leasehold improvements have been completed. The lease payments, which begin on October 1, 2016, will be approximately $15.4 million over the initial 10-year term. We also estimate payments for our pro rata share of certain real estate taxes, operating expenses and common area maintenance expenses to be approximately $0.9 million for the first year of the lease, and these payments will continue throughout the initial 10-year term. We expect to pay approximately $7.3 million for leasehold improvements, net of tenant improvement allowances. Pursuant to the lease, within six months of the expiration of the initial 10-year term, we have the option to extend the lease for up to two additional five-year terms, with certain annual increases in base rent.

Additionally, on January 8, 2016, we entered into an amendment to our current research facility office lease for property located at 465 Science Drive Suite C, Madison, Wisconsin with University Research Park, Incorporated that provides for an early termination of such lease effective on October 31, 2016.

Net losses were $20.8 million and $40.1 million during the three and six months ended March 31, 2016, respectively, as compared to net losses of $28.7 million and $51.3 million during the three and six months ended March 31, 2015, respectively. Diluted losses per share were $0.35 and $0.67 during the three and six months ended March 31, 2016, respectively as compared to diluted losses per share of $0.51 and $0.93 during the three and six months ended March 31, 2015, respectively.

The Company had $50.3 million of cash and cash equivalents, $11.2 million of short term investments and $94.6 million of total assets as of March 31, 2016 as compared to $81.2 million, $17.5 million and $132.3 million as of September 30, 2015, respectively. The operating expenses, net losses and decrease in cash and cash equivalents and total assets reflects expenditures associated with the Company's research and development efforts for its clinical candidates and pipeline. Based upon the Company's rate of expenditure to advance its primary clinical candidates through clinical trials, the Company's current cash resources may not provide sufficient liquidity to fund operations for at least the next twelve months. The Company plans to secure additional sources of funds through several options including potential collaborative research and development partnership agreements and/or sales of the Company's securities, the latter of which could be dilutive to shareholders. The Company's financial statements were prepared under the assumption that the Company will continue as a going concern and do not include any adjustments that might result from the outcome of that uncertainty.

Critical Accounting Policies and Estimates

Management makes certain judgments and uses certain estimates and assumptions when applying GAAP 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 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 is 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.

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 in-process research and development, license agreements and patents acquired in conjunction with a business or asset acquisition. 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 ASU 2012-02, 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 account 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. We use the Black-Scholes option valuation model to estimate the fair value of our 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. For restricted stock units, the value of the award is based on the Company’s stock price at the grant date. For performance-based restricted stock unit awards, the value of the award is based on the Company’s stock price at the grant date, with consideration given to the probability of the performance condition being achieved. We use historical data and other information to estimate the expected price volatility for stock option awards and the expected forfeiture rate for all awards. Expense is recognized over the vesting period for all awards, and commences at the grant date for time-based awards and upon our determination that the achievement of such performance conditions is probable for performance-based awards. This determination requires significant judgment by

management.

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 progress of clinical development, 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, 2016	Three Months Ended March 31, 2015
Revenue	$43,750	$43,750
Operating Loss	(21,264,855)	(29,632,743)
Net Loss	(20,815,860)	(28,683,993)
Earnings per Share (Basic and Diluted)	$(0.35)	$(0.51)

	Six Months Ended March 31, 2016	Six Months Ended March 31, 2015
Revenue	$87,500	$214,500
Operating Loss	(40,606,125)	(54,750,437)
Net Loss	(40,080,274)	(51,261,694)
Earnings per Share (Basic and Diluted)	$(0.67)	$(0.93)

The decrease in our Operating Expenses during the three and six months ended March 31, 2016, is primarily due to reduced expenses associated with the drug manufacturing campaign to support our Phase 2 studies for ARC-520, our lead clinical candidate for HBV. The manufacturing campaign for this clinical trial for ARC-520 is largely complete, however, as other clinical candidates are nominated, and as other clinical trials advance, further expenditures will be incurred.

Revenue

Total revenue was $43,750 and $87,500 for the three and six months ended March 31, 2016, respectively, as compared to $43,750 and $214,500 for the three and six months ended March 31, 2015, respectively. 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, 2016 and 2015 are shown in the tables below.

Research and Development Expenses – Three and Six months ended March 31, 2016 compared to the three and six months ended March 31, 2015

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, 2016	% of Expense Category	Three Months Ended March 31, 2015	% of Expense Category	Increase (Decrease) $	Increase (Decrease) %
Laboratory supplies & services	$732	7 %	$697	6 %	$35	5 %
In vivo studies	427	4 %	139	1 %	288	207 %
Outside labs & contract services	5	0 %	105	1 %	(100)	-95 %
Toxicity/efficacy studies	2,593	26 %	2,028	17 %	565	28 %
Drug manufacturing	2,221	22 %	5,211	45 %	(2,990)	-57 %
Clinical trials	3,642	36 %	2,174	19 %	1,468	68 %
License, royalty & milestones	12	0 %	1,012	9 %	(1,000)	-99 %
Facilities and related	331	3 %	246	2 %	85	35 %
Other research expenses	58	2 %	29	0 %	29	100 %
Total	$10,021	100 %	$11,641	100 %	$(1,620)	-14 %

	Six Months Ended March 31, 2016	% of Expense Category	Six Months Ended March 31, 2015	% of Expense Category	Increase (Decrease) $	Increase (Decrease) %
Laboratory supplies & services	$1,334	7 %	$1,191	4 %	$143	12 %
In vivo studies	716	4 %	199	1 %	517	260 %
Outside labs & contract services	70	0 %	231	1 %	(161)	-70 %
Toxicity/efficacy studies	5,692	28 %	4,096	14 %	1,596	39 %
Drug manufacturing	5,320	26 %	14,810	49 %	(9,490)	-64 %
Clinical trials	6,477	32 %	7,240	25 %	(763)	-11 %
License, royalty & milestones	32	0 %	1,035	4 %	(1,003)	-97 %

Facilities and related	612	3	%	452	1	%	160	35	%
Other research expenses	107	0	%	133	1	%	(26)	-20	%
Total	$20,360	100	%	$29,387	100	%	$(9,027)	-31	%

Laboratory supplies and services expense increased by $35,000 from $697,000 during the three months ended March 31, 2015 to $732,000 during the current period. Laboratory supplies and services expense increased by $143,000 from $1,191,000 during the six months ended March 31, 2015 to $1,334,000 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 $288,000 from $139,000 during the three months ended March 31, 2015 to $427,000 during the current period. In vivo studies expense increased by $517,000 from $199,000 during the six months ended March 31, 2015 to $716,000 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 Company has expanded its candidate pipeline which has resulted in additional studies conducted.

Outside labs and contract services expense decreased by $100,000 from $105,000 during the three months ended March 31, 2015 to $5,000 during the current period. Outside labs and contract services expense decreased by $161,000 from $231,000 during the six months ended March 31, 2015 to $70,000 during the current period. The decrease in the current period primarily relates to reduced contracted labor services that have been converted into R&D headcount.

Toxicity/efficacy studies expense increased by $565,000 from $2,028,000 during the three months ended March 31, 2015 to $2,593,000 during the current period. Toxicity/efficacy studies expense increased by $1,596,000 from $4,096,000 during the six months ended March 31, 2015 to $5,692,000 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 increase primarily relates to toxicology studies related to one of our recent drug candidates, ARC-521, to support the commencement of clinical trials. These amounts can vary quarter to quarter based on stage of development.

Drug manufacturing expense decreased by $2,990,000 from $5,211,000 during the three months ended March 31, 2015 to $2,221,000 during the current period. Drug manufacturing expense decreased by $9,490,000 from $14,810,000 during the six months ended March 31, 2015 to $5,320,000 during the current period. The decrease is primarily due to reduced expenses associated with the drug manufacturing campaign to support our Phase 2 studies for ARC-520, our lead clinical candidate for HBV. The manufacturing campaign for this clinical trial for ARC-520 is largely complete, however, as other clinical candidates are nominated, and as other clinical trials advance, further expenditures will be incurred.

Clinical trials expense increased by $1,468,000 from $2,174,000 during the three months ended March 31, 2015 to $3,642,000 during the current period. Clinical trials expense decreased by $763,000 from $7,240,000 during the six months ended March 31, 2015 to $6,477,000 during the current period. The changes in both periods are primarily driven by the timing of costs incurred for our Phase 2 clinical trial for ARC-520. The Phase 2 trials are currently enrolling and we expect clinical trial expenses to increase further as enrollment in our clinical trials increases. We are also incurring costs related to our clinical trial for our second clinical candidate ARC-AAT.

License, royalty & milestones expense decreased by $1,000,000 from $1,012,000 during the three months ended March 31, 2015 to $12,000 during the current period. License, royalty & milestones expense decreased by $1,003,000 from $1,035,000 during the six months ended March 31, 2015 to $32,000 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 and related expense increased by $85,000 from $246,000 during the three months ended March 31, 2015 to $331,000 during the current period. Facilities and related expense increased by $160,000 from $452,000 during the six months ended March 31, 2015 to $612,000 during the current period. The increase relates to rent for our additional research and development facility in Middleton, Wisconsin and increased repairs and maintenance costs on our lab equipment.

Other research expense increased by $29,000 from $29,000 during the three months ended March 31, 2015 to $58,000 during the current period. Other research expense decreased by $26,000 from $133,000 during the six months ended March 31, 2015 to $107,000 during the current period. The decrease in the six month period primarily relates to costs associated with a collaboration agreement to identify muscle targeting peptide molecules in the six months ended March 31, 2015, for which the Company has been reimbursed from its collaboration partner.

Salaries – Three and six months ended March 31, 2016 compared to the three and six months ended March 31, 2015

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, 2016	% of Expense Category	Three Months Ended March 31, 2015	% of Expense Category	Increase (Decrease) $	Increase (Decrease) %
R&D - compensation-related	$ 3,133	74 %	$ 2,511	71 %	$ 622	25 %
G&A - compensation-related	1,116	26 %	1,031	29 %	85	8 %
Total	$ 4,249	100 %	$ 3,542	100 %	$ 707	20 %

	Six Months Ended March 31, 2016	% of Expense Category		Six Months Ended March 31, 2015	% of Expense Category		Increase (Decrease) $	Increase (Decrease) %	
R&D - compensation-related	$ 6,078	74	%	$ 4,876	73	%	$ 1,202	25	%
G&A - compensation-related	2,091	26	%	1,816	27	%	275	15	%
Total	$ 8,169	100	%	$ 6,692	100	%	$ 1,477	22	%

R&D compensation expense increased by $622,000 from $2,511,000 during the three months ended March 31, 2015 to $3,133,000 during the current period. R&D compensation expense increased by $1,202,000 from $4,876,000 during the six months ended March 31, 2015 to $6,078,000 during the current period. An increase in personnel accounted for the majority of the change in compensation-related expense.

G&A compensation expense increased by $85,000 from $1,031,000 during the three months ended March 31, 2016 to $1,116,000 during the current period. G&A compensation expense increased by $275,000 from $1,816,000 during the six months ended March 31, 2016 to $2,091,000 during the current period. Higher headcount and annual merit increases accounted for the majority of the change in the current period.

General & Administrative Expenses – Three and six months ended March 31, 2016 compared to the three and six months ended March 31, 2015

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

(in thousands, except percentages)

	Three Months Ended March 31, 2016	% of Expense Category		Three Months Ended March 31, 2015	% of Expense Category		Increase (Decrease) $	Increase (Decrease) %	
Professional/outside services	$ 1,819	48	%	$ 893	53	%	$ 926	104	%
Patent expense	316	8	%	157	9	%	159	101	%
Facilities and related	80	1	%	77	5	%	3	4	%
Travel	170	5	%	141	8	%	29	21	%
Business insurance	144	4	%	107	6	%	37	35	%
Communication and Technology	133	4	%	192	11	%	(59)	-31	%
Office expenses	68	1	%	65	4	%	3	5	%
Other	1,088	29	%	65	4	%	1,023	1574	%
Total	$ 3,818	100	%	$ 1,697	100	%	$ 2,121	125	%

	Six Months Ended	% of Expense		Six Months Ended	% of Expense		Increase (Decrease)

	March 31, 2016	Category		March 31, 2015	Category		$	%	
Professional/outside services	$2,669	46	%	$2,136	57	%	$533	25	%
Patent expense	597	10	%	334	9	%	263	79	%
Facilities and related	156	3	%	153	4	%	3	2	%
Travel	419	7	%	328	9	%	91	28	%
Business insurance	282	5	%	213	6	%	69	32	%
Communication and Technology	282	5	%	357	9	%	(75)	-21	%
Office expenses	162	3	%	145	4	%	17	12	%
Other	1,203	21	%	117	2	%	1,086	928	%
Total	$5,770	100	%	$3,783	100	%	$1,987	53	%

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 $926,000 from $893,000 during the three months ended March 31, 2015 to $1,819,000 during the current period. Professional/outside services expense increased by $533,000 from $2,136,000 during the six months ended March 31, 2015 to $2,669,000 during the current period. The increase primarily related to higher legal fees related to recent litigation events as discussed in Note 6 – Commitments and Contingencies.

Patent expense increased by $159,000 from $157,000 during the three months ended March 31, 2015 to $316,000 during the current period. Patent expense increased by $263,000 from $334,000 during the six months ended March 31, 2015 to $597,000 during the current period. Patent expense increased due to additional prosecution expenses associated with new patents acquired through the Novartis RNAi asset acquisition. 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. Expenses can vary from period to period as patents proceed through their prosecution life cycle.

Facilities-related expense remained consistent in each period. Facilities expense relates to recurring expenses associated with our corporate headquarters in Pasadena.

Travel expense increased by $29,000 from $141,000 during the three months ended March 31, 2015 to $170,000 during the current period. Travel expense increased by $91,000 from $328,000 during the six months ended March 31, 2015 to $419,000 during the current period. Travel expense increased due to travel in support of our R&D function, including our regulatory function, GMP manufacturing campaigns and our clinical trials in multiple countries.

Business insurance expense increased by $37,000 from $107,000 during the three months ended March 31, 2015 to $144,000 during the current period. Business insurance expense increased by $69,000 from $213,000 during the six months ended March 31, 2015 to $282,000 during the current period. Business insurance costs increased primarily due to increases in corporate liability insurance and added coverage related to the Company’s clinical trials.

Communication and technology expense decreased by $59,000 from $192,000 during the three months ended March 31, 2015 to $133,000 during the current period. Communication and technology expense decreased by $75,000 from $357,000 during the six months ended March 31, 2015 to $282,000 during the current period. This category includes costs associated with the Company’s IT infrastructure which were reduced during the current year.

Office expense remained consistent in each 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 increased by $1,023,000 from $65,000 during the three months ended March 31, 2015 to $1,088,000 during the current period. Other expense increased by $1,086,000 from $117,000 during the six months ended March 31, 2015 to $1,203,000 during the current period. The increase in both periods pertains to litigation as discussed in Note 6 – Commitments and Contingencies. This category also consists primarily of conference attendance fees, franchise and property tax expenses and marketing expenses.

Stock-based compensation expense

Stock-based compensation expense, a noncash expense, was $2,416,839 and $4,797,182 during the three and six months ended March 31, 2016, respectively, and was $2,205,079 and $4,219,935 during the three and six months ended March 31, 2015, respectively. 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. Due to additional options and restricted stock units granted to new and existing employees, compensation expense has increased from the prior year.

Depreciation and amortization expense

Depreciation and amortization expense, a noncash expense, was $803,912 and $1,598,261 during the three and months ended March 31, 2016, respectively, and was $449,559 and $739,598 during the three and six months ended March 31, 2015, respectively. The majority of depreciation and amortization expense relates to depreciation on lab equipment at our Madison research facility. In addition, the Company records depreciation on leasehold improvements at its Madison research facility and its Pasadena corporate headquarters. The increase in depreciation and amortization expense is primarily due to the amortization of the intangible assets acquired in the Novartis RNAi asset acquisition.

Other income / expense

Other income / expense was income of $448,995 and $525,851 during the three and six months ended March 31, 2016, respectively, and was income of $948,750 and $3,488,743 during the three and six months ended March 31, 2015, respectively. The primary component of other income during the six month periods was a change in the value of derivative liabilities related to certain warrants with a price adjustment feature, necessitating derivative accounting. The fluctuations 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 its securities. 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, 2016, the Company had cash on hand of approximately $50.3 million as compared to $81.2 million at September 30, 2015. Excess cash invested in fixed income securities was $11.2 million at March 31, 2016, compared to $17.5 million at September 30, 2015. Based upon the Company's rate of expenditure to advance its primary clinical candidates through clinical trials, the Company's current cash resources may not provide sufficient liquidity to fund operations for at least the next twelve months. The Company plans to secure additional sources of funds through several options including potential collaborative research and development partnership agreements and/or sales of the Company's securities, the latter of which could be dilutive to shareholders.

A summary of cash flows for the six months ended March 31, 2016 and 2015 is as follows:

	Six Months Ended March 31, 2016	Six Months Ended March 31, 2015
Cash Flow from Continuing Operations:		
Operating Activities	$(35,895,904)	$(40,569,584)
Investing Activities	5,699,366	4,299,211
Financing Activities	(716,969)	207,064
Net Increase (Decrease) in Cash	(30,913,507)	(36,063,309)
Cash at Beginning of Period	81,214,354	132,510,610
Cash at End of Period	$50,300,847	$96,447,301

During the six months ended March 31, 2016, the Company used $35.9 million in cash from operating activities, which represents the on-going expenses of its research and development programs and general and administrative expenses. Cash provided by investing activities was $5.7 million, primarily related to maturities on fixed income securities of $6.2 million, partially offset by capital expenditures of $0.5 million. Cash used by financing activities of $0.7 million was driven by cash paid for employee taxes on net share settlements of restricted stock units that vested during the period.

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 general and administrative expenses. 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.

Contractual Obligations

In January 2016, the Company entered into a new lease for a Madison, Wisconsin research facility. The 10-year office building lease between the Company's subsidiary, Arrowhead Madison Inc. and University Research Park, Incorporated is for approximately 60,000 square feet of office and laboratory space located at 502 South Rosa Road, Madison, Wisconsin. This lease will replace the Company's current research facility office lease, also with University

Research Park, Incorporated, for the facility located at 465 Science Drive, Madison Wisconsin. The larger facility is designed to accommodate increased research and development personnel for the Company's expanding pipeline of current and future drug candidates.

The initial term of the lease commenced on January 1, 2016 with expected occupancy in late 2016, after certain leasehold improvements have been completed. The lease payments, which begin on October 1, 2016, will be approximately $15.4 million over the initial 10-year term. We also estimate payments for our pro rata share of certain real estate taxes, operating expenses and common area maintenance expenses to be approximately $0.9 million for the first year of the lease, and these payments will continue throughout the initial 10-year term. We expect to pay approximately $7.3 million for leasehold improvements, net of tenant improvement allowances. Pursuant to the lease, within six months of the expiration of the initial 10-year term, we have the option to extend the lease for up to two additional five-year terms, with certain annual increases in base rent.

Additionally, on January 8, 2016, we entered into an amendment to our current research facility office lease for property located at 465 Science Drive Suite C, Madison, Wisconsin with University Research Park, Incorporated that provides for an early termination of such lease effective on October 31, 2016.

These agreements represent the only material changes outside the ordinary course of business in the specified contractual obligations disclosure in our Annual Report on Form 10-K for the year ended September 30, 2015, filed with the Securities and Exchange Commission on December 14, 2015.

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, 2015, filed with the Securities and Exchange Commission on December 14, 2015.

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 6 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, 2015. 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, 2015, 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	Incorporated by Reference Herein: Form	Date
3.1	Certificate of Elimination of Series A Convertible Preferred Stock of Arrowhead Research Corporation	Current Report on Form 8-K, as Exhibit 3.1	April 6, 2016
3.2	Certificate of Elimination of Series B Convertible Preferred Stock of Arrowhead Research Corporation	Current Report on Form 8-K, as Exhibit 3.2	April 6, 2016
3.3	Amended and Restated Certificate of Incorporation of Arrowhead Research Corporation	Current Report on Form 8-K, as Exhibit 3.3	April 6, 2016
3.4	Amended and Restated Bylaws of Arrowhead Pharmaceuticals, Inc.	Current Report on Form 8-K, as Exhibit 3.4	April 6, 2016
4.1	Form of Common Stock Certificate of Arrowhead Pharmaceuticals, Inc.	Current Report on Form 8-K, as Exhibit 4.1	April 6, 2016
10.1	Lease Agreement between Arrowhead Madison Inc. and University Research Park, Incorporated, dated January 8, 2016	Current Report on Form 10-Q, as Exhibit 10.1	February 9, 2016
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, 2016, 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

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 10, 2016

ARROWHEAD
PHARMACEUTICALS, INC.

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

30