

ARROWHEAD PHARMACEUTICALS, INC.

FORM 10-Q (Quarterly Report)

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**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, DC 20549

FORM 10-Q

(Mark One)

QUARTERLY REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended June 30, 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
(State of incorporation)

46-0408024
(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 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 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	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input type="checkbox"/>

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

The number of shares of the registrant's common stock outstanding as of August 8, 2016 was 60,750,327.

	<u>Page(s)</u>
<u>PART I — FINANCIAL INFORMATION</u>	
<u>ITEM 1. FINANCIAL STATEMENTS (unaudited)</u>	1
<u>Consolidated Balance Sheets</u>	1
<u>Consolidated Statements of Operations</u>	2
<u>Consolidated Statement of Stockholders' Equity</u>	3
<u>Consolidated Statements of Cash Flows</u>	4
<u>Notes to Consolidated Financial Statements</u>	5
<u>ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS</u>	18
<u>ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK</u>	27
<u>ITEM 4. CONTROLS AND PROCEDURES</u>	27
<u>PART II — OTHER INFORMATION</u>	
<u>ITEM 1. LEGAL PROCEEDINGS</u>	29
<u>ITEM 1A. RISK FACTORS</u>	29
<u>ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS</u>	29
<u>ITEM 3. DEFAULTS UPON SENIOR SECURITIES</u>	29
<u>ITEM 4. MINE SAFETY DISCLOSURES</u>	29
<u>ITEM 5. OTHER INFORMATION</u>	29
<u>ITEM 6. EXHIBITS</u>	30
<u>SIGNATURE</u>	31

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

Arrowhead Pharmaceuticals, Inc.
Consolidated Balance Sheets

	(unaudited) June 30, 2016	September 30, 2015
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	\$ 43,616,543	\$ 81,214,354
Prepaid expenses	3,446,863	3,293,285
Other current assets	1,507,470	823,620
Short term investments	1,030,556	17,539,902
TOTAL CURRENT ASSETS	49,601,432	102,871,161
Property and equipment, net	12,274,821	4,526,848
Intangible assets, net	23,534,910	24,824,116
Other assets	122,333	45,789
TOTAL ASSETS	\$ 85,533,496	\$ 132,267,914
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	\$ 5,945,370	\$ 5,031,706
Accrued expenses	6,263,349	5,376,119
Accrued payroll and benefits	1,129,460	3,824,062
Deferred revenue	26,042	103,125
Derivative liabilities	1,068,552	1,301,604
Capital lease obligation	216,653	217,548
Note Payable	144,435	-
Other current liabilities	46,407	46,407
TOTAL CURRENT LIABILITIES	14,840,268	15,900,571
LONG-TERM LIABILITIES		
Capital lease obligation, net of current portion	378,862	540,792
Contingent consideration obligations	5,862,464	5,862,464
Deferred rent	2,243,406	142,453
Note Payable	2,583,330	-
Other non-current liabilities	200,000	200,000
TOTAL LONG-TERM LIABILITIES	11,268,062	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 June 30, 2016 and September 30, 2015	16	16
Common stock, \$0.001 par value; 145,000,000 shares authorized; 60,429,405 and 59,544,677 shares issued and outstanding as of June 30, 2016 and September 30, 2015, respectively	152,799	151,914
Additional paid-in capital	436,071,308	426,873,358
Accumulated other comprehensive income (loss)	(30,712)	(136,425)
Accumulated deficit	(376,213,057)	(316,712,041)
Total Arrowhead Pharmaceuticals, Inc. stockholders' equity	59,980,354	110,176,822
Noncontrolling interest	(555,188)	(555,188)
TOTAL STOCKHOLDERS' EQUITY	59,425,166	109,621,634
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$ 85,533,496	\$ 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 June 30, 2016	Three Months ended June 30, 2015	Nine Months ended June 30, 2016	Nine Months ended June 30, 2015
REVENUE	\$ 39,583	\$ 123,750	\$ 127,083	\$ 338,250
OPERATING EXPENSES				
Research and development	9,423,195	7,490,400	29,782,854	36,877,925
Acquired in-process research and development	-	-	-	10,142,786
Salaries and payroll-related costs	4,113,262	3,570,531	12,281,841	10,262,799
General and administrative expenses	2,275,628	1,829,393	8,045,571	5,612,219
Stock-based compensation	2,750,785	2,486,074	7,547,967	6,706,009
Depreciation and amortization	818,200	741,058	2,416,461	1,480,656
TOTAL OPERATING EXPENSES	19,381,070	16,117,456	60,074,694	71,082,394
OPERATING LOSS	(19,341,487)	(15,993,706)	(59,947,611)	(70,744,144)
OTHER INCOME (EXPENSE)				
Gain (loss) on sale of fixed assets, net	-	-	-	19,195
Interest income (expense), net	34,103	162,366	213,543	597,896
Change in value of derivatives	(113,359)	(104,713)	233,052	2,446,403
Other income (expense)	-	-	-	482,904
TOTAL OTHER INCOME (EXPENSE)	(79,256)	57,653	446,595	3,546,398
LOSS BEFORE INCOME TAXES	(19,420,743)	(15,936,053)	(59,501,016)	(67,197,746)
Provision for income taxes	-	-	-	-
NET LOSS	(19,420,743)	(15,936,053)	(59,501,016)	(67,197,746)
Net loss attributable to non-controlling interests	-	-	-	-
NET LOSS ATTRIBUTABLE TO ARROWHEAD	\$ (19,420,743)	\$ (15,936,053)	\$ (59,501,016)	\$ (67,197,746)
NET LOSS PER SHARE ATTRIBUTABLE TO ARROWHEAD SHAREHOLDERS - BASIC & DILUTED:	\$ (0.32)	\$ (0.27)	\$ (1.00)	\$ (1.19)
Weighted average shares outstanding - basic and diluted	\$ 59,966,955	\$ 59,492,867	\$ 59,764,129	\$ 56,631,297
OTHER COMPREHENSIVE INCOME (LOSS), NET OF TAX				
Foreign Currency Translation Adjustments	(90,625)	(1,982)	105,713	(65,947)
COMPREHENSIVE LOSS ATTRIBUTABLE TO ARROWHEAD	\$ (19,511,368)	\$ (15,938,035)	\$ (59,395,303)	\$ (67,263,693)

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

Arrowhead Pharmaceuticals, Inc.
Consolidated Statement of Stockholders' Equity
(unaudited)

	<u>Preferred Stock</u>	<u>Amount (\$)</u>	<u>Common Stock</u>	<u>Amount (\$)</u>	<u>Additional Paid-In Capital</u>	<u>Accumulated Other Comprehensive Income (loss)</u>	<u>Accumulated Deficit</u>	<u>Non- controlling Interest</u>	<u>Totals</u>
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 warrants	-	-	460,177	460	2,259,051	-	-	-	2,259,511
Exercise of stock options	-	-	4,687	5	25,539	-	-	-	25,544
Stock-based compensation	-	-	-	-	7,547,967	-	-	-	7,547,967
Common stock- Restricted Stock Unit vesting	-	-	419,864	420	(634,607)	-	-	-	(634,187)
Foreign currency translation adjustments	-	-	-	-	-	105,713	-	-	105,713
Net loss for the nine months ended June 30, 2016	-	-	-	-	-	-	(59,501,016)	-	(59,501,016)
Balance at June 30, 2016	<u>15,652</u>	<u>\$ 16</u>	<u>60,429,405</u>	<u>\$ 152,799</u>	<u>\$ 436,071,308</u>	<u>\$ (30,712)</u>	<u>\$ (376,213,057)</u>	<u>\$ (555,188)</u>	<u>\$ 59,425,166</u>

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

Arrowhead Pharmaceuticals, Inc.
Consolidated Statements of Cash Flows
(unaudited)

	Nine months ended June 30, 2016	Nine months ended June 30, 2015
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	\$ (59,501,016)	\$ (67,197,746)
Change in value of derivatives	(233,052)	(2,446,403)
Acquired-in-process research and development	-	10,142,786
Stock-based compensation	7,547,967	6,706,009
Depreciation and amortization	2,416,461	1,480,656
Amortization of note premiums	201,346	945,114
Changes in operating assets and liabilities:	-	-
Prepaid expenses and Other Current Assets	(887,426)	(3,522,763)
Accounts payable	913,664	2,328,360
Accrued expenses	(4,728,300)	(2,155,033)
Other	24,249	31,639
NET CASH PROVIDED BY (USED IN) OPERATING ACTIVITIES	(54,246,107)	(53,687,381)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of property and equipment	(1,147,748)	(1,135,651)
Proceeds from sale of fixed assets	-	500
Proceeds from sale of marketable securities	16,308,000	19,411,146
Cash paid for acquisitions	-	(10,000,000)
NET CASH PROVIDED BY (USED IN) INVESTING ACTIVITIES	15,160,252	8,275,995
CASH FLOWS FROM FINANCING ACTIVITIES:		
Principal payments on capital leases and notes payable	(162,824)	(160,162)
Payments of taxes for net share settled restricted stock unit issuances	(634,187)	-
Proceeds from the exercise of warrants and stock options	2,285,055	313,751
NET CASH PROVIDED BY (USED IN) FINANCING ACTIVITIES	1,488,044	153,589
NET INCREASE (DECREASE) IN CASH	(37,597,811)	(45,257,797)
CASH AT BEGINNING OF PERIOD	81,214,354	132,510,610
CASH AT END OF PERIOD	\$ 43,616,543	\$ 87,252,813
Supplementary disclosures:		
Interest paid	\$ (8,906)	\$ (11,153)
Property and Equipment purchased through tenant improvement allowance financing	\$ (4,849,360)	\$ -
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.

Arrowhead Pharmaceuticals, Inc.
Notes to Consolidated Financial Statements
(unaudited)

Unless otherwise noted, (1) the term “Arrowhead” refers to Arrowhead Pharmaceuticals, Inc., a Delaware corporation 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 (6) 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., to reflect the Company’s focus on advancing products through clinical development to bring innovative new medicines to patients.

Liquidity

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. 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.

At June 30, 2016, the Company had \$43.6 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 June 30, 2016, the Company had invested \$1.0 million in bonds. During the nine months ended June 30, 2016, the Company’s cash position decreased by \$ 37.6 million, which was primarily the result of cash outflows related to operating activities of \$54.2 million, partially offset by maturities of fixed income investments totaling \$16.3 million.

On August 8, 2016, the Company signed security purchase agreements for the sale of equity securities in the amount of \$45 million, which is expected to close on or before August 12, 2016, and which should provide sufficient liquidity to fund operations for at least the next 12 months. This financing is discussed in further detail in Note 9 – Subsequent Events. Should this financing not be consummated, 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 12 months. These financial statements do not include any adjustments that might result from the outcome of this uncertainty.

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 June 30, 2016 and September 30, 2015.

Concentration of Credit Risk—The Company maintains several bank accounts at two financial institutions for its operations. 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 June 30, 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 an 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 nine months ended June 30, 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:

	June 30, 2016	September 30, 2015
Computers, office equipment and furniture	\$ 445,797	\$ 404,964
Research equipment	7,299,105	6,354,584
Software	121,568	110,428
Leasehold improvements	10,988,715	3,117,537
Total gross fixed assets	18,855,185	9,987,513
Less: Accumulated depreciation and amortization	(6,580,364)	(5,460,665)
Property and equipment, net	<u>\$ 12,274,821</u>	<u>\$ 4,526,848</u>

During the three months ended June 30, 2016, the Company's leasehold improvements increased as the Company prepares to move into its larger research facility in Madison, Wisconsin. The lease terms of this facility are discussed in Note 6 – *Commitments and Contingencies*.

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 June 30, 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 June 30, 2016, all investments were classified as held-to-maturity securities.

The following tables summarize the Company’s short-term investments as of June 30, 2016, and September 30, 2015.

	As of June 30, 2016			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Commercial notes (due within one year)	\$ 1,030,556	\$ —	\$ (26,716)	\$ 1,003,840

	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

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, then 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 \$197,874. 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 June 30, 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 \$2,069,365. Amortization expense for the three and nine months ended June 30, 2016 was \$425,107 and \$1,289,206, respectively, and amortization expense for the three and nine months ended June 30, 2015 was \$438,770 and \$607,801, respectively. Amortization expense is expected to be approximately \$425,107 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	-	(1,289,206)	(1,289,206)
Balance at June 30, 2016	\$ 944,935	\$ 22,589,975	\$ 23,534,910

NOTE 5 . STOCKHOLDERS' EQUITY

At June 30, 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 June 30, 2016, 60,429,405 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 June 30, 2016, 8,742,453 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 June 30, 2016:

<u>Exercise prices</u>	<u>Number of Warrants</u>	<u>Remaining Life in Years</u>
\$ 70.60	94,897	0.9
\$ 4.16	1,000	0.5
\$ 3.25	307,173	0.1
\$ 2.12	75,000	1.5
\$ 1.83	277,284	1.5
\$ 7.14	80,000	2.0
Total warrants outstanding	<u>835,354</u>	

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 and payments against a note payable for a tenant improvement allowance, which begin on October 1, 2016, will total approximately \$15.4 million over the initial 10-year term. The Company also estimates 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 which are accounted for as deferred rent and a note payable on the Company's Consolidated Balance Sheet. 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, 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 nine months ended June 30, 2016 was \$232,000 and \$659,000, respectively. Facility rent expense for the three and nine months ended June 30, 2015 was \$182,000 and \$544,000, respectively.

As of June 30, 2016, future minimum lease payments due in fiscal years under capitalized leases are as follows:

2016 (remainder of)	\$ 57,105
2017	228,420
2018	228,420
2019	95,175
2020	-
2021 and thereafter	-
Less interest	(13,605)
Principal	595,515
Less current portion	(216,653)
Noncurrent portion	<u>\$ 378,862</u>

As of June 30, 2016, future minimum lease payments due in fiscal years under operating leases are as follows:

2016 (remainder of)	\$ 192,220
2017	1,330,839
2018	1,303,345
2019	1,340,234
2020	1,044,431
2021 and thereafter	6,836,991
Total	<u>\$ 12,048,060</u>

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 were 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, 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 alleged that the Company and its former executives acted fraudulently with respect to Unidym's license from Rice University and sought injunctive relief, damages, including unspecified compensatory and punitive damages, and attorneys' fees. In May 2016, the Company and the plaintiff agreed to a settlement under which the Company admitted no liability and paid a confidential settlement amount and the plaintiff agreed to a permanent dismissal of claims. The amount of the settlement was recorded during the three months ended March 31, 2016 and 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, for toxicology studies, and for clinical studies. As of June 30, 2016, these future commitments were approximately \$49.8 million, of which approximately \$8.0 million is expected to be incurred in the remainder of fiscal 2016, and \$41.8 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 June 30, 2016, 2,534,518 and 5,616,651 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 June 30, 2016, there were options granted and outstanding to purchase 2,534,518 and 3,638,916 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 June 30, 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 nine months ended June 30, 2016, no options or restricted stock units were granted under the 2004 Equity Incentive Plan, 1,387,000 options and 838,517 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	1,387,000	6.12		
Cancelled	(99,897)	9.86		
Exercised	(4,687)	5.45		
Balance At June 30, 2016	<u>6,718,056</u>	<u>\$ 6.54</u>	7.6 years	\$ 4,073,899
Exercisable At June 30, 2016	<u>3,563,564</u>	<u>\$ 6.16</u>	6.6 years	\$ 3,304,194

Stock-based compensation expense related to stock options for the three and nine months ended June 30, 2016 was \$1,476,384 and \$4,205,413, respectively. Stock-based compensation expense related to stock options for the three and nine months ended June 30, 2015 was \$1,289,037 and \$3,469,327, 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 the Company for the three and nine months ended June 30, 2016 was estimated at \$ 30,440 and \$ 6,359,672, respectively. The grant date fair value of the options granted by the Company for the three and nine months ended June 30, 2015 was estimated at \$ 285,828 and \$ 7,100,339, respectively.

The intrinsic value of the options exercised during the three and nine months ended June 30, 2016 was \$0 and \$3,515, respectively. The intrinsic value of the options exercised during the three and nine months ended June 30, 2015 was \$0 and \$113,728, respectively.

As of June 30, 2016, the pre-tax compensation expense for all outstanding unvested stock options in the amount of approximately \$13,383,829 will be recognized in the Company's results of operations over a weighted average period of 2.6 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:

	Nine months ended June 30,	
	2016	2015
Dividend yield	—	—
Risk-free interest rate	1.42 – 1.89%	1.46 – 1.88%
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	\$4.25

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 nine months ended June 30, 2016, the Company issued 838,517 restricted stock units to certain members of management. Of the restricted stock units granted during the nine months ended June 30, 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	838,517	6.15
Vested	(402,684)	10.95
Forfeited	—	—
Unvested at June 30, 2016	1,370,000	\$ 6.80

The Company recorded \$ 1,274,401 and \$ 3,342,554 of expense relating to restricted stock units during the three and nine months ended June 30 , 2016 , respectively . The Company recorded \$1, 197,037 and \$ 3,236,682 of expense relating to restricted stock units during the three and nine months ended June 30, 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 June 30, 2016, the pre-tax compensation expense for all unvested restricted stock units in the amount of approximately \$3,258,026 will be recognized in the Company’s results of operations over a weighted average period of 1.6 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 June 30, 2016 and September 30, 2015 for assets and liabilities measured at fair value on a recurring basis:

June 30, 2016:

	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	\$ 43,616,543	\$ —	\$ —	\$ 43,616,543
Derivative liabilities	\$ —	\$ —	\$ 1,068,552	\$ 1,068,552
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 June 30, 2016, the Company had short-term investments of \$1,030,556. The fair value of its investments at June 30, 2016 was \$1,003,840. 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 June 30, 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 June 30, 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 nine months ended June 30, 2016, the Company recorded a non-cash gain/(loss) from the change in fair value of the derivative liability of \$ (1,108,599) and \$ 230,082, respectively. During the three and nine months ended June 30, 2015, the Company recorded a non-cash gain/(loss) from the change in fair value of the derivative liability of \$ (102,763) and \$2,268,798, 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”), of which warrants to exercise 24,324 shares remained unexercised and were cancelled at their expiration during fiscal 2016.

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

2012 Warrants	<u>June 30, 2016</u>	<u>September 30, 2015</u>
Risk-free interest rate	0.52%	0.6%
Expected life	1.5 Years	2.2 Years
Dividend yield	—	—
Volatility	89%	75%
2013 Warrants	<u>June 30, 2016</u>	<u>September 30, 2015</u>
Risk-free interest rate	0.52%	0.6%
Expected life	1.6 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	(230,852)
Net settlements	—
Value at June 30, 2016	<u>\$ 1,041,950</u>

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 and a current exchange ratio of 0.01. Exchange rights for 675,000 Ablaris shares were sold in fiscal 2011, and 500,000 remain outstanding at June 30, 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 nine months ended June 30, 2016, the Company recorded a non-cash gain/(loss) from the change in fair value of the derivative liability of \$(2,500) and \$2,200, respectively. During the three and nine months ended June 30, 2015, the Company recorded a non-cash loss and gain from the change in fair value of the derivative liability of \$(1,950) and \$177,605, respectively.

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

	<u>June 30, 2016</u>	<u>September 30, 2015</u>
Risk-free interest rate	0.52%	1.00%
Expected life	1.6 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	(2,200)
Net settlements	—
Value at June 30, 2016	<u>\$ 26,602</u>

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 June 30, 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 June 30, 2016	\$	<u>5,862,464</u>

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.

NOTE 9. SUBSEQUENT EVENTS

On August 8, 2016, the Company signed security purchase agreements for the sale of equity securities with certain institutional investors, pursuant to which the Company agreed to issue and sell an aggregate of approximately 7.63 million shares of common stock, \$0.001 par value per share, at a purchase price of \$5.90 per share. The aggregate purchase price to be paid by the investors for the Shares was \$45,000,000 and the Company expects to receive net proceeds of approximately \$43,200,000, after commissions and offering expenses. The closing of the sale of the Shares is expected to occur on August 12, 2016.

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., to reflect the Company's 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 nine months 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, which continues to be generally well tolerated. 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 also continues to dose patients in multiple additional Phase 2 studies in Europe, Asia and the US.

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.

Regarding ARC-521, the Company initiated a Phase 1 / 2 study in June 2016. The study is designed to evaluate the safety, tolerability, and pharmacokinetics of single doses of ARC-521 in healthy volunteers and the safety, tolerability, and antiviral activity of single and multiple doses of ARC-521 in patients with chronic HBV. The study is currently recruiting at a single center in New Zealand, and the Company plans to add additional centers in other countries, pending regulatory and ethics review.

The Company continues to progress on its expanded pipeline of additional pre-clinical candidates including ARC-F12, a treatment for factor 12 (F12) mediated angioedema 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 manufacturers 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 are expected to 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 and payments against a note payable for a tenant improvement allowance, which begin on October 1, 2016, will total 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 which are accounted for as deferred rent and a note payable on our Consolidated Balance Sheet. 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, Madison, Wisconsin with University Research Park, Incorporated that provides for an early termination of such lease effective on October 31, 2016.

Net losses were \$19.4 million and \$59.5 million during the three and nine months ended June 30, 2016, respectively, as compared to net losses of \$15.9 million and \$67.2 million during the three and nine months ended June 30, 2015, respectively. Diluted losses per share were \$0.32 and \$1.00 during the three and nine months ended June 30, 2016, respectively, as compared to diluted losses per share of \$0.27 and \$1.19 during the three and nine months ended June 30, 2015, respectively.

The Company had \$43.6 million of cash and cash equivalents, \$1.0 million of short term investments and \$85.5 million of total assets as of June 30, 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 reflect expenditures associated with the Company's research and development efforts for its clinical candidates and pipeline.

During August 2016, the Company completed a financing through the sale of equity securities in the amount of \$45 million, providing additional liquidity to the Company. Based upon the Company's current cash resources and operating plan, the Company expects to have sufficient liquidity to fund operations for at least the next twelve months.

Critical Accounting Policies and Estimates

Management makes certain judgments and uses certain estimates and assumptions when applying 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 June 30, 2016	Three Months Ended June 30, 2015
Revenue	\$ 39,583	\$ 123,750
Operating Loss	(19,341,487)	(15,993,706)
Net Loss	(19,420,743)	(15,936,053)
Earnings per Share (Basic and Diluted)	\$ (0.32)	\$ (0.27)

	Nine Months Ended June 30, 2016	Nine Months Ended June 30, 2015
Revenue	\$ 127,083	\$ 338,250
Operating Loss	(59,947,611)	(70,744,144)
Net Loss	(59,501,016)	(67,197,746)
Earnings per Share (Basic and Diluted)	\$ (1.00)	\$ (1.19)

The increase in our Operating Expenses during the three months ended June 30, 2016 is primarily due to increased manufacturing and toxicology costs in preparation for a phase 1 / 2 clinical trial for ARC-521. The decrease in our Operating Expenses during the nine months ended June 30, 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 are expected to be incurred.

Revenue

Total revenue was \$39,583 and \$127,083 for the three and nine months ended June 30, 2016, respectively, as compared to \$123,750 and \$338,250 for the three and nine months ended June 30, 2015, respectively. Revenue is primarily related to licensed technology in both periods. In addition, the Company had collaboration revenue of \$160,000 and earned \$47,000 in revenue for delivering a materials study during the nine months ended June 30, 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 nine months ended June 30, 2016 and 2015 are shown in the tables below.

Research and Development Expenses – Three and nine months ended June 30, 2016 compared to the three and nine months ended June 30, 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 June 30, 2016		Three Months Ended June 30, 2015		Increase (Decrease)	
	\$	% of Expense Category	\$	% of Expense Category	\$	%
Laboratory supplies & services	\$ 737	8%	\$ 655	9%	\$ 82	13%
In vivo studies	505	5%	158	2%	347	220%
Outside labs & contract services	46	1%	177	2%	(131)	-74%
Toxicity/efficacy studies	1,450	15%	1,458	20%	(8)	-1%
Drug manufacturing	2,529	27%	1,713	23%	816	48%
Clinical trials	3,787	40%	2,956	40%	831	28%
License, royalty & milestones	12	0%	12	0%	-	0%
Facilities and related	315	3%	234	3%	81	35%
Other research expenses	42	0%	127	2%	(85)	-67%
Total	\$ 9,423	100%	\$ 7,490	100%	\$ 1,933	26%

	Nine Months Ended June 30, 2016		Nine Months Ended June 30, 2015		Increase (Decrease)	
	\$	% of Expense Category	\$	% of Expense Category	\$	%
Laboratory supplies & services	\$ 2,072	7%	\$ 1,846	5%	\$ 226	12%
In vivo studies	1,221	4%	356	1%	865	243%
Outside labs & contract services	116	0%	408	1%	(292)	-72%
Toxicity/efficacy studies	7,142	24%	5,554	15%	1,588	29%
Drug manufacturing	7,849	26%	16,524	44%	(8,675)	-52%
Clinical trials	10,263	35%	10,196	28%	67	1%
License, royalty & milestones	44	0%	1,047	3%	(1,003)	-96%
Facilities and related	927	3%	686	2%	241	35%
Other research expenses	149	1%	261	1%	(112)	-43%
Total	\$ 29,783	100%	\$ 36,878	100%	\$ (7,095)	-19%

Laboratory supplies and services expense increased by \$82,000 from \$655,000 during the three months ended June 30, 2015 to \$737,000 during the current period. Laboratory supplies and services expense increased by \$226,000 from \$1,846,000 during the nine months ended June 30, 2015 to \$2,072,000 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 efforts to identify new clinical candidates.

In vivo studies expense increased by \$347,000 from \$158,000 during the three months ended June 30, 2015 to \$505,000 during the current period. In vivo studies expense increased by \$865,000 from \$356,000 during the nine months ended June 30, 2015 to \$1,221,000 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 \$131,000 from \$177,000 during the three months ended June 30, 2015 to \$46,000 during the current period. Outside labs and contract services expense decreased by \$292,000 from \$408,000 during the nine months ended June 30, 2015 to \$116,000 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 was consistent at \$1,458,000 during the three months ended June 30, 2015 and \$1,450,000 during the current period. Toxicity/efficacy studies expense increased by \$1,588,000 from \$5,554,000 during the nine months ended June 30, 2015 to \$7,142,000 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 increased by \$816,000 from \$1,713,000 during the three months ended June 30, 2015 to \$2,529,000 during the current period. Drug manufacturing expense decreased by \$8,675,000 from \$16,524,000 during the nine months ended June 30, 2015 to \$7,849,000 during the current period. The increase in the three month periods primarily relates to manufacturing to support our phase 1 / 2 study for ARC-521. The decrease in the nine month periods 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 are expected to be incurred.

Clinical trials expense increased by \$831,000 from \$2,956,000 during the three months ended June 30, 2015 to \$3,787,000 during the current period. Clinical trials expense was consistent at \$10,196,000 during the nine months ended June 30, 2015 and \$10,263,000 during the current period. The increase in the three month periods is 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 and third clinical candidates ARC-AAT and ARC-521.

License, royalty & milestones expense was consistent at \$12,000 during both the three months ended June 30, 2015 and the current period. License, royalty & milestones expense decreased by \$1,003,000 from \$1,047,000 during the nine months ended June 30, 2015 to \$44,000 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 related to our progress on ARC-AAT that required a \$1 million payment.

Facilities and related expense increased by \$81,000 from \$234,000 during the three months ended June 30, 2015 to \$315,000 during the current period. Facilities and related expense increased by \$241,000 from \$686,000 during the nine months ended June 30, 2015 to \$927,000 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 decreased by \$85,000 from \$127,000 during the three months ended June 30, 2015 to \$42,000 during the current period. Other research expense decreased by \$112,000 from \$261,000 during the nine months ended June 30, 2015 to \$149,000 during the current period. The decrease in both periods primarily relates to costs associated with a collaboration agreement to identify muscle targeting peptide molecules, for which the Company has been reimbursed from its collaboration partner.

Salaries – Three and nine months ended June 30, 2016 compared to the three and nine months ended June 30, 2015

The Company employs scientific, technical and administrative staff at its corporate offices and its research facility. Salaries and payroll-related expenses consist of salaries, bonuses, payroll taxes and related benefits. Salaries 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 details of salaries and payroll-related expenses for the periods indicated:

(in thousands, except percentages)

	Three Months	% of	Three Months	% of	Increase (Decrease)	
	Ended June 30, 2016	Expense Category	Ended June 30, 2015	Expense Category	\$	%
R&D - compensation-related	\$ 3,100	75%	\$ 2,625	74%	\$ 475	18%
G&A - compensation-related	1,013	25%	946	26%	67	7%
Total	\$ 4,113	100%	\$ 3,571	100%	\$ 542	15%

	Nine Months	% of	Nine Months	% of	Increase (Decrease)	
	Ended June 30, 2016	Expense Category	Ended June 30, 2015	Expense Category	\$	%
R&D - compensation-related	\$ 9,179	75%	\$ 7,501	73%	\$ 1,678	22%
G&A - compensation-related	3,103	25%	2,762	27%	341	12%
Total	\$ 12,282	100%	\$ 10,263	100%	\$ 2,019	20%

R&D compensation expense increased by \$475,000 from \$2,625,000 during the three months ended June 30, 2015 to \$3,100,000 during the current period. R&D compensation expense increased by \$1,678,000 from \$7,501,000 during the nine months ended June 30, 2015 to \$9,179,000 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 \$67,000 from \$946,000 during the three months ended June 30, 2016 to \$1,013,000 during the current period. G&A compensation expense increased by \$341,000 from \$2,762,000 during the nine months ended June 30, 2015 to \$3,103,000 during the current period. Annual merit increases and increased headcount accounted for the majority of the change in the current period.

General & Administrative Expenses – Three and nine months ended June 30, 2016 compared to the three and nine months ended June 30, 2015

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

(in thousands, except percentages)

	Three	% of Expense	Three	% of Expense	Increase (Decrease)	
	Months Ended June 30, 2016	Category	Months Ended June 30, 2015	Category	\$	%
Professional/outside services	\$ 879	39%	\$ 773	42%	\$ 106	14%
Patent expense	540	24%	225	12%	315	140%
Facilities and related	84	4%	75	4%	9	12%
Travel	258	11%	235	13%	23	10%
Business insurance	173	8%	133	7%	40	30%
Communication and Technology	176	8%	170	9%	6	4%
Office expenses	66	3%	78	4%	(12)	-15%
Other	100	4%	140	8%	(40)	-29%
Total	\$ 2,276	100%	\$ 1,829	100%	\$ 447	24%

	Nine Months Ended		Nine Months Ended		Increase (Decrease)	
	June 30, 2016	% of Expense Category	June 30, 2015	% of Expense Category	\$	
Professional/outside services	\$ 3,548	44%	\$ 2,909	52%	\$ 639	22%
Patent expense	1,136	14%	559	10%	577	103%
Facilities and related	240	3%	228	4%	12	5%
Travel	677	8%	563	10%	114	20%
Business insurance	455	6%	346	6%	109	32%
Communication and Technology	458	6%	527	9%	(69)	-13%
Office expenses	227	3%	222	4%	5	2%
Other	1,304	16%	258	5%	1,046	405%
Total	\$ 8,045	100%	\$ 5,612	100%	\$ 2,433	43%

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 \$106,000 from \$773,000 during the three months ended June 30, 2015 to \$879,000 during the current period. Professional/outside services expense increased by \$639,000 from \$2,909,000 during the nine months ended June 30, 2015 to \$3,548,000 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 \$315,000 from \$225,000 during the three months ended June 30, 2015 to \$540,000 during the current period. Patent expense increased by \$577,000 from \$559,000 during the nine months ended June 30, 2015 to \$1,136,000 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 \$23,000 from \$235,000 during the three months ended June 30, 2015 to \$258,000 during the current period. Travel expense increased by \$114,000 from \$563,000 during the nine months ended June 30, 2015 to \$677,000 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 \$40,000 from \$133,000 during the three months ended June 30, 2015 to \$173,000 during the current period. Business insurance expense increased by \$109,000 from \$346,000 during the nine months ended June 30, 2015 to \$455,000 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 was consistent at \$170,000 during the three months ended June 30, 2015 and \$176,000 during the current period. Communication and technology expense decreased by \$69,000 from \$527,000 during the nine months ended June 30, 2015 to \$458,000 during the current period. This category includes costs associated with the Company's telecommunication and information technology infrastructure which fluctuate based on variable costs of maintenance, expansions, and upgrades implemented from period to period.

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 decreased by \$40,000 from \$140,000 during the three months ended June 30, 2015 to \$100,000 during the current period. Other expense increased by \$1,046,000 from \$258,000 during the nine months ended June 30, 2015 to \$1,304,000 during the current period. The increase in the nine month 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.

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

Acquired in-process research and development expense for the Novartis pre-clinical candidates was \$0 and \$10,142,786 for the three and nine months ended June 30, 2015 and \$0 for the current periods. This expense pertains to the acquisition of the Novartis RNAi assets discussed above. The pre-clinical candidates were expensed during the period, while certain other patents and a third-party license were capitalized as intangible assets.

Stock-based compensation expense

Stock-based compensation expense, a noncash expense, was \$2,750,785 and \$7,457,967 during the three and nine months ended June 30, 2016, respectively, and was \$2,486,074 and \$6,706,009 during the three and nine months ended June 30, 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 \$818,200 and \$2,416,461 during the three and nine months ended June 30, 2016, respectively, and was \$741,058 and \$1,480,656 during the three and nine months ended June 30, 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 expense of \$79,256 and income of \$446,595 during the three and nine months ended June 30, 2016, respectively, and was income of \$57,653 and \$3,546,398 during the three and nine months ended June 30, 2015, respectively. The primary component of other income during the nine 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 June 30, 2016, the Company had cash on hand of approximately \$43.6 million as compared to \$81.2 million at September 30, 2015. Excess cash invested in fixed income securities was \$1.0 million at June 30, 2016, compared to \$17.5 million at September 30, 2015. During August 2016, the Company completed a financing through the sale of equity securities in the amount of \$45 million, providing additional liquidity to the Company. Based upon the Company's current cash resources and operating plan, the Company expects to have sufficient liquidity to fund operations for at least the next twelve months.

A summary of cash flows for the nine months ended June 30, 2016 and 2015 is as follows:

	Nine Months Ended June 30, 2016	Nine Months Ended June 30, 2015
Cash Flow from Continuing Operations:		
Operating Activities	\$ (54,246,107)	\$ (53,687,381)
Investing Activities	15,160,252	8,275,995
Financing Activities	1,488,044	153,589
Net Increase (Decrease) in Cash	(37,597,811)	(45,257,797)
Cash at Beginning of Period	81,214,354	132,510,610
Cash at End of Period	\$ 43,616,543	\$ 87,252,813

During the nine months ended June 30, 2016, the Company used \$ 54.2 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 \$ 15.2 million, primarily related to maturities on fixed income securities of \$ 16.3 million, partially offset by capital expenditures of \$1.1 million. Cash provided by financing activities of \$1.5 million was primarily driven by cash received from the exercise of warrants and stock options of \$2.3 million, partially offset by cash paid for employee taxes on net share settlements of restricted stock units that vested during the period of \$0.6 million.

During the nine months ended June 30, 2015, the Company used \$53.7 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 \$8.3 million, primarily related to maturities on fixed income securities of \$19.4 million, partially offset by cash paid for the acquisition of the Novartis RNAi assets of \$10.0 million and capital expenditures of \$1.1 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 and payments against a note payable for a tenant improvement allowance, which begin on October 1, 2016, will total 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, which are accounted for as deferred rent and a note payable on our Consolidated Balance Sheet. 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, 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
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 June 30, 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: August 9, 2016

ARROWHEAD PHARMACEUTICALS, INC.

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

CERTIFICATION PURSUANT SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Christopher Anzalone, Chief Executive Officer of Arrowhead Pharmaceuticals, Inc., certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Arrowhead Pharmaceuticals, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 9, 2016

/s/ C HRISTOPHER A NZALONE

Christopher Anzalone
Chief Executive Officer

CERTIFICATION PURSUANT SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Kenneth A. Myszkowski, Chief Financial Officer of Arrowhead Pharmaceuticals, Inc., certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Arrowhead Pharmaceuticals, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 9, 2016

/s/ Kenneth A. Myszkowski

**Kenneth A. Myszkowski,
Chief Financial Officer**

CERTIFICATION PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Christopher Anzalone, Chief Executive Officer of Arrowhead Pharmaceuticals, Inc. (the "Company"), certify, pursuant to Rule 13(a)-14(b) or Rule 15(d)-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350, that (i) the Quarterly Report on Form 10-Q of the Company for the quarterly period ended June 30, 2016, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and (ii) the information contained in such Quarterly Report on Form 10-Q fairly presents in all material respects the financial condition and results of operations of the Company.

Date: August 9, 2016

/s/ CHRISTOPHER A NZALONE

Christopher Anzalone
Chief Executive Officer

A signed original of these written statements required by 18 U.S.C. Section 1350 has been provided to Arrowhead Pharmaceuticals, Inc. and will be retained by Arrowhead Pharmaceuticals, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

CERTIFICATION PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Kenneth A. Myszkowski, Chief Financial Officer of Arrowhead Pharmaceuticals, Inc. (the "Company"), certify, pursuant to Rule 13(a)-14(b) or Rule 15(d)-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350, that (i) the Quarterly Report on Form 10-Q of the Company for the quarterly period ended June 30, 2016, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and (ii) the information contained in such Quarterly Report on Form 10-Q fairly presents in all material respects the financial condition and results of operations of the Company.

Date: August 9, 2016

/s/ Kenneth A. Myszkowski

Kenneth A. Myszkowski
Chief Financial Officer

A signed original of these written statements required by 18 U.S.C. Section 1350 has been provided to Arrowhead Pharmaceuticals, Inc. and will be retained by Arrowhead Pharmaceuticals, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.