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

# FORM 10-Q

**(Mark One)**

x **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the quarterly period ended June 30, 2022**

o **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the transition period from to .**

**Commission file number 001-38042**

# ARROWHEAD PHARMACEUTICALS, INC.

**(Exact name of registrant as specified in its charter)**

| **Delaware** | **46-0408024** |
|---|---|
| **(State or other jurisdiction of incorporation or organization)** | **(I.R.S. Employer Identification No.)** |

**177 E. Colorado Blvd, Suite 700**
**Pasadena, California 91105**
**(626) 304-3400**
**(Address and telephone number of principal executive offices)**

Former name, former address, and former fiscal year, if changed since last report: N/A

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

| Title of each class | Trading Symbol(s) | Name of each exchange on which registered |
|---|---|---|
| Common Stock, par value $0.001 per share | ARWR | The Nasdaq Global Select Market |

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No o

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted 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 such files). Yes x No o

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

| | | | |
|---|---|---|---|
| Large Accelerated Filer | x | Accelerated Filer | o |
| Non-Accelerated Filer | o | Smaller Reporting Company | o |
| Emerging Growth Company | o | | |

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. o

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

The number of shares of the registrant’s common stock outstanding as of July 28, 2022 was 105,848,963.

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## PART I. FINANCIAL INFORMATION

## ITEM 1. FINANCIAL STATEMENTS

**Arrowhead Pharmaceuticals, Inc.**
**Consolidated Balance Sheets**
**(In thousands, except per share amounts)**

| | (unaudited) June 30, 2022 | September 30, 2021 |
|---|---|---|
| **ASSETS** | | |
| CURRENT ASSETS | | |
| Cash and cash equivalents | $ 139,439 | $ 184,434 |
| Accounts receivable | 239 | 10,255 |
| Prepaid expenses | 6,761 | 4,362 |
| Other current assets | 8,892 | 2,191 |
| Marketable securities | — | 126,728 |
| Short term investments | 277,057 | 56,627 |
| TOTAL CURRENT ASSETS | 432,388 | 384,597 |
| Property and equipment, net | 71,904 | 48,675 |
| Intangible assets, net | 12,387 | 13,663 |
| Long term investments | 165,920 | 245,595 |
| Right-of-use assets | 68,908 | 17,346 |
| Other assets | 275 | 272 |
| **TOTAL ASSETS** | **$ 751,782** | **$ 710,148** |
| **LIABILITIES, NONCONTROLLING INTEREST AND STOCKHOLDERS' EQUITY** | | |
| CURRENT LIABILITIES | | |
| Accounts payable | $ 5,894 | $ 9,457 |
| Accrued expenses | 32,499 | 14,001 |
| Accrued payroll and benefits | 2,648 | 9,773 |
| Lease liabilities | 2,883 | 2,250 |
| Deferred revenue | 84,288 | 111,055 |
| TOTAL CURRENT LIABILITIES | 128,212 | 146,536 |
| LONG-TERM LIABILITIES | | |
| Lease liabilities, net of current portion | 78,231 | 23,295 |
| Deferred revenue, net of current portion | 71,162 | 131,495 |
| TOTAL LONG-TERM LIABILITIES | 149,393 | 154,790 |
| Commitments and contingencies (Note 7) | | |
| STOCKHOLDERS' EQUITY | | |
| Arrowhead Pharmaceuticals, Inc. stockholders' equity: | | |
| Common stock, $0.001 par value; 145,000 shares authorized; 105,795 and 104,327 shares issued and outstanding as of June 30, 2022 and September 30, 2021, respectively | 198 | 197 |
| Additional paid-in capital | 1,189,113 | 1,053,386 |
| Accumulated other comprehensive loss | (140) | (69) |
| Accumulated deficit | (735,244) | (644,692) |
| TOTAL ARROWHEAD PHARMACEUTICALS INC. STOCKHOLDERS' EQUITY | 453,927 | 408,822 |
| Noncontrolling Interest | 20,250 | — |
| TOTAL STOCKHOLDERS' EQUITY | 474,177 | 408,822 |
| **TOTAL LIABILITIES, NONCONTROLLING INTEREST AND STOCKHOLDERS' EQUITY** | **$ 751,782** | **$ 710,148** |

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

**Arrowhead Pharmaceuticals, Inc.**
**Consolidated Statements of Operations and Comprehensive Income (Loss)**
**(unaudited)**
**(In thousands, except per share amounts)**

| | Three Months Ended June 30, | | Nine Months Ended June 30, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2022 | 2021 |
| **REVENUE** | **$ 32,412** | **$ 45,891** | **$ 211,656** | **$ 100,004** |
| **OPERATING EXPENSES** | | | | |
| Research and development | 72,180 | 59,325 | 213,930 | 140,576 |
| General and administrative expenses | 33,141 | 18,434 | 92,403 | 43,581 |
| TOTAL OPERATING EXPENSES | **105,321** | **77,759** | **306,333** | **184,157** |
| OPERATING INCOME (LOSS) | (72,909) | (31,868) | (94,677) | (84,153) |
| **OTHER INCOME** | | | | |
| Interest income, net | 1,240 | 1,280 | 3,450 | 4,972 |
| Other income (expense) | (377) | 664 | 675 | 1,707 |
| TOTAL OTHER INCOME | **863** | **1,944** | **4,125** | **6,679** |
| INCOME (LOSS) BEFORE INCOME TAXES | **(72,046)** | **(29,924)** | **(90,552)** | **(77,474)** |
| Provision for income taxes | — | — | — | — |
| NET INCOME (LOSS) | **(72,046)** | **(29,924)** | **(90,552)** | **(77,474)** |
| NET INCOME (LOSS) PER SHARE - BASIC | $ (0.68) | $ (0.29) | $ (0.86) | $ (0.75) |
| NET INCOME (LOSS) PER SHARE - DILUTED | $ (0.68) | $ (0.29) | $ (0.86) | $ (0.75) |
| Weighted average shares outstanding - basic | 105,753 | 104,099 | 105,273 | 103,569 |
| Weighted average shares outstanding - diluted | 105,753 | 104,099 | 105,273 | 103,569 |
| OTHER COMPREHENSIVE INCOME (LOSS), NET OF TAX: | | | | |
| Foreign currency translation adjustments | (33) | (40) | (71) | 44 |
| COMPREHENSIVE INCOME (LOSS) | **$ (72,079)** | **$ (29,964)** | **$ (90,623)** | **$ (77,430)** |

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

**Arrowhead Pharmaceuticals, Inc.**
**Consolidated Statements of Stockholders' Equity and Noncontrolling Interest**
**(unaudited)**
**(In thousands, except per share amounts)**

| | Common Stock | Amount ($) | Additional Paid-In Capital | Accumulated Other Comprehensive Income (Loss) | Accumulated Deficit | Noncontrollling Interest | Totals |
|---|---|---|---|---|---|---|---|
| **Balance at March 31, 2021** | **104,020** | **$ 196** | **$ 996,645** | **$ 102** | **$ (551,394)** | **$ —** | **$ 445,549** |
| Stock-based compensation | — | — | 18,549 | — | — | — | 18,549 |
| Exercise of stock options | 161 | 1 | 2,755 | — | — | — | 2,756 |
| Common stock - restricted stock units vesting | 28 | — | — | — | — | — | — |
| Foreign currency translation adjustments | — | — | — | (40) | — | — | (40) |
| Net income (loss) for the three months ended June 30, 2021 | — | — | — | — | (29,924) | — | (29,924) |
| **Balance at June 30, 2021** | **104,209** | **$ 197** | **$ 1,017,949** | **$ 62** | **$ (581,318)** | **$ —** | **$ 436,890** |

| | Common Stock | Amount ($) | Additional Paid-In Capital | Accumulated Other Comprehensive Income (Loss) | Accumulated Deficit | Noncontrollling Interest | Totals |
|---|---|---|---|---|---|---|---|
| **Balance at March 31, 2022** | **105,702** | **$ 198** | **$ 1,115,373** | **$ (107)** | **$ (663,198)** | **$ —** | **$ 452,266** |
| Stock-based compensation | — | — | 33,391 | — | — | — | 33,391 |
| Exercise of stock options | 53 | — | 599 | — | — | — | 599 |
| Common stock - restricted stock units vesting | 40 | — | — | — | — | — | — |
| Foreign currency translation adjustments | — | — | — | (33) | — | — | (33) |
| Interest in joint venture | — | — | 39,750 | — | — | 20,250 | 60,000 |
| Net income (loss) for the three months ended June 30, 2022 | — | — | — | — | (72,046) | — | (72,046) |
| **Balance at June 30, 2022** | **105,795** | **$ 198** | **$ 1,189,113** | **$ (140)** | **$ (735,244)** | **$ 20,250** | **$ 474,177** |

| | Common Stock | Amount ($) | Additional Paid-In Capital | Accumulated Other Comprehensive Income (Loss) | Accumulated Deficit | Noncontrollling Interest | Totals |
|---|---|---|---|---|---|---|---|
| **Balance at September 30, 2020** | **102,376** | **$ 195** | **$ 965,410** | **$ 18** | **$ (503,844)** | **$ —** | **$ 461,779** |
| Stock-based compensation | — | — | 42,051 | — | — | — | 42,051 |
| Exercise of stock options | 981 | 1 | 10,489 | — | — | — | 10,490 |
| Common stock - restricted stock units vesting | 852 | 1 | (1) | — | — | — | — |
| Foreign currency translation adjustments | — | — | — | 44 | — | — | 44 |
| Net income (loss) for the nine months ended June 30, 2021 | — | — | — | — | (77,474) | — | (77,474) |
| **Balance at June 30, 2021** | **104,209** | **$ 197** | **$ 1,017,949** | **$ 62** | **$ (581,318)** | **$ —** | **$ 436,890** |

| | Common Stock | Amount ($) | Additional Paid-In Capital | Accumulated Other Comprehensive Income (Loss) | Accumulated Deficit | Noncontrollling Interest | Totals |
|---|---|---|---|---|---|---|---|
| **Balance at September 30, 2021** | **104,327** | **$ 197** | **$ 1,053,386** | **$ (69)** | **$ (644,692)** | **$ —** | **$ 408,822** |
| Stock-based compensation | — | — | 91,697 | — | — | — | 91,697 |
| Exercise of stock options | 497 | — | 4,281 | — | — | — | 4,281 |
| Common stock - restricted stock units vesting | 971 | 1 | (1) | — | — | — | — |
| Foreign currency translation adjustments | — | — | — | (71) | — | — | (71) |
| Interest in joint venture | — | — | 39,750 | — | — | 20,250 | 60,000 |
| Net income (loss) for the nine months ended June 30, 2022 | — | — | — | — | (90,552) | — | (90,552) |
| **Balance at June 30, 2022** | **105,795** | **$ 198** | **$ 1,189,113** | **$ (140)** | **$ (735,244)** | **$ 20,250** | **$ 474,177** |

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

**Arrowhead Pharmaceuticals, Inc.**
**Consolidated Statements of Cash Flows**
**(unaudited)**
**(In thousands, except per share amounts)**

| | Nine Months Ended June 30, | |
|---|---|---|
| | **2022** | **2021** |
| CASH FLOWS FROM OPERATING ACTIVITIES: | | |
| Net income (loss) | $ (90,552) | $ (77,474) |
| Stock-based compensation | 91,697 | 42,051 |
| Depreciation and amortization | 7,761 | 5,763 |
| Unrealized (gains) losses on marketable securities | 5,755 | (1,387) |
| Amortization/(accretion) of note premiums/discounts | 2,013 | 142 |
| Changes in operating assets and liabilities: | | |
| Accounts receivable | 10,016 | 174 |
| Prepaid expenses and other current assets | (8,876) | (2,895) |
| Deferred revenue | (87,100) | 211,392 |
| Accounts payable | (3,563) | 3,208 |
| Accrued expenses | 1,713 | 13,682 |
| Other | 3,672 | 685 |
| NET CASH PROVIDED BY (USED IN) OPERATING ACTIVITIES | (67,464) | 195,341 |
| CASH FLOWS FROM INVESTING ACTIVITIES: | | |
| Purchases of property and equipment | (20,066) | (15,368) |
| Purchases of investments | (223,391) | (95,195) |
| Proceeds from sale of investments | 201,595 | 87,130 |
| NET CASH PROVIDED BY (USED IN) INVESTING ACTIVITIES | (41,862) | (23,433) |
| CASH FLOWS FROM FINANCING ACTIVITIES: | | |
| Proceeds from the exercises of stock options | 4,331 | 10,490 |
| Proceeds from investment in joint venture | 60,000 | — |
| NET CASH PROVIDED BY FINANCING ACTIVITIES | 64,331 | 10,490 |
| NET INCREASE (DECREASE) IN CASH | (44,995) | 182,398 |
| CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD | 184,434 | 143,583 |
| CASH AND CASH EQUIVALENTS AT END OF PERIOD | $ 139,439 | $ 325,981 |

*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 and its Subsidiaries, (2) the terms "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 to Arrowhead Madison Inc. ("Arrowhead Madison"), Visirna Therapeutics Inc. ("Visirna"), and Arrowhead Australia Pty Ltd ("Arrowhead Australia"), (4) the term "Common Stock" refers to Arrowhead's Common Stock, par value $0.001 per share, (5) the term "Preferred Stock" refers to Arrowhead's Preferred Stock, par value $0.001 per share, and (6) the term "Stockholder(s)" refers to the holders of Arrowhead's Common Stock.*

**NOTE 1. *ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES***

*Nature of Business and Recent Developments*

Arrowhead Pharmaceuticals, Inc. develops medicines that 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 ARO-APOC3 for hypertriglyceridemia, ARO-ANG3 for dyslipidemia, ARO-ENaC2 for cystic fibrosis, ARO-DUX4 for facioscapulohumeral muscular dystrophy, ARO-COV for the coronavirus that causes COVID-19 and other possible future pulmonary-borne pathogens, ARO-C3 for complement mediated diseases, ARO-RAGE and ARO-MUC5AC for various muco-obstructive or inflammatory pulmonary conditions and ARO-MMP7 for idiopathic pulmonary fibrosis. ARO-HSD for liver disease was out-licensed to Glaxosmithkline Intellectual Property (No. 3) Limited ("GSK") in November 2021. ARO-XDH is being developed for uncontrolled gout under a collaboration agreement with Horizon Therapeutics Ireland DAC ("Horizon"). JNJ-75220795 (ARO-JNJ1) is being developed by Janssen as a potential treatment for patients with non-alcoholic steatohepatitis (NASH). ARO-AAT for liver disease associated with alpha-1 antitrypsin deficiency ("AATD") was out-licensed to Takeda Pharmaceuticals U.S.A., Inc. ("Takeda") in October 2020. JNJ-3989 (formerly referred to as ARO-HBV) for chronic hepatitis B virus was out-licensed to Janssen in October 2018. Olpasiran (formerly referred to as AMG 890 or ARO-LPA) for cardiovascular disease was out-licensed to Amgen Inc. ("Amgen") in 2016. While the Company believes that initial ARO-HIF2 Phase 1 clinical data provides proof of concept for the ability to deliver siRNA to RCC tumors, the Company has decided not to pursue further clinical development of ARO-HIF2 based on a number of factors including the evolving competitive landscape for HIF2 inhibitors.

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

During the first three quarters of fiscal 2022, the Company continued to develop and advance its pipeline and partnered candidates and expanded its facilities to support the Company's growing pipeline. Several key recent developments include:

i) dosed the first patients in its PALISADE study, a phase 3 clinical study to evaluate the safety and efficacy of ARO-APOC3 in adults with familial chylomicronemia syndrome (FCS);

ii) entered into an exclusive license agreement with GSK for ARO-HSD;

iii) Janssen presented clinical data from REEF-1, a Phase 2b study of different combination regimens, including JNJ-73763989 (JNJ-3989), formerly called ARO-HBV, and/or JNJ-56136379 (JNJ-6379), and a nucleos(t)ide analog (NA) for the treatment of chronic hepatitis B virus infection (CHB);

iv) filed for regulatory clearance to begin a Phase 1/2a study of ARO-C3 and subsequently dosed the first subjects in AROC3-1001, a Phase 1/2 clinical study of ARO-C3, the Company's investigational RNA interference (RNAi) therapeutic designed to reduce production of complement component 3 (C3) as a potential therapy for various complement mediated diseases;

v) presented additional interim clinical data from AROHSD1001, AROAAT2002, and AROAPOC31001;

vi) completed the purchase of 13 acres of land in the Verona Technology Park in Verona, Wisconsin and held a groundbreaking ceremony on the site. The site is being developed into an approximately 160,000 square foot drug manufacturing facility and an approximately 140,000 square foot laboratory and office facility which will support the Company's process development and analytical activities. The Company also announced that it received awards for up to $16 million in tax increment financing from the city of Verona, and up to $2.5 million in refundable Wisconsin state income tax credits from the Wisconsin Economic Development Corporation (WEDC) as incentives to invest in the local community and create new jobs. Additionally, The Company entered into a lease agreement for a new 144,000 square foot laboratory and office facility in San Diego, California to support discovery activities;

vii) completed enrollment in Phase 2b ARCHES-2 study of investigational ARO-ANG3 for patients with mixed dyslipidemia;

viii) filed for regulatory clearance to initiate Phase 1/2a study of ARO-RAGE for treatment of Asthma;

ix) filed for regulatory clearance to initiate Phase 1/2a study of ARO-MUC5AC for treatment of muco-obstructive lung disease;

x) initiated and dosed the first patients in the Phase 2 GATEWAY clinical study of investigational ARO-ANG3 for the treatment of patients with homozygous familial hypercholersterolemia;

xi) entered into definitive agreements to form a joint venture, Visirna Therapeutics, Inc. (“Visirna”) with Vivo Capital (“Vivo”) through which the Company and Vivo intend to expand the reach of innovative medicines in Greater China;

xii) hosted a pulmonary research & development (R&D) Day to discuss the Company’s emerging pipeline of pulmonary targeted RNA interference (RNAi) therapeutic candidates that leverage its proprietary Targeted RNAi Molecule (TRIM™) platform, including an announcement of its previously undisclosed candidate designed to reduce expression of matrix metalloproteinase 7 (MMP7) as a potential treatment for idiopathic pulmonary fibrosis (IPF); and

xiii) in conjunction with Takeda, announced results from a Phase 2 clinical study (AROAAT-2002) of investigational fazirsiran (TAK-999/ARO-AAT) for the treatment of liver disease associated with alpha-1 antitrypsin deficiency (AATD), and was recently published in the New England Journal of Medicine (NEJM) and presented in an oral presentation at The International Liver Congress™ 2022 - The Annual Meeting of the European Association for the Study of the Liver (EASL).

The Company is actively monitoring the ongoing COVID-19 pandemic. The financial results for the three and nine months ended June 30, 2022 were not significantly impacted by COVID-19. Operationally, the Company has experienced delays in its earlier stage programs due to a shortage in non-human primates, which are critical to the Company’s preclinical programs. Additionally, the Company has experienced delays in enrollment in its clinical trials. The Company’s operations at its research and development facilities in Madison, Wisconsin and San Diego, California, and its corporate headquarters in Pasadena, California have continued with limited impact, other than for enhanced safety measures and intermittent lab supply shortages. However, the Company cannot predict the impact the progression of COVID-19 will have on future financial and operational results due to a variety of factors, including the ability of the Company’s clinical sites to continue to enroll subjects, the ability of the Company’s suppliers to continue to operate, the continued good health and safety of the Company’s employees and the length and severity of the COVID-19 pandemic.

*Liquidity*

The Consolidated Financial Statements have been prepared in conformity with the accounting principles generally accepted in the United States of America (“GAAP”), which contemplate the continuation of the Company as a going concern. Historically, the Company’s primary sources of financing have been through the sale of its securities and revenue from its licensing and collaboration agreements. Research and development activities have required significant capital investment since the Company’s inception and are expected to continue to require significant cash expenditure in the future, particularly as the Company’s pipeline of drug candidates and its headcount have both expanded significantly. Additionally, significant capital investment will be required as the Company’s pipeline matures into later stage clinical trials, as well as with the Company’s plans to increase its internal manufacturing capabilities, and expand its footprint in Verona, Wisconsin and San Diego, California.

At June 30, 2022, the Company had $139.4 million in cash and cash equivalents (including $7.4 million in restricted cash), $277.1 million in short-term investments, $0 in marketable securities and $165.9 million in long-term investments to fund operations. $60 million of our cash balance resulted from the formation of our joint venture, Viserna. During the nine months ended June 30, 2022, the Company's cash and investments balance decreased by $31.0 million, which was primarily due to cash being used to fund the Company's operations, partially offset by the $120.0 million upfront payment received from GSK, and $60 million cash infusion to Viserna.

In total, the Company remains eligible for $4.9 billion in developmental, regulatory and sales milestones and various royalties on net sales from its licensing and collaboration agreements. The revenue recognition for these collaboration agreements is discussed further in Note 2 below.

*Summary of Significant Accounting Policies*

There have been no changes to the significant accounting policies disclosed in the Company's most recent Annual Report on Form 10-K.

*Recent Accounting Pronouncements*

There have been no recent accounting pronouncements that have significantly impacted this Quarterly Report on Form 10-Q, beyond those disclosed in the Company's most recent Annual Report on Form 10-K.

*Basis of Presentation*

The accompanying unaudited consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("US GAAP") for interim financial information. Accordingly, they do not include all of the information and notes required by US GAAP for complete financial statements. In our opinion, the unaudited consolidated financial statements have been prepared on the same basis as audited consolidated financial statements and include all adjustments, consisting of only normal recurring adjustments, necessary for the fair presentation of our financial position, results of operations, comprehensive income and cash flows. The interim results are not necessarily indicative of the results of operations to be expected for the year ending September 30, 2022 or any other period.

The accompanying unaudited consolidated financial statements include the accounts of our wholly owned subsidiaries, as well as the accounts of Visirna, a variable interest entity for which we are the primary beneficiary. All intercompany balances and transactions have been eliminated in consolidation. For consolidated entities where we own or are exposed to less than 100% of the economics, we record net income (loss) attributable to noncontrolling interest in our unaudited consolidated statements of income equal to the percentage of the economic or ownership interest retained in such entities by the respective noncontrolling parties. The accompanying unaudited consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto included in our Annual Report on Form 10-K for the year ended September 30, 2021, filed with the SEC.

**NOTE 2. *COLLABORATION AND LICENSE AGREEMENTS***

*Amgen Inc.*

On September 28, 2016, the Company entered into two collaboration and license agreements and a common stock purchase agreement with Amgen. Under the Second Collaboration and License Agreement (the "Olpasiran Agreement"), Amgen has received a worldwide, exclusive license to Arrowhead's novel RNAi Olpasiran (previously referred to as AMG 890 or ARO-LPA) program. These RNAi molecules are designed to reduce elevated lipoprotein(a), which is a genetically validated, independent risk factor for atherosclerotic cardiovascular disease. Under the prior collaboration and license agreement (the "First Collaboration and License Agreement" or the "ARO-AMG1 Agreement"), Amgen received an option to a worldwide, exclusive license for ARO-AMG1, an RNAi therapy for an undisclosed genetically validated cardiovascular target. Under both agreements, Amgen is wholly responsible for clinical development and commercialization. Under the terms of the agreements taken together, the Company has received $35.0 million in upfront payments, $21.5 million in the form of an equity investment by Amgen in the Company's Common Stock, and $30.0 million in milestone payments, and may receive up to an additional $400.0 million in remaining development, regulatory and sales milestone payments. The Company is further eligible to receive up to low double-digit royalties for sales of products under the Olpasiran Agreement. In July 2019, Amgen informed the Company that it would not be exercising its option for an exclusive license for ARO-AMG1, and as such, there will be no further milestone or royalty payments under the ARO-AMG1 Agreement.

The Company has evaluated these agreements in accordance with FASB Topics 808 – Collaboration Arrangements and 606 - Revenue for Contracts from Customers. The Company has substantially completed its performance obligations under the Olpasiran Agreement and the ARO-AMG1 Agreement. Future milestones and royalties achieved will be recognized in their entirety when earned. In July 2020, Amgen initiated a Phase 2 clinical study of Olpasiran, which resulted in a $20.0 million milestone payment to the Company. During the three and nine months ended June 30, 2022 and 2021, the Company recognized $0 and $0 of revenue associated with its agreement with Amgen, respectively. As of June 30, 2022, there were $0 in contract assets recorded as accounts receivable and $0 contract liabilities recorded as current deferred revenue on the Company's Consolidated Balance Sheets.

*Janssen Pharmaceuticals, Inc.*

On October 3, 2018, the Company entered into a License Agreement (the "Janssen License Agreement") and a Research Collaboration and Option Agreement (the "Janssen Collaboration Agreement") with Janssen, part of the Janssen Pharmaceutical Companies of Johnson & Johnson. The Company also entered into a stock purchase agreement with JJDC ("JJDC Stock Purchase Agreement"). Under the Janssen License Agreement, Janssen has received a worldwide, exclusive license to the Company's JNJ-3989 (ARO-HBV) program, the Company's third-generation subcutaneously administered RNAi therapeutic candidate being developed as a potential therapy for patients with chronic hepatitis B virus infection. Beyond the Company's Phase 1/2 study of JNJ-3989 (ARO-HBV), which the Company was responsible for completing, Janssen is wholly responsible for clinical development and commercialization of JNJ-3989. Under the Janssen Collaboration Agreement, Janssen was able to select three new targets against which Arrowhead would develop clinical candidates. These candidates were subject to certain restrictions and do not include candidates that already were in the Company's pipeline. The Company was obligated to perform discovery, optimization and preclinical research and development, entirely funded by Janssen, which on its own or in combination with Janssen development work, would have been sufficient to allow the filing of a U.S. Investigational New Drug Application or equivalent, at which time Janssen would have the option to take an exclusive license. If the option was exercised, Janssen would have been wholly responsible for clinical development and commercialization of each optioned candidate. Under the terms of the agreements taken together, the Company has received $175.0 million as an upfront payment, $75.0 million in the form of an equity investment by JJDC in Arrowhead Common Stock under the JJDC Stock Purchase Agreement, and milestone and option payments totaling $73.0 million, and the Company may receive up to $1.6 billion in development and sales milestones payments for the Janssen License Agreement, and up to $0.6 billion in development and sales milestone payments for the remaining target covered under the Janssen Collaboration Agreement. The Company is further eligible to receive tiered royalties on product sales up to mid-teens under the Janssen License Agreement and up to low teens under the Janssen Collaboration Agreement. During the three months ended June 30, 2022, Janssen's option period expired unexercised for two of the three candidates (ARO-JNJ2 and ARO-JNJ3) under the Janssen Collaboration Agreement.

The Company has evaluated these agreements in accordance with FASB Topics 808 – Collaboration Arrangements and 606 - Revenue for Contracts from Customers. At the inception of these agreements, the Company identified one distinct performance obligation. Regarding the Janssen License Agreement, the Company determined that the key deliverables included the license and certain R&D services including the Company's responsibility to complete the Phase 1/2 study of JNJ-3989 (ARO-HBV) and the Company's responsibility to ensure certain manufacturing of JNJ-3989 (ARO-HBV) drug product is completed and delivered to Janssen (the "Janssen R&D Services"). Due to the specialized and unique nature of these Janssen R&D Services and their direct relationship with the license, the Company determined that these deliverables represent one distinct bundle and, thus, one performance obligation. The Company also determined that Janssen's option to require the Company to develop up to three new targets is not a material right and, thus, not a performance obligation at the onset of the agreement. The consideration for this option is accounted for separately.

The Company determined the transaction price totaled approximately $252.7 million, which includes the upfront payment, the premium paid by JJDC for its equity investment in the Company, two $25.0 million milestone payments related to JNJ-3989 (ARO-HBV), and estimated payments for reimbursable Janssen R&D Services to be performed. The Company has allocated the total $252.7 million initial transaction price to its one distinct performance obligation for the JNJ-3989 (ARO-HBV) license and the associated Janssen R&D Services. The Company has recognized this transaction price in its entirety as of September 30, 2021, as its performance obligations were substantially completed. Future milestones and royalties achieved will be recognized in their entirety when earned. During the three months ended June 30, 2022 and 2021, the Company recognized approximately $0 and $0 of revenue associated with this performance obligation, respectively. During the nine months ended June 30, 2022 and 2021, the Company recognized approximately $0 and $20.2 million of revenue associated with this performance obligation, respectively. As of June 30, 2022, there were $0 in contract assets recorded as accounts receivable, and $0 of contract liabilities recorded as current deferred revenue on the Company's Consolidated Balance Sheets.

The Company has conducted its discovery, optimization and preclinical research and development of JNJ-75220795 (ARO-JNJ1), ARO-JNJ2, and ARO-JNJ3 under the Janssen Collaboration Agreement. All costs and labor hours spent by the Company have been entirely funded by Janssen. During the three months ended June 30, 2022, Janssen's option period expired unexercised for two of the three candidates (ARO-JNJ2 and ARO-JNJ3) under the Janssen Collaboration Agreement as reported in the second quarter of 2022. During the three months ended June 30, 2022 and 2021, the Company recognized $0.0 million and $0.2 million of revenue associated with these efforts, respectively. During the nine months ended June 30, 2022 and 2021, the Company recognized $0.1 million and $0.5 million of revenue associated with these efforts, respectively. In May 2021, Janssen exercised its option right for ARO-JNJ1, which resulted in a $10.0 million milestone payment to the Company. This $10 million milestone payment was recognized entirely during the three months ended June 30, 2021. As of June 30, 2022, there were $0 of contract assets recorded as accounts receivable and $0 of contract liabilities recorded as current deferred revenue on the Company's Consolidated Balance Sheets.

*Takeda Pharmaceuticals U.S.A., Inc.*

On October 7, 2020, the Company entered into an Exclusive License and Co-funding agreement (the "Takeda License Agreement") with Takeda. Under the Takeda License Agreement, Takeda and the Company will co-develop the Company's ARO-AAT program, the Company's second-generation subcutaneously administered RNAi therapeutic candidate being developed as a treatment for liver disease associated with alpha-1 antitrypsin deficiency. Within the United States, ARO-AAT, if approved, will be co-commercialized under a 50/50 profit sharing structure. Outside the United States, Takeda will lead the global commercialization strategy and will receive an exclusive license to commercialize ARO-AAT, while the Company will be eligible to receive tiered royalties of 20% to 25% on net sales. In January 2021, the Company received $300.0 million as an upfront payment and is eligible to receive potential development, regulatory and commercial milestones of up to $740.0 million.

The Company has evaluated the Takeda License Agreement in accordance with FASB Topics 808 – Collaborative Arrangements and 606 - Revenue for Contracts from Customers. At the inception of the Takeda License Agreement, the Company identified one distinct performance obligation. The Company determined that the key deliverables included the license and certain R&D services including the Company's responsibilities to complete the initial portion of the SEQUOIA study, to complete the ongoing Phase 2 AROAAT2002 study and to ensure certain manufacturing of ARO-AAT drug product is completed and delivered to Takeda (the "Takeda R&D Services"). Due to the specialized and unique nature of these Takeda R&D Services and their direct relationship with the license, the Company determined that these deliverables represent one distinct bundle and, thus, one performance obligation. Beyond the Takeda R&D Services, which are the responsibility of the Company, Takeda will be responsible for managing future clinical development and commercialization outside the United States. Within the United States, the Company will also participate in co-development and co-commercialization efforts and will co-fund these efforts with Takeda as part of the 50/50 profit sharing structure within the United States. The Company considers the collaborative activities, including the co-development and co-commercialization, to be a separate unit of account within Topic 808, and as such, these co-funding amounts will be recorded as Research and Development Expenses or General and Administrative Expenses, as appropriate.

The Company determined the initial transaction price totaled $300.0 million, which includes the upfront payment. The Company has excluded any future milestones or royalties from this transaction price to date. The Company has allocated the total $300.0 million initial transaction price to its one distinct performance obligation for the ARO-AAT license and the associated Takeda R&D Services. Revenue will be recognized using a proportional performance method (based on actual patient visits completed versus total estimated visits completed for the ongoing SEQUOIA and AROAAT2002 clinical studies). Revenue for the three months ended June 30, 2022 and 2021 was $25.5 million and $35.7 million, respectively. Revenue for the nine months ended June 30, 2022 and 2021 was $67.1 million and $69.3 million, respectively. As of June 30, 2022, there were $0 in contract assets recorded as accounts receivable, $71.0 million in contract liabilities recorded as deferred revenue and $71.2 million in contract liabilities recorded as deferred revenue, net of the current portion, and $7.8 million in contract liabilities recorded as accrued expenses. The $7.8 million in accrued expenses was primarily driven by co-development and co-commercialization activities.

*Horizon Therapeutics Ireland DAC*

On June 18, 2021, the Company entered into the Horizon License Agreement with Horizon. Under the Horizon

License Agreement, Horizon received a worldwide exclusive license for ARO-XDH, a previously undisclosed discovery-stage investigational RNAi therapeutic being developed by the Company as a potential treatment for people with uncontrolled gout. The Company will conduct all activities through the preclinical stages of development of ARO-XDH, and Horizon will be wholly responsible for clinical development and commercialization of ARO-XDH. In July 2021, the Company received $40 million as an upfront payment and is eligible to receive up to $660 million in potential development, regulatory and sales milestones. The Company is also eligible to receive royalties in the low- to mid-teens range on net product sales.

The Company has evaluated the Horizon License Agreement in accordance with FASB Topics 808 – Collaborative Arrangements and 606 - Revenue for Contracts from Customers. At the inception of the Horizon License Agreement, the Company identified one distinct performance obligation. The Company determined that the key deliverables included the license and certain R&D services, including the Company's responsibilities to conduct all activities through the preclinical stages of development of ARO-XDH (the "Horizon R&D Services"). Due to the specialized and unique nature of these Horizon R&D Services and their direct relationship with the license, the Company determined that these deliverables represented one distinct bundle and, thus, one performance obligation. Beyond the Horizon R&D Services, which are the responsibility of the Company, Horizon will be responsible for managing future clinical development and commercialization of ARO-XDH.

The Company determined the initial transaction price totaled $40.0 million, including the upfront payment. The Company has excluded any future estimated milestones or royalties, from this transaction price to date. The Company will allocate the total $40.0 million initial transaction price to its one distinct performance obligation for the ARO-XDH license and the associated Horizon R&D Services. Revenue will be recognized on a straight-line basis over the estimated timeframe for completing the Horizon R&D Services. The Company determined that the straight-line basis was appropriate as its efforts will be expended evenly over the course of completing its performance obligation. Revenue for the three months ended June 30, 2022 and 2021 was $6.7 million and $0, respectively. Revenue for the nine months ended June 30, 2022 and 2021 was $20.0 million and $0, respectively. As of June 30, 2022, there were $0 million in contract assets recorded as accounts receivable, $13.3 million in contract liabilities recorded as deferred revenue.

The Company has manufactured ARO-XDH material for Horizon in furtherance of the research plan entered into pursuant to the Horizon License Agreement, for which the Company has been reimbursed for its costs. During the nine months ended June 30, 2022 and 2021, the Company recognized $1.3 million and $0 with these efforts, respectively. As of June 30, 2022, there were $0.0 million of contract assets recorded as accounts receivable and $0 of contract liabilities recorded as current deferred revenue on the Company's Consolidated Balance Sheets.

*Glaxosmithkline Intellectual Property (No. 3) Limited*

On November 22, 2021, the Company entered into an Exclusive License Agreement (the "GSK License Agreement") with GSK. Under the GSK License Agreement, GSK has received an exclusive license for ARO-HSD, the Company's investigational RNAi therapeutic being developed as a treatment for patients with alcohol-related and nonalcohol related liver diseases, such as nonalcoholic steatohepatitis (NASH). The exclusive license is worldwide with the exception of greater China, for which the Company retained rights to develop and commercialize. Beyond the Company's Phase 1/2 study of (ARO-HSD), which the Company is responsible for completing, GSK is wholly responsible for clinical development and commercialization of ARO-HSD in its territory. Under the terms of the agreement, the Company has received an upfront payment of $120 million and is eligible for additional payments of $30 million at the start of Phase 2 and $100 million upon achieving a successful Phase 2 trial readout and the first patient dosed in a Phase 3 trial. Furthermore, should the Phase 3 trial read out positively, and the potential new medicine receives regulatory approval in major markets, the deal provides for commercial milestone payments to the Company of up to $190 million at first commercial sale, and up to $590 million in sales-related milestone payments. The Company is further eligible to receive tiered royalties on net product sales in a range of mid-teens to twenty percent.

The Company has evaluated the GSK License Agreement in accordance with FASB Topics 808 – Collaborative Arrangements and 606 - Revenue for Contracts from Customers. At the inception of the GSK License Agreement, the Company identified one distinct performance obligation. The Company determined that the key deliverables included the license and certain R&D services, including the Company's responsibility to complete the Phase 1/2 study, (the "GSK R&D Services"). Due to the specialized and unique nature of these GSK R&D Services and their direct relationship with the license, the Company determined that these deliverables represented one distinct bundle and, thus, one performance obligation. Beyond the GSK R&D Services, which are the responsibility of the Company, GSK will be responsible for managing future clinical development and commercialization in its territory.

The Company determined the initial transaction price totaled $120.0 million, including the upfront payment. The $120.0 million upfront payment was collected in January 2022. The Company has excluded any future estimated milestones or royalties from this transaction price to date. The Company has allocated the total $120.0 million initial transaction price to its one distinct performance obligation for the ARO-HSD license and the associated GSK R&D Services. As the Company has completed its performance obligation related to this agreement, the upfront payment of $120.0 million will be fully recognized as of the three and nine months ended June 30, 2022. Revenue for the nine months ended June 30, 2022 and 2021 was $120.0 million and $0, respectively. As of June 30, 2022, there were $0 in contract assets recorded as accounts receivable, $0 in contract liabilities recorded as deferred revenue.

*Joint Venture and License Agreement with Visirna Therapeutics, Inc.*

On April 25, 2022, the Company entered into a License Agreement (the “Visirna License Agreement”) with Visirna Therapeutics, Inc. (“Visirna”), pursuant to which Visirna received an exclusive license to develop, manufacture and commercialize four of Arrowhead’s RNAi-based investigational cardiobolic medicines in Greater China (including the People’s Republic of China, Hong Kong, Macau and Taiwan). Pursuant to a Share Purchase Agreement entered into simultaneously with the Visirna License Agreement (the “Visirna SPA”), the Company acquired a majority stake in Visirna (after accounting for shares reserved for Visirna’s employee stock ownership plan) as partial consideration for the Visirna License Agreement. Under the Visirna SPA, entities affiliated with Vivo Capital (“Vivo”) also acquired a minority stake in Visirna in exchange for $60 million in upfront capital to support the operations of Visirna. As further consideration under the Visirna License Agreement, the Company is also eligible to receive potential royalties on commercial sales.

The Company has determined that Visirna is a variable interest entity upon its formation and as of June 30, 2022, and it has been determined that Arrowhead is the primary beneficiary; accordingly, Arrowhead consolidates the financial statements of Visirna.

## NOTE 3. *PROPERTY AND EQUIPMENT*

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

| | June 30, 2022 | September 30, 2021 |
|---|---|---|
| | (In thousands) | |
| Computers, software, office equipment and furniture | $ 2,210 | $ 2,170 |
| Research equipment | 31,678 | 27,500 |
| Leasehold improvements | 42,017 | 41,524 |
| Construction in Progress | 22,338 | 345 |
| Land | 2,996 | — |
| Total gross fixed assets | 101,239 | 71,539 |
| Less: Accumulated depreciation and amortization | (29,335) | (22,864) |
| Property and equipment, net | $ 71,904 | $ 48,675 |

Depreciation and amortization expense for property and equipment for the three months ended June 30, 2022 and 2021 was $2.2 million and $1.6 million, respectively. Depreciation and amortization expense for property and equipment for the nine months ended June 30, 2022 and 2021 was $6.5 million and $4.5 million, respectively. Construction in Progress relates to the Company’s Verona and San Diego research facilities. Land relates to the Company’s Verona, Wisconsin research facility.

## NOTE 4. *INVESTMENTS*

Investments at June 30, 2022 primarily consisted of commercial paper and corporate bonds that have maturities of less than 36 months and a certificate of deposit. Cash and cash equivalents consist of cash on hand and commercial paper purchased with 90-days or less remaining to maturity. The Company's corporate bonds consist of both short-term and long-term bonds and are classified as "held-to-maturity" on the Company's Consolidated Balance Sheets. The Company's certificate of deposit matures in less than 12 months and is classified as "held-to-maturity" on the Company's Consolidated Balance Sheet,'. The Company's marketable equity securities consisted of mutual funds that primarily invest in U.S. government bonds, U.S. government agency bonds, corporate bonds and other asset-backed debt securities. Dividends from these funds were automatically re-invested. In April 2022, all marketable securities were sold for $122.3 million. The Company may also invest excess cash balances in money market accounts, and these securities would be classified as cash and cash equivalents on the Company's Consolidated Balance Sheet. The Company accounts for its "held-to-maturity" investments in accordance with FASB ASC 320, Investments – Debt and Equity Securities and its marketable equity securities in accordance with ASC 321, Investments – Equity Securities. We did not record any impairment charges related to our marketable debt securities during the three and nine months ended June 30, 2022.

The following tables summarize the Company's short-term and long-term investments and marketable securities as of June 30, 2022 and September 30, 2021 by measurement category:

| | As of June 30, 2022 (In thousands) | | | |
|---|---|---|---|---|
| | Cost Basis | Gross Unrealized Gains | Gross Unrealized Losses | Fair Value |
| **Classified as Cash Equivalents** | | | | |
| Commercial notes (due within ninety days) | $ 25,325 | $ 11 | $ — | $ 25,336 |
| **Classified as Held to Maturity** | | | | |
| Commercial notes (due within one year) | $ 227,057 | $ 21 | $ (1,588) | $ 225,490 |
| Commercial notes (due within one through three years) | $ 165,920 | $ — | $ (6,380) | $ 159,540 |
| Certificate of deposit (due within one year) | $ 50,000 | $ — | $ — | $ 50,000 |
| **Classified as Marketable Securities** | | | | |
| Marketable securities | $ — | $ — | $ — | $ — |
| **Total** | $ 468,302 | $ 32 | $ (7,968) | $ 460,366 |

| | As of September 30, 2021 (In thousands) | | | |
|---|---|---|---|---|
| | Cost Basis | Gross Unrealized Gains | Gross Unrealized Losses | Fair Value |
| **Classified as Held to Maturity** | | | | |
| Commercial notes (due within one year) | $ 56,627 | $ 803 | $ — | $ 57,430 |
| Commercial notes (due within one through three years) | $ 195,595 | $ 1,151 | $ (103) | $ 196,643 |
| Certificate of deposit (due within one through two years) | $ 50,000 | $ — | $ — | $ 50,000 |
| **Classified as Marketable Securities** | | | | |
| Marketable securities | $ 127,481 | $ — | $ (753) | $ 126,728 |
| **Total** | $ 429,703 | $ 1,954 | $ (856) | $ 430,801 |

## NOTE 5. *INTANGIBLE ASSETS*

Intangible assets subject to amortization include patents and a license agreement capitalized as part of the Novartis RNAi asset acquisition in March 2015. 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 $1.1 million. 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 $11.4 million. Amortization expense for the three months ended June 30, 2022 and 2021 was $0.4 million and $0.4 million, respectively. Amortization expense for the nine months ended June 30, 2022 and 2021 was $1.3 million and $1.3 million, respectively. Amortization expense is expected to be $0.4 million for the remainder of fiscal 2022, $1.7 million in 2023, $1.7 million in 2024, $1.7 million in 2025, $1.7 million in 2026 and $5.2 million thereafter.

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

| | Intangible Assets Subject to Amortization |
|---|---|
| | (in thousands) |
| Balance at September 30, 2021 | $ 13,663 |
| Impairment | — |
| Amortization | (1,276) |
| Balance at June 30, 2022 | $ 12,387 |

## NOTE 6. *STOCKHOLDERS' EQUITY*

At June 30, 2022, 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, 2022, 105,795,456 shares of Common Stock were outstanding. At June 30, 2022, 13,942,716 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, 2013 Incentive Plan, and 2021 Incentive Plan, as well as for inducement grants made to new employees under Rule 5635(c)(4) of the Nasdaq Listing Rules.

In August 2020, the Company entered into an Open Market Sale Agreement (the "ATM Agreement"), pursuant to which the Company may, from time to time, sell up to $250,000,000 in shares of the Company's Common Stock through Jefferies LLC, acting as the sales agent and/or principal, in an at-the-market offering. The Company is not required to sell shares under the ATM Agreement. The Company will pay Jefferies LLC a commission of up to 3.0% of the aggregate gross proceeds received from all sales of the common stock under the ATM Agreement. Unless otherwise terminated, the ATM Agreement continues until the earlier of selling all shares available under the ATM Agreement or December 2, 2022. At June 30, 2022, no shares have been sold under the ATM Agreement.

## NOTE 7. *COMMITMENTS AND CONTINGENCIES*

*Litigation*

From time to time, the Company may be subject to various claims and legal proceedings in the ordinary course of business. If the potential loss from any claim, asserted or unasserted, or legal proceeding is considered probable and the amount is reasonably estimable, the Company will accrue a liability for the estimated loss. There were no contingent liabilities recorded as of June 30, 2022.

*Commitments*

On December 20, 2021, the Company completed a purchase of 13 acres of land in the Verona Technology Park in Verona, Wisconsin, which is planned to be the site of an approximately 160,000 square foot drug manufacturing facility and an approximately 140,000 square foot laboratory and office facility to support process development and analytical activities. Arrowhead intends to invest between $200 million and $250 million into the buildout of the facilities. As part of this acquisition, the Company also entered into a development agreement with the City of Verona to construct certain infrastructure improvements within the TIF district, and will be reimbursed by the City of Verona by future tax increment revenue generated from the developed property. The total amount of funding that City of Verona will pay as reimbursements under the TIF program for these improvements is not guaranteed and will depend on future tax revenues generated from the developed property.

*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 a new drug application and upon certain sales level milestones. These milestone payments could amount to the mid to upper double-digit millions of dollars. During the three and nine months ended June 30, 2022 and 2021, the Company did not reach any milestones. Under certain agreements, the Company may be required to make mid to high single-digit percentage royalty payments based on a percentage of sales of the relevant products.

## NOTE 8. *LEASES*

*Leases*

In April 2019, the Company entered into a lease for its corporate headquarters in Pasadena, California. The 91 month office building lease between the Company and 177 Colorado Owner, LLC is for approximately 24,000 square feet of office space located at 177 E. Colorado Blvd, Pasadena, California. The increased capacity of this new office space compared to the Company's prior corporate headquarters will accommodate increased personnel as the Company's pipeline of drug candidates expands and moves closer to market. Lease payments began on September 30, 2019 and are estimated to total approximately $8.7 million over the term. The lease expires on April 30, 2027. The Company has paid approximately $3.5 million for leasehold improvements, net of tenant improvement allowances. The lease contains an option to renew for one term of five years. The exercise of this option was not determined to be reasonably certain and thus was not included in lease liabilities on the Company's Consolidated Balance Sheet at June 30, 2022. On October 23, 2020, the Company entered into a lease expansion to add an additional approximately 24,000 square feet of office space at the same location for its corporate headquarters. Lease payments for the expansion began in July 2021 and the lease for the expansion expires in April 2027. The lease payments for the expansion are expected to total $6.9 million. The Company has paid approximately $4.0 million of leasehold improvements, net of tenant improvement allowances, for the lease expansion.

In January 2016, the Company entered into a lease for its research facility in Madison, Wisconsin. The lease was for approximately 60,000 square feet of office and laboratory space and had an expiration date of September 30, 2026. The lease was amended in January 2019 and May 2020 to expand the rentable square feet by an additional 40,000 square feet and to extend the lease expiration date to September 30, 2031. Lease payments are estimated to total approximately $26.2 million for the term. The Company incurred approximately $11.0 million of leasehold improvements for the additional 40,000 square feet, net of tenant improvement allowances. The lease contains two options to renew for two terms of five years. The exercise of these options were not determined to be reasonably certain and thus was not included in lease liabilities on the Company's Consolidated Balance Sheet at June 30, 2022. In November 2020 and December 2020, the Company entered into amendments to expand the rentable square space by an additional 10,743 square feet and these amendments added a total of approximately $1.2 million of lease payments for the remainder of the term.

In March 2020, the Company entered into a sublease agreement for additional research and development facility space in San Diego, California. The Sublease provides additional space needed to accommodate the recent growth of the Company's personnel and discovery efforts. The Sublease is for approximately 21,000 rentable square feet. The term of the Sublease commenced on April 1, 2020 and will end on January 14, 2023. Sublease payments are estimated to total approximately $2.0 million over the term.

On November 19, 2021, the Company entered into a new lease for a San Diego, California research facility. The 15-year lease is for approximately 144,000 square feet of office and research and development laboratory space to be constructed in San Diego, California. This lease will replace the Company's current research facility sublease for property located in San Diego, California. The increased capacity of this new facility compared to the Company's current research facility in San Diego will accommodate increased personnel for the Company's expanding pipeline of current and future drug candidates. The estimated rent commencement date for the lease is in March 2023, after construction and leasehold improvements have been completed. The lease payments, which begin on the rent commencement date, will be approximately $119.0 million over the initial 15-year term. The Company also estimates payments for operating expenses to be approximately $3.0 million for the first year of the lease, and these payments will continue throughout the initial 15-year term. The Company expects to pay approximately $31.0 million for leasehold improvements, net of tenant improvement allowances. Pursuant to the lease, within twelve months of the expiration of the initial 15-year term, the

Company has the option to extend the lease for up to one additional ten-year term, with certain annual increases in base rent. .

Operating lease cost during the three months ended June 30, 2022 and 2021 was $3.4 million and $1.6 million, respectively. Operating lease cost during the nine months ended June 30, 2022 and 2021 was $6.0 million and $3.6 million, respectively. Variable lease costs for the three months ended June 30, 2022 and 2021 was $0.2 million and $0.1 million, respectively. Variable lease costs for the nine months ended June 30, 2022 and 2021 was $0.5 million and $0.6 million, respectively. There was no short-term lease cost during the three and nine months ended June 30, 2022 and 2021.

The following table presents payments of operating lease liabilities on an undiscounted basis as of June 30, 2022:

| | (in thousands) |
|---|---|
| 2022 (remainder of fiscal year) | $ 1,309 |
| 2023 | 5,802 |
| 2024 | 8,094 |
| 2025 | 11,800 |
| 2026 | 12,313 |
| 2027 and thereafter | 114,109 |
| Total | $ 153,427 |
| Less imputed interest | $ (72,313) |
| Total operating lease liabilities (includes current portion) | $ 81,114 |

Cash paid for the amounts included in the measurement of the operating lease liabilities on the Company's Consolidated Balance Sheet and included in Other changes in operating assets and liabilities within cash flows from operating activities on the Company's Consolidated Statements of Cash Flows for the nine months ended June 30, 2022 and 2021 was $3.4 million and $2.2 million, respectively. The weighted-average remaining lease term and weighted-average discount rate for all leases as of June 30, 2022 was 7.3 years and 8.5%, respectively.

**NOTE 9. *STOCK-BASED COMPENSATION***

Arrowhead has three plans that provide for equity-based compensation. Under the 2004 Equity Incentive Plan and the 2013 Incentive Plan, as of June 30, 2022, 216,607 and 4,114,999 shares, respectively, of Arrowhead's Common Stock are reserved for the grant of stock options, stock appreciation rights, and restricted stock unit awards to employees, consultants and others. No further grants may be made under the 2004 Equity Incentive Plan. As of June 30, 2022, there were options granted and outstanding to purchase 216,607 and 1,806,987 shares of Common Stock under the 2004 Equity Incentive Plan and the 2013 Incentive Plan, respectively, and there were 2,308,012 restricted stock units granted and outstanding under the 2013 Incentive Plan. As of June 30, 2022, there were 816,248 shares reserved for options and 682,500 shares reserved for restricted stock units issued as inducement grants to new employees outside of equity compensation plans. As of June 30, 2022, there were 3,000 shares of Common Stock reserved for options and 1,507,267 shares of Common Stock reserved for restricted stock units granted and outstanding under the 2021 Incentive Plan. As of June 30, 2022, the total number of shares available under the 2021 Incentive Plan was 6,627,845 shares, which includes 119,612 shares that were forfeited under the 2013 Incentive Plan.

*Stock Options*

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, 2021 | 3,456,239 | $ 19.60 | | |
| Granted | — | — | | |
| Cancelled | (106,801) | 43.68 | | |
| Exercised | (506,596) | 8.45 | | |
| Balance at June 30, 2022 | 2,842,842 | $ 20.60 | 5.1 years | $ 55,434,252 |
| Exercisable at June 30, 2022 | 2,370,089 | $ 16.14 | 4.6 years | $ 52,941,990 |

Stock-based compensation expense related to stock options for the three months ended June 30, 2022 and 2021 was $2.6 million and $3.2 million, respectively. Stock-based compensation expense related to stock options for the nine months ended June 30, 2022 and 2021 was $8.3 million and $9.6 million, respectively. For non-qualified stock options, the expense 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 months ended June 30, 2022 and 2021 was $0 and $0.9 million, respectively. The grant date fair value of the options granted by the Company for the nine months ended June 30, 2022 and 2021 was $0 and $9.0 million, respectively.

The intrinsic value of the options exercised during the three months ended June 30, 2022 and 2021 was $1.6 million and $10.2 million, respectively. The intrinsic value of the options exercised during the nine months ended June 30, 2022 and 2021 was $24.9 million and $63.0 million, respectively.

As of June 30, 2022, the pre-tax compensation expense for all outstanding unvested stock options in the amount of $14.9 million will be recognized in the Company's results of operations over a weighted average period of 1.7 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, | |
|---|---|---|
| | 2022 | 2021 |
| Dividend yield | N/A | — |
| Risk-free interest rate | N/A | 0.4% - 1.1% |
| Volatility | N/A | 86% - 90.4% |
| Expected life (in years) | N/A | 6.25 |
| Weighted average grant date fair value per share of options granted | N/A | $ 48.64 |

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, market condition-based, and performance condition-based awards, have been granted under the Company's 2013 Incentive Plan, 2021 Incentive Plan, and as inducements grants granted outside of the Company's equity-based compensation plans under Rule 5635(c)(4) of the Nasdaq Listing Rules. At vesting, each outstanding RSU will be exchanged for one share of the Company's Common Stock. RSU 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 RSUs:

| | Number of RSUs | Weighted-Average Grant Date Fair Value Per Share |
|---|---|---|
| Unvested at September 30, 2021 | 3,831,850 | $ 61.24 |
| Granted | 1,691,367 | 56.73 |
| Vested | (962,188) | 49.10 |
| Forfeited | (95,625) | 69.32 |
| Unvested at June 30, 2022 | 4,465,404 | $ 61.97 |

During the three months ended June 30, 2022 and 2021, the Company recorded $33.7 million and $15.4 million of expense related to RSUs, respectively. During the nine months ended June 30, 2022 and 2021, the Company recorded $83.4 million and $32.5 million of expense related to RSUs, respectively. Such expense is included in stock-based compensation expense in the Company's Consolidated Statements of Operations and Comprehensive Income (Loss). For RSUs, the expense creates a timing difference, resulting in a deferred tax asset, which is fully reserved by a valuation allowance.

For RSUs, 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. The grant date fair value of the RSUs granted by the Company for the three months ended June 30, 2022 and 2021 was $42.5 million and $3.1 million, respectively. The grant date fair value of the RSUs granted by the Company for the nine months ended June 30, 2022 and 2021 was $95.2 million and $112.1 million, respectively.

As of June 30, 2022, the pre-tax compensation expense for all unvested RSUs in the amount of $190.3 million will be recognized in the Company's results of operations over a weighted average period of 2.7 years.

## NOTE 10. *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, 2022 and September 30, 2021 for assets and liabilities measured at fair value on a recurring basis:

June 30, 2022:

| | Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|
| | | (in thousands) | | |
| ***Classified as Cash and cash equivalents*** | | | | |
| Commercial Notes | $ — | $ 25,336 | $ — | $ 25,336 |
| ***Classified as Marketable Securities*** | | | | |
| Marketable securities | $ — | $ — | $ — | $ — |
| ***Classified as Held to Maturity*** | | | | |
| Short-term investments | $ — | $ 225,490 | $ — | $ 225,490 |
| Long-term investments | $ — | $ 159,540 | $ — | $ 159,540 |
| Certificate of deposits | $ 50,000 | $ — | $ — | $ 50,000 |
| ***Classified as Contingent Consideration*** | | | | |
| Contingent consideration | $ — | $ — | $ — | $ — |

September 30, 2021:

| | Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|
| | | (in thousands) | | |
| ***Classified as Marketable Securities*** | | | | |
| Marketable securities | $ 126,728 | $ — | $ — | $ 126,728 |
| ***Classified as Held to Maturity*** | | | | |
| Short-term investments | $ — | $ 57,430 | $ — | $ 57,430 |
| Long-term investments | $ — | $ 196,643 | $ — | $ 196,643 |
| Certificate of deposit | $ 50,000 | $ — | $ — | $ 50,000 |
| ***Classified as Contingent Consideration*** | | | | |
| Contingent consideration | $ — | $ — | $ — | $ — |

**NOTE 11.** ***SUBSEQUENT EVENTS***

None.

## 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," "plan," "project," "could," "estimate," "target," "forecast," or "continue" or the negative of these words 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 business, 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. In addition, many of these risks and uncertainties may be exacerbated by the COVID-19 pandemic and any worsening of the global business and economic environment as a result. As such, our actual results may differ materially from those expressed in any forward-looking statements. Readers should carefully review the factors identified in our most recent Annual Report on Form 10-K under the caption "Risk Factors" as well as the additional risks and uncertainties described in other documents we file from time to time with the Securities and Exchange Commission ("SEC"), including this Quarterly Report on Form 10-Q for the quarter ended June 30, 2022. 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.*

### Description of Business

*Unless otherwise noted, (1) the term "Arrowhead" refers to Arrowhead Pharmaceuticals, Inc., a Delaware corporation and its Subsidiaries, (2) the terms "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 to Arrowhead Madison Inc. ("Arrowhead Madison"), Visirna Therapeutics Inc. ("Visirna"), and Arrowhead Australia Pty Ltd ("Arrowhead Australia"), (4) the term "Common Stock" refers to Arrowhead's Common Stock, par value $0.001 per share, (5) the term "Preferred Stock" refers to Arrowhead's Preferred Stock, par value $0.001 per share, and (6) the term "Stockholder(s)" refers to the holders of Arrowhead's Common Stock.*

### Overview

Arrowhead Pharmaceuticals, Inc. develops medicines that 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 ARO-APOC3 for hypertriglyceridemia, ARO-ANG3 for dyslipidemia, ARO-ENaC2 for cystic fibrosis, ARO-DUX4 for facioscapulohumeral muscular dystrophy, ARO-COV for the coronavirus that causes COVID-19 and other possible future pulmonary-borne pathogens, ARO-C3 for complement mediated diseases, ARO-RAGE and ARO-MUC5AC for various muco-obstructive or inflammatory pulmonary conditions and ARO-MMP7 for idiopathic pulmonary fibrosis. ARO-HSD for liver disease was out-licensed to Glaxosmithkline Intellectual Property (No. 3) Limited ("GSK") in November 2021. ARO-XDH is being developed for uncontrolled gout under a collaboration agreement with Horizon Therapeutics Ireland DAC ("Horizon"). JNJ-75220795 (ARO-JNJ1) is being developed by Janssen as a potential treatment for patients with non-alcoholic steatohepatitis (NASH). ARO-AAT for liver disease associated with alpha-1 antitrypsin deficiency ("AATD") was out-licensed to Takeda Pharmaceuticals U.S.A., Inc. ("Takeda") in October 2020. JNJ-3989 (formerly referred to as ARO-HBV) for chronic hepatitis B virus was out-licensed to Janssen in October 2018. Olpasiran (formerly referred to as AMG 890 or ARO-LPA) for cardiovascular disease was out-licensed to Amgen Inc. ("Amgen") in 2016. While the Company believes that initial ARO-HIF2 Phase 1 clinical data provides proof of concept for the ability to deliver siRNA to RCC tumors, the Company has decided not to pursue further clinical development of ARO-HIF2 based on a number of factors including the evolving competitive landscape for HIF2 inhibitors.

Arrowhead operates lab facilities in Madison, Wisconsin and San Diego, California, where the Company’s research and development activities, including the development of RNAi therapeutics, take place. The Company’s principal executive offices are located in Pasadena, California.

During the first three quarters of fiscal 2022, the Company continued to develop and advance its pipeline and partnered candidates and expanded its facilities to support the Company’s growing pipeline. Several key recent developments include:

i) dosed the first patients in its PALISADE study, a phase 3 clinical study to evaluate the safety and efficacy of ARO-APOC3 in adults with familial chylomicronemia syndrome (FCS);

ii) entered into an exclusive license agreement with GSK for ARO-HSD;

iii) Janssen presented clinical data from REEF-1, a Phase 2b study of different combination regimens, including JNJ-73763989 (JNJ-3989), formerly called ARO-HBV, and/or JNJ-56136379 (JNJ-6379), and a nucleos(t)ide analog (NA) for the treatment of chronic hepatitis B virus infection (CHB);

iv) filed for regulatory clearance to begin a Phase 1/2a study of ARO-C3 and subsequently dosed the first subjects in AROC3-1001, a Phase 1/2 clinical study of ARO-C3, the Company’s investigational RNA interference (RNAi) therapeutic designed to reduce production of complement component 3 (C3) as a potential therapy for various complement mediated diseases;

v) presented additional interim clinical data from AROHSD1001, AROAAT2002, and AROAPOC31001;

vi) completed the purchase of 13 acres of land in the Verona Technology Park in Verona, Wisconsin and held a groundbreaking ceremony on the site. The site is being developed into an approximately 160,000 square foot drug manufacturing facility and an approximately 140,000 square foot laboratory and office facility which will support the Company's process development and analytical activities. The Company also announced that it received awards for up to $16 million in tax increment financing from the city of Verona, and up to $2.5 million in refundable Wisconsin state income tax credits from the Wisconsin Economic Development Corporation (WEDC) as incentives to invest in the local community and create new jobs. Additionally, The Company entered into a lease agreement for a new 144,000 square foot laboratory and office facility in San Diego, California to support discovery activities;

vii) completed enrollment in Phase 2b ARCHES-2 study of investigational ARO-ANG3 for patients with mixed dyslipidemia;

viii) filed for regulatory clearance to initiate Phase 1/2a study of ARO-RAGE for treatment of Asthma;

ix) filed for regulatory clearance to initiate Phase 1/2a study of ARO-MUC5AC for treatment of muco-obstructive lung disease;

x) initiated and dosed the first patients in the Phase 2 GATEWAY clinical study of investigational ARO-ANG3 for the treatment of patients with homozygous familial hypercholersterolemia;

xi) entered into definitive agreements to form a joint venture, Visirna Therapeutics, Inc. (“Visirna”) with Vivo Capital (“Vivo”) through which the Company and Vivo intend to expand the reach of innovative medicines in Greater China;

xii) hosted a pulmonary research & development (R&D) Day to discuss the Company’s emerging pipeline of pulmonary targeted RNA interference (RNAi) therapeutic candidates that leverage its proprietary Targeted RNAi Molecule (TRIM™) platform, including an announcement of its previously undisclosed candidate designed to reduce expression of matrix metalloproteinase 7 (MMP7) as a potential treatment for idiopathic pulmonary fibrosis (IPF); and

xiii) in conjunction with Takeda, announced results from a Phase 2 clinical study (AROAAT-2002) of investigational fazirsiran (TAK-999/ARO-AAT) for the treatment of liver disease associated with alpha-1 antitrypsin deficiency (AATD), and was recently published in the New England Journal of Medicine (NEJM) and presented in an oral presentation at The International Liver Congress™ 2022 -

The Annual Meeting of the European Association for the Study of the Liver (EASL).

The Company is actively monitoring the ongoing COVID-19 pandemic. The financial results for the three and nine months ended June 30, 2022 were not significantly impacted by COVID-19. Operationally, the Company has experienced delays in its earlier stage programs due to a shortage in non-human primates, which are critical to the Company's preclinical programs. Additionally, the Company has experienced delays in enrollment in its clinical trials. The Company's operations at its research and development facilities in Madison, Wisconsin and San Diego, California, and its corporate headquarters in Pasadena, California have continued with limited impact, other than for enhanced safety measures and intermittent lab supply shortages. However, the Company cannot predict the impact the progression of COVID-19 will have on future financial and operational results due to a variety of factors, including the ability of the Company's clinical sites to continue to enroll subjects, the ability of the Company's suppliers to continue to operate, the continued good health and safety of the Company's employees and the length and severity of the COVID-19 pandemic.

Net losses were $72.0 million for the three months ended June 30, 2022 as compared to net losses of $29.9 million for the three months ended June 30, 2021. Net losses were $90.6 million for the nine months ended June 30, 2022 as compared to net losses of $77.5 million for the nine months ended June 30, 2021. Net losses per share-diluted were $0.68 for the three months ended June 30, 2022 as compared to net losses per share-diluted of $0.29 for the three months ended June 30, 2022. Net losses per share-diluted were $0.86 for the nine months ended June 30, 2022 as compared to net losses per share-diluted of $0.75 for the nine months ended June 30, 2021. The increase in net losses for the three months ended June 30, 2022 was due to an increase in research and development and general and administrative expenses as the Company's pipeline of candidates has expanded and progressed through clinical trial phases, partially offset by an increase in revenue from the Company's license and collaboration agreements, primarily from the Takeda License Agreement (as defined below) and the Horizon License Agreement (as defined below).

The Company has strengthened its liquidity and financial position through upfront and milestone payments received under its collaboration agreements, as well as equity financings. Under the terms of the Company's agreements with Janssen, taken together, the Company has received $175.0 million as an upfront payment, $75.0 million in the form of an equity investment by JJDC in Arrowhead Common Stock, and four milestone payments totaling $70.0 million. Under the terms of the Company's agreements with Amgen, the Company has received $35.0 million in upfront payments, $21.5 million in the form of an equity investment by Amgen in the Company's Common Stock and $30.0 million in milestone payments. The Takeda License Agreement resulted in a $300.0 million upfront payment, and the Horizon License Agreement resulted in a $40.0 million upfront payment. Finally, the GSK License Agreement resulted in an upfront payment of $120.0 million, which was received in January 2022. The Company had $139.4 million of cash and cash equivalents, $277.1 million in short-term investments, $165.9 million of long term investments and $751.8 million of total assets as of June 30, 2022, as compared to $184.4 million of cash and cash equivalents, $126.7 million of marketable securities, $56.6 million in short-term investments, $245.6 million of long term investments and $710.1 million of total assets as of September 30, 2021. Based upon the Company's current cash and investment 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*

There have been no changes to the significant accounting policies disclosed in the Company's most recent Annual Report on Form 10-K.

### Results of Operations

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

| | Three Months Ended June 30, | |
|---|---|---|
| | **2022** | **2021** |
| | **(in thousands, except per share amounts)** | |
| Revenues | $ 32,412 | $ 45,891 |
| Operating income (loss) | $ (72,909) | $ (31,868) |
| Net income (loss) | $ (72,046) | $ (29,924) |
| Net income (loss) per share-diluted | (0.68) | (0.29) |

| | | Nine Months Ended June 30, | | |
|---|---|---|---|---|
| | | 2022 | | 2021 |
| | | (in thousands, except per share amounts) | | |
| Revenues | $ | 211,656 | $ | 100,004 |
| Operating income (loss) | $ | (94,677) | $ | (84,153) |
| Net income (loss) | $ | (90,552) | $ | (77,474) |
| Net income (loss) per share-diluted | | (0.86) | | (0.75) |

The increase in revenue for the nine months ended June 30, 2022 compared to the nine months ended June 30, 2021 was driven by the revenue recognized from the GSK, Takeda and Horizon License Agreements.

**Revenue**

Total revenue for the three months ended June 30, 2022 and 2021 was $32.4 million and $45.9 million, respectively. Total revenue for the nine months ended June 30, 2022 and 2021 was $211.7 million and $100.0 million, respectively. Revenue for the nine months ended June 30, 2022 is primarily related to the recognition of the $120.0 million of revenue associated with the upfront payment received from GSK under the GSK License Agreement in the second quarter of 2022.

*Amgen Inc.*

On September 28, 2016, the Company entered into two collaboration and license agreements and a common stock purchase agreement with Amgen. Under the Second Collaboration and License Agreement (the "Olpasiran Agreement"), Amgen has received a worldwide, exclusive license to Arrowhead's novel RNAi Olpasiran (previously referred to as AMG 890 or ARO-LPA) program. These RNAi molecules are designed to reduce elevated lipoprotein(a), which is a genetically validated, independent risk factor for atherosclerotic cardiovascular disease. Under the prior collaboration and license agreement (the "First Collaboration and License Agreement" or the "ARO-AMG1 Agreement"), Amgen received an option to a worldwide, exclusive license for ARO-AMG1, an RNAi therapy for an undisclosed genetically validated cardiovascular target. Under both agreements, Amgen is wholly responsible for clinical development and commercialization. Under the terms of the agreements taken together, the Company has received $35.0 million in upfront payments, $21.5 million in the form of an equity investment by Amgen in the Company's Common Stock, and $30.0 million in milestone payments, and may receive up to an additional $400.0 million in remaining development, regulatory and sales milestone payments. The Company is further eligible to receive up to low double-digit royalties for sales of products under the Olpasiran Agreement. In July 2019, Amgen informed the Company that it would not be exercising its option for an exclusive license for ARO-AMG1, and as such, there will be no further milestone or royalty payments under the ARO-AMG1 Agreement.

The Company has evaluated these agreements in accordance with FASB Topics 808 – Collaboration Arrangements and 606 - Revenue for Contracts from Customers. The Company has substantially completed its performance obligations under the Olpasiran Agreement and the ARO-AMG1 Agreement. Future milestones and royalties achieved will be recognized in their entirety when earned. In July 2020, Amgen initiated a Phase 2 clinical study of Olpasiran, which resulted in a $20.0 million milestone payment to the Company. During the three and nine months ended June 30, 2022 and 2021, the Company recognized $0 and $0 of revenue associated with its agreement with Amgen, respectively. As of June 30, 2022, there were $0 in contract assets recorded as accounts receivable and $0 contract liabilities recorded as current deferred revenue on the Company's Consolidated Balance Sheets.

*Janssen Pharmaceuticals, Inc.*

On October 3, 2018, the Company entered into a License Agreement (the "Janssen License Agreement") and a Research Collaboration and Option Agreement (the "Janssen Collaboration Agreement") with Janssen, part of the Janssen Pharmaceutical Companies of Johnson & Johnson. The Company also entered into a stock purchase agreement with JJDC ("JJDC Stock Purchase Agreement"). Under the Janssen License Agreement, Janssen has received a worldwide, exclusive license to the Company's JNJ-3989 (ARO-HBV) program, the Company's third-generation subcutaneously administered RNAi therapeutic candidate being developed as a potential therapy for patients with chronic hepatitis B virus infection. Beyond the Company's Phase 1/2 study of JNJ-3989 (ARO-HBV), which the Company was responsible for completing, Janssen is wholly responsible for clinical development and commercialization of JNJ-3989. Under the Janssen

Collaboration Agreement, Janssen was able to select three new targets against which Arrowhead would develop clinical candidates. These candidates were subject to certain restrictions and do not include candidates that already were in the Company's pipeline. The Company was obligated to perform discovery, optimization and preclinical research and development, entirely funded by Janssen, which on its own or in combination with Janssen development work, would have been sufficient to allow the filing of a U.S. Investigational New Drug Application or equivalent, at which time Janssen would have the option to take an exclusive license. If the option was exercised, Janssen would have been wholly responsible for clinical development and commercialization of each optioned candidate. Under the terms of the agreements taken together, the Company has received $175.0 million as an upfront payment, $75.0 million in the form of an equity investment by JJDC in Arrowhead Common Stock under the JJDC Stock Purchase Agreement, and milestone and option payments totaling $73.0 million, and the Company may receive up to $1.6 billion in development and sales milestones payments for the Janssen License Agreement, and up to $0.6 billion in development and sales milestone payments for the remaining target covered under the Janssen Collaboration Agreement. The Company is further eligible to receive tiered royalties on product sales up to mid-teens under the Janssen License Agreement and up to low teens under the Janssen Collaboration Agreement. During the three months ended June 30, 2022, Janssen's option period expired unexercised for two of the three candidates (ARO-JNJ2 and ARO-JNJ3) under the Janssen Collaboration Agreement.

The Company has evaluated these agreements in accordance with FASB Topics 808 – Collaboration Arrangements and 606 - Revenue for Contracts from Customers. At the inception of these agreements, the Company identified one distinct performance obligation. Regarding the Janssen License Agreement, the Company determined that the key deliverables included the license and certain R&D services including the Company's responsibility to complete the Phase 1/2 study of JNJ-3989 (ARO-HBV) and the Company's responsibility to ensure certain manufacturing of JNJ-3989 (ARO-HBV) drug product is completed and delivered to Janssen (the "Janssen R&D Services"). Due to the specialized and unique nature of these Janssen R&D Services and their direct relationship with the license, the Company determined that these deliverables represent one distinct bundle and, thus, one performance obligation. The Company also determined that Janssen's option to require the Company to develop up to three new targets is not a material right and, thus, not a performance obligation at the onset of the agreement. The consideration for this option is accounted for separately.

The Company determined the transaction price totaled approximately $252.7 million, which includes the upfront payment, the premium paid by JJDC for its equity investment in the Company, two $25.0 million milestone payments related to JNJ-3989 (ARO-HBV), and estimated payments for reimbursable Janssen R&D Services to be performed. The Company has allocated the total $252.7 million initial transaction price to its one distinct performance obligation for the JNJ-3989 (ARO-HBV) license and the associated Janssen R&D Services. The Company has recognized this transaction price in its entirety as of September 30, 2021, as its performance obligations were substantially completed. Future milestones and royalties achieved will be recognized in their entirety when earned. During the three months ended June 30, 2022 and 2021, the Company recognized approximately $0 and $0 of revenue associated with this performance obligation, respectively. During the nine months ended June 30, 2022 and 2021, the Company recognized approximately $0 and $20.2 million of revenue associated with this performance obligation, respectively. As of June 30, 2022, there were $0 in contract assets recorded as accounts receivable, and $0 of contract liabilities recorded as current deferred revenue on the Company's Consolidated Balance Sheets.

The Company has conducted its discovery, optimization and preclinical research and development of JNJ-75220795 (ARO-JNJ1), ARO-JNJ2, and ARO-JNJ3 under the Janssen Collaboration Agreement. All costs and labor hours spent by the Company have been entirely funded by Janssen. During the three months ended June 30, 2022, Janssen's option period expired unexercised for two of the three candidates (ARO-JNJ2 and ARO-JNJ3) under the Janssen Collaboration Agreement as reported in the second quarter of 2022. During the three months ended June 30, 2022 and 2021, the Company recognized $0.0 million and $0.2 million of revenue associated with these efforts, respectively. During the nine months ended June 30, 2022 and 2021, the Company recognized $0.1 million and $0.5 million of revenue associated with these efforts, respectively. In May 2021, Janssen exercised its option right for ARO-JNJ1, which resulted in a $10.0 million milestone payment to the Company. This $10 million milestone payment was recognized entirely during the three months ended June 30, 2021. As of June 30, 2022, there were $0 of contract assets recorded as accounts receivable and $0 of contract liabilities recorded as current deferred revenue on the Company's Consolidated Balance Sheets.

*Takeda Pharmaceuticals U.S.A., Inc.*

On October 7, 2020, the Company entered into an Exclusive License and Co-funding agreement (the "Takeda License Agreement") with Takeda. Under the Takeda License Agreement, Takeda and the Company will co-develop the Company's ARO-AAT program, the Company's second-generation subcutaneously administered RNAi therapeutic candidate being developed as a treatment for liver disease associated with alpha-1 antitrypsin deficiency. Within the United States, ARO-AAT, if approved, will be co-commercialized under a 50/50 profit sharing structure. Outside the United States, Takeda will lead the global commercialization strategy and will receive an exclusive license to commercialize ARO-AAT, while the Company will be eligible to receive tiered royalties of 20% to 25% on net sales. In January 2021, the Company received $300.0 million as an upfront payment and is eligible to receive potential development, regulatory and commercial milestones of up to $740.0 million.

The Company has evaluated the Takeda License Agreement in accordance with FASB Topics 808 – Collaborative Arrangements and 606 - Revenue for Contracts from Customers. At the inception of the Takeda License Agreement, the Company identified one distinct performance obligation. The Company determined that the key deliverables included the license and certain R&D services including the Company's responsibilities to complete the initial portion of the SEQUOIA study, to complete the ongoing Phase 2 AROAAT2002 study and to ensure certain manufacturing of ARO-AAT drug product is completed and delivered to Takeda (the "Takeda R&D Services"). Due to the specialized and unique nature of these Takeda R&D Services and their direct relationship with the license, the Company determined that these deliverables represent one distinct bundle and, thus, one performance obligation. Beyond the Takeda R&D Services, which are the responsibility of the Company, Takeda will be responsible for managing future clinical development and commercialization outside the United States. Within the United States, the Company will also participate in co-development and co-commercialization efforts and will co-fund these efforts with Takeda as part of the 50/50 profit sharing structure within the United States. The Company considers the collaborative activities, including the co-development and co-commercialization, to be a separate unit of account within Topic 808, and as such, these co-funding amounts will be recorded as Research and Development Expenses or General and Administrative Expenses, as appropriate.

The Company determined the initial transaction price totaled $300.0 million, which includes the upfront payment. The Company has excluded any future milestones or royalties from this transaction price to date. The Company has allocated the total $300.0 million initial transaction price to its one distinct performance obligation for the ARO-AAT license and the associated Takeda R&D Services. Revenue will be recognized using a proportional performance method (based on actual patient visits completed versus total estimated visits completed for the ongoing SEQUOIA and AROAAT2002 clinical studies). Revenue for the three months ended June 30, 2022 and 2021 was $25.5 million and $35.7 million, respectively. Revenue for the nine months ended June 30, 2022 and 2021 was $67.1 million and $69.3 million, respectively. As of June 30, 2022, there were $0 in contract assets recorded as accounts receivable, $71.0 million in contract liabilities recorded as deferred revenue and $71.2 million in contract liabilities recorded as deferred revenue, net of the current portion, and $7.8 million in contract liabilities recorded as accrued expenses. The $7.8 million in accrued expenses was primarily driven by co-development and co-commercialization activities.

*Horizon Therapeutics Ireland DAC*

On June 18, 2021, the Company entered into the Horizon License Agreement with Horizon. Under the Horizon License Agreement, Horizon received a worldwide exclusive license for ARO-XDH, a previously undisclosed discovery-stage investigational RNAi therapeutic being developed by the Company as a potential treatment for people with uncontrolled gout. The Company will conduct all activities through the preclinical stages of development of ARO-XDH, and Horizon will be wholly responsible for clinical development and commercialization of ARO-XDH. In July 2021, the Company received $40 million as an upfront payment and is eligible to receive up to $660 million in potential development, regulatory and sales milestones. The Company is also eligible to receive royalties in the low- to mid-teens range on net product sales.

The Company has evaluated the Horizon License Agreement in accordance with FASB Topics 808 – Collaborative Arrangements and 606 - Revenue for Contracts from Customers. At the inception of the Horizon License Agreement, the Company identified one distinct performance obligation. The Company determined that the key deliverables included the license and certain R&D services, including the Company's responsibilities to conduct all activities through the preclinical stages of development of ARO-XDH (the "Horizon R&D Services"). Due to the specialized and unique nature of these Horizon R&D Services and their direct relationship with the license, the Company determined that these deliverables represented one distinct bundle and, thus, one performance obligation. Beyond the Horizon R&D Services, which are the responsibility of the Company, Horizon will be responsible for managing future clinical development and commercialization of ARO-XDH.

The Company determined the initial transaction price totaled $40.0 million, including the upfront payment. The Company has excluded any future estimated milestones or royalties, from this transaction price to date. The Company will allocate the total $40.0 million initial transaction price to its one distinct performance obligation for the ARO-XDH license and the associated Horizon R&D Services. Revenue will be recognized on a straight-line basis over the estimated timeframe for completing the Horizon R&D Services. The Company determined that the straight-line basis was appropriate as its efforts will be expended evenly over the course of completing its performance obligation. Revenue for the three months ended June 30, 2022 and 2021 was $6.7 million and $0, respectively. Revenue for the nine months ended June 30, 2022 and 2021 was $20.0 million and $0, respectively. As of June 30, 2022, there were $0 million in contract assets recorded as accounts receivable, $13.3 million in contract liabilities recorded as deferred revenue.

The Company has manufactured ARO-XDH material for Horizon in furtherance of the research plan entered into pursuant to the Horizon License Agreement, for which the Company has been reimbursed for its costs. During the nine months ended June 30, 2022 and 2021, the Company recognized $1.3 million and $0 with these efforts, respectively. As of June 30, 2022, there were $0.0 million of contract assets recorded as accounts receivable and $0 of contract liabilities recorded as current deferred revenue on the Company's Consolidated Balance Sheets.

*Glaxosmithkline Intellectual Property (No. 3) Limited*

On November 22, 2021, the Company entered into an Exclusive License Agreement (the "GSK License Agreement") with GSK. Under the GSK License Agreement, GSK has received an exclusive license for ARO-HSD, the Company's investigational RNAi therapeutic being developed as a treatment for patients with alcohol-related and nonalcohol related liver diseases, such as nonalcoholic steatohepatitis (NASH). The exclusive license is worldwide with the exception of greater China, for which the Company retained rights to develop and commercialize. Beyond the Company's Phase 1/2 study of (ARO-HSD), which the Company is responsible for completing, GSK is wholly responsible for clinical development and commercialization of ARO-HSD in its territory. Under the terms of the agreement, the Company has received an upfront payment of $120 million and is eligible for additional payments of $30 million at the start of Phase 2 and $100 million upon achieving a successful Phase 2 trial readout and the first patient dosed in a Phase 3 trial. Furthermore, should the Phase 3 trial read out positively, and the potential new medicine receives regulatory approval in major markets, the deal provides for commercial milestone payments to the Company of up to $190 million at first commercial sale, and up to $590 million in sales-related milestone payments. The Company is further eligible to receive tiered royalties on net product sales in a range of mid-teens to twenty percent.

The Company has evaluated the GSK License Agreement in accordance with FASB Topics 808 – Collaborative Arrangements and 606 - Revenue for Contracts from Customers. At the inception of the GSK License Agreement, the Company identified one distinct performance obligation. The Company determined that the key deliverables included the license and certain R&D services, including the Company's responsibility to complete the Phase 1/2 study, (the "GSK R&D Services"). Due to the specialized and unique nature of these GSK R&D Services and their direct relationship with the license, the Company determined that these deliverables represented one distinct bundle and, thus, one performance obligation. Beyond the GSK R&D Services, which are the responsibility of the Company, GSK will be responsible for managing future clinical development and commercialization in its territory.

The Company determined the initial transaction price totaled $120.0 million, including the upfront payment. The $120.0 million upfront payment was collected in January 2022. The Company has excluded any future estimated milestones or royalties from this transaction price to date. The Company has allocated the total $120.0 million initial transaction price to its one distinct performance obligation for the ARO-HSD license and the associated GSK R&D Services. As the Company has completed its performance obligation related to this agreement, the upfront payment of $120.0 million will be fully recognized as of the three and nine months ended June 30, 2022. Revenue for the nine months ended June 30, 2022 and 2021 was $120.0 million and $0, respectively. As of June 30, 2022, there were $0 in contract assets recorded as accounts receivable, $0 in contract liabilities recorded as deferred revenue.

*Joint Venture and License Agreement with Visirna Therapeutics, Inc.*

On April 25, 2022, the Company entered into a License Agreement (the "Visirna License Agreement") with Visirna Therapeutics, Inc. ("Visirna"), pursuant to which Visirna received an exclusive license to develop, manufacture and commercialize four of Arrowhead's RNAi-based investigational cardiobolic medicines in Greater China (including the People's Republic of China, Hong Kong, Macau and Taiwan). Pursuant to a Share Purchase Agreement entered into simultaneously with the Visirna License Agreement (the "Visirna SPA"), the Company acquired a majority stake in Visirna (after accounting for shares reserved for Visirna's employee stock ownership plan) as partial consideration for the Visirna License Agreement. Under the Visirna SPA, entities affiliated with Vivo Capital ("Vivo") also acquired a minority stake in Visirna in exchange for $60 million in upfront capital to support the operations of Visirna. As further consideration under the Visirna License Agreement, the Company is also eligible to receive potential royalties on commercial sales.

The Company has determined that Visirna is a variable interest entity upon its formation and as of June 30, 2022, and it has been determined that Arrowhead is the primary beneficiary; accordingly, Arrowhead consolidates the financial statements of Visirna.

**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, 2022 and 2021 are shown in the tables below.

***Research and Development Expenses***

R&D expenses are related to the Company's research and development efforts and related program costs, which are comprised 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 facilities in Madison, Wisconsin and San Diego, California, including facility costs and laboratory-related expenses. Salaries and stock compensation expense consist of salary, bonuses, payroll taxes and related benefits and stock compensation for our R&D personnel. Depreciation and amortization expense consist of depreciation on lab equipment and leasehold improvements at our research facilities. We do not separately track R&D expenses by individual research and development projects, including by individual drug candidates. The Company operates in a cross-functional manner across projects and does not separately allocate facilities-related costs, candidate costs, discovery costs, compensation expenses, depreciation and amortization expenses, and other expenses for research and development activities. The following table provides details of research and development expenses for the periods indicated:

*(table below in thousands)*

| | Three Months Ended June 30, 2022 | % of Expense Category | Three Months Ended June 30, 2021 | % of Expense Category | Increase (Decrease) $ | Increase (Decrease) % |
|---|---|---|---|---|---|---|
| Salaries | $ 11,243 | 16 % | $ 8,518 | 14 % | $ 2,725 | 32 % |
| Facilities related | $ 3,827 | 5 % | $ 1,306 | 2 % | $ 2,521 | 193 % |
| Candidate costs | $ 31,732 | 44 % | $ 31,468 | 54 % | $ 264 | 1 % |
| R&D discovery costs | $ 15,081 | 21 % | $ 10,082 | 17 % | $ 4,999 | 50 % |
| Total research and development expense, excluding non-cash expense | **$ 61,883** | **86 %** | **$ 51,374** | **87 %** | **$ 10,509** | **20 %** |
| Stock compensation | $ 8,098 | 11 % | $ 6,530 | 11 % | $ 1,568 | 24 % |
| Depreciation/amortization | $ 2,200 | 3 % | $ 1,421 | 2 % | $ 779 | 55 % |
| Total research and development expense | **$ 72,181** | **100 %** | **$ 59,325** | **100 %** | **$ 12,856** | **22 %** |

| | Nine Months Ended June 30, 2022 | % of Expense Category | Nine Months Ended June 30, 2021 | % of Expense Category | Increase (Decrease) $ | % |
|---|---|---|---|---|---|---|
| Salaries | $ 33,641 | 16 % | $ 25,375 | 18 % | $ 8,266 | 33 % |
| Facilities related | 7,644 | 4 % | $ 4,456 | 3 % | $ 3,188 | 72 % |
| Candidate costs | 101,789 | 47 % | $ 67,152 | 48 % | $ 34,637 | 52 % |
| R&D discovery costs | 40,347 | 19 % | $ 20,295 | 14 % | $ 20,052 | 99 % |
| Total research and development expense, excluding non-cash expense | **$ 183,421** | **86 %** | **$ 117,278** | **83 %** | **$ 66,143** | **56 %** |
| Stock compensation | $ 23,958 | 11 % | $ 18,421 | 13 % | $ 5,537 | 30 % |
| Depreciation/amortization | $ 6,551 | 3 % | $ 4,877 | 4 % | $ 1,674 | 34 % |
| Total research and development expense | **$ 213,930** | **100 %** | **$ 140,576** | **100 %** | **$ 73,354** | **52 %** |

Salaries expense increased by $2,725,000 from $8,518,000 during the three months ended June 30, 2021 to $11,243,000 during the current period. Salaries expense increased by $8,266,000 from $25,375,000 during the nine months ended June 30, 2021 to $33,641,000 during the current period. This increase is primarily due to an increase in R&D headcount that has occurred as the Company has expanded its pipeline of candidates. We anticipate this expense to continue to increase as we continue to expand our pipeline of candidates and increase headcount to support our discovery efforts to identify new drug candidates, in addition to inflationary pressures in the labor market.

Facilities expense increased by $2,521,000 from $1,306,000 during the three months ended June 30, 2021 to $3,827,000 during the current period. Facilities expense increased by $3,188,000 from $4,456,000 during the nine months ended June 30, 2021 to $7,644,000 during the current period. This category includes rental costs for our research and development facilities in Madison, Wisconsin and San Diego, California. We expect this expense to continue to increase as we continue to build out our manufacturing capabilities to support our discovery efforts to identify new drug candidates. The increase in facilities expense is due to the recognition of rent expense from the San Diego research facility.

Candidate costs increased by $264,000 from $31,468,000 during the three months ended June 30, 2021 to $31,732,000 during the current period. Candidate costs increased by $34,637,000 from $67,152,000 during the nine months ended June 30, 2021 to $101,789,000 during the current period. This increase is primarily due to the progression of our pipeline of candidates into and through clinical trials, which results in higher outsourced clinical trial, toxicity study and manufacturing costs. For example, our cardiometabolic candidates, ARO-ANG3 and ARO-APOC3, have advanced into phase 2 and phase 3 clinical trials. We anticipate these expenses to continue to increase as our pipeline of candidates grows and progresses to later phase clinical trials, in addition to unforeseen inflationary pressure on goods and services.

R&D discovery costs increased by $4,999,000 from $10,082,000 during the three months ended June 30, 2021 to $15,081,000 in the current period. R&D discovery costs increased by $20,052,000 from $20,295,000 during the nine months ended June 30, 2021 to $40,347,000 in the current period. This increase is primarily due to the growth of our discovery efforts, including the addition of our research facility in San Diego. We anticipate this expense to continue to increase as we increase headcount to support our discovery efforts to identify new drug candidates.

Stock compensation expense, a non-cash expense, increased by $1,568,000 from $6,530,000 during the three months ended June 30, 2021 to $8,098,000 during the current period. Stock compensation expense, a non-cash expense, increased by $5,537,000 from $18,421,000 during the nine months ended June 30, 2021 to $23,958,000 during the current period. Stock 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. The increase in the expense in the current period is primarily due to the increased headcount discussed above. We generally expect future stock compensation expense to continue to increase as our headcount continues to increase to support our clinical pipeline.

Depreciation and amortization expense, a non-cash expense, increased by $779,000 from $1,421,000 during the three months ended June 30, 2021 to $2,200,000 during the current period. Depreciation and amortization expense, a non-cash expense, increased by $1,674,000 from $4,877,000 during the nine months ended June 30, 2021 to $6,551,000 during the current period. The majority of depreciation and amortization expense relates to depreciation on lab equipment and leasehold improvements at our Madison and San Diego research facilities. The increase in depreciation and amortization expense is due to an increase in laboratory equipment and leasehold improvements. We expect this amount to increase in the future as we continue to purchase additional lab equipment and increase our footprint expansions to support our growing pipeline.

***General & Administrative Expenses***

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

*(table below in thousands)*

| | Three Months Ended June 30, 2022 | % of Expense Category | Three Months Ended June 30, 2021 | % of Expense Category | Increase (Decrease) $ | Increase (Decrease) % |
|---|---|---|---|---|---|---|
| Salaries | $ 3,175 | 10 % | $ 2,570 | 14 % | $ 605 | 24 % |
| Professional/outside services | 1,576 | 5 % | 379 | 2 % | 1,197 | 316 % |
| Facilities related | 703 | 2 % | 610 | 3 % | 93 | 15 % |
| Other G&A | 1,992 | 6 % | 2,278 | 12 % | (286) | (13) % |
| Total general & administrative expense, excluding non-cash expense | **$ 7,446** | **23 %** | **$ 5,837** | **31 %** | **$ 1,609** | **28 %** |
| Stock compensation | 25,292 | 76 % | 12,020 | 66 % | 13,272 | 110 % |
| Depreciation/amortization | 403 | 1 % | 577 | 3 % | (174) | (30) % |
| Total general & administrative expense | **$ 33,141** | **100 %** | **$ 18,434** | **100 %** | **$ 14,707** | **80 %** |

| | Nine Months Ended June 30, 2022 | % of Expense Category | Nine Months Ended June 30, 2021 | % of Expense Category | Increase (Decrease) $ | Increase (Decrease) % |
|---|---|---|---|---|---|---|
| Salaries | $ 10,365 | 11 % | $ 8,411 | 19 % | $ 1,954 | 23 % |
| Professional/outside services | 6,083 | 7 % | 4,199 | 10 % | 1,884 | 45 % |
| Facilities related | 2,085 | 2 % | 2,127 | 5 % | (42) | (2) % |
| Other G&A | 4,921 | 5 % | 4,326 | 10 % | 595 | 14 % |
| Total general & administrative expense, excluding non-cash expense | **$ 23,454** | **25 %** | **$ 19,063** | **44 %** | **$ 4,391** | **23 %** |
| Stock compensation | 67,739 | 74 % | 23,631 | 54 % | 44,108 | 187 % |
| Depreciation/amortization | 1,210 | 1 % | 887 | 2 % | 323 | 36 % |
| Total general & administrative expense | **$ 92,403** | **100 %** | **$ 43,581** | **100 %** | **$ 48,822** | **112 %** |

Salaries expense increased by $605,000 from $2,570,000 during the three months ended June 30, 2021 to $3,175,000 during the current period. Salaries expense increased by $1,954,000 from $8,411,000 during the nine months ended June 30, 2021 to $10,365,000 during the current period. This increase is primarily due to an increase in G&A headcount that has occurred as the Company has grown. We expect salaries expense to continue to increase as our headcount continues to increase to support our expanding clinical pipeline, in addition to inflationary pressures in the labor market.

Professional/outside services include legal, accounting, consulting, patent expenses, business insurance expenses and other outside services retained by the Company. Professional/outside services expense increased by 1,197,000 from $379,000 during the three months ended June 30, 2021 to $1,576,000 during the current period. Professional/outside services expense increased by $1,884,000 from $4,199,000 during the nine months ended June 30, 2021 to $6,083,000 during the current period. We expect future professional/outside services expense to increase as we continue to increase discovery efforts. The increase in professional/outside services expense is due to intellectual property and general legal fees.

Facilities-related expense increased by $93,000 from $610,000 during the three months ended June 30, 2021 to $703,000 during the current period. Facilities-related expense decreased by $42,000 from $2,127,000 during the nine months ended June 30, 2021 to $2,085,000 during the current period. This category primarily includes rental costs for our corporate headquarters in Pasadena, California. The increase in facilities related expenses is due to an increase in building maintenance and repair costs. We expect future facilities related expenses to increase as we continue to increase our headcount and footprint to support our discovery efforts.

Other G&A expense decreased by $286,000 from $2,278,000 during the three months ended June 30, 2021 to $1,992,000 during the current period. Other G&A expense increased by $595,000 from $4,326,000 during the nine months ended June 30, 2021 to $4,921,000 during the current period. This category consists primarily of travel, communication and technology, office expenses, and franchise and property tax expenses. The decrease during the three months ended June 30, 2022 and 2021 is due to a decrease in consulting expenses from the prior year. The increase during the nine months ended June 30, 2022 and 2021 is due to software and software implementation costs..

Stock compensation expense, a non-cash expense, increased by $13,272,000 from $12,020,000 during the three months ended June 30, 2021 to $25,292,000 during the current period. Stock compensation expense, a non-cash expense, increased by $44,108,000 from $23,631,000 during the nine months ended June 30, 2021 to $67,739,000 during the current period. Stock 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. The increase in the current period is due to a performance award that was achieved earlier than anticipated, as well as a modification of certain performance awards to include market conditions. The fair value of market condition-based awards is expensed ratably over the service period and is not adjusted for actual achievement. We generally expect future stock compensation expense to continue to increase as our headcount continues to increase to support our clinical pipeline.

Depreciation and amortization expense, a noncash expense, decreased by $174,000 from $577,000 during the three months ended June 30, 2021 to $403,000 during the current period. Depreciation and amortization expense, a noncash expense, increased by $323,000 from $887,000 during the nine months ended June 30, 2021 to $1,210,000 during the current period. The decrease in depreciation expense in the current quarter is due to reclassification of certain depreciation from general and administrative to research and development.

***Other Income***

Other income decreased by $1,080,000 from $1,944,000 during the three months ended June 30, 2021 to $863,000 during the current period. Other income decreased by $2,554,000 from $6,679,000 during the nine months ended June 30, 2021 compared to $4,125,000 during the current period. Other income is primarily related to interest income and realized and unrealized gain/loss on our marketable securities. The decrease in other income is due to lower yields on more recently purchased bonds and increase in realized loss on the sale of marketable securities offset by a property tax credit the company received during the current period.

**Liquidity and Capital Resources**

Arrowhead has historically financed its operations through the sale of its equity securities and revenue from its collaboration agreements. Research and development activities have required significant capital investment since the Company’s inception and are expected to continue to require significant cash expenditure as the Company’s pipeline continues to expand and matures into later stage clinical trials. Additionally, the Company plans to expand its facilities with its purchase of land in Verona, Wisconsin, and its entry into a new lease in San Diego, California. Each of these expansions is designed to increase the Company’s internal manufacturing and discovery capabilities, and each will require significant capital investment.

At June 30, 2022, the Company's cash and cash equivalents totalled approximately $139.4 million as compared to $184.4 million at September 30, 2021. Cash invested in short-term fixed income securities and marketable securities was $277.1 million at June 30, 2022, compared to $183.4 million at September 30, 2021. Cash invested in long-term fixed income securities was $165.9 million at June 30, 2022, compared to $245.6 million at September 30, 2021. The Company also entered into an Open Market Sale Agreement (the “ATM Agreement”) in August 2020, pursuant to which the Company may, from time to time, sell up to $250,000,000 in shares of the Company’s Common Stock through Jefferies LLC. As of June 30, 2022, no shares have been sold under the ATM Agreement. The Company believes its current financial resources are sufficient to fund its operations through at least the next twelve months.

A summary of cash flows for the nine months ended June 30, 2022 and 2021 is as follows:

| | Nine Months Ended June 30, 2022 | Nine Months Ended June 30, 2021 |
|---|---|---|
| | (in thousands) | |
| Cash flow from: | | |
| Operating activities | (67,464) | 195,341 |
| Investing activities | (41,862) | (23,433) |
| Financing activities | 64,331 | 10,490 |
| Net increase (decrease) in cash and cash equivalents | (44,995) | 182,398 |
| Cash and cash equivalents at beginning of period | 184,434 | 143,583 |
| Cash and cash equivalents at end of period | 139,439 | 325,981 |

During the nine months ended June 30, 2022, cash flow used by operating activities was $67.5 million, which was primarily due to the receipt of the $120.0 million upfront payment from GSK, offset by the ongoing expenses related to the Company's research and development programs and general and administrative expenses. Cash used in investing activities was $41.9 million, which was primarily related to the purchase of property and equipment of $20.1 million and net sales of investments of $21.8 million. Cash provided by financing activities of $64.3 million was primarily related to the formation of our joint venture, Viserna, as well as cash received from stock option exercises.

During the nine months ended June 30, 2021, cash flow provided by operating activities was $195.3 million, which was primarily due to the $300 million payment received under the Takeda License Agreement, partially offset by ongoing expenses of the Company's research and development programs and general and administrative expenses. Cash used in investing activities was $23.4 million, which was primarily related to the purchase of property and equipment of $15.4 million, partially offset by the net sales of investments of $8.1 million. Cash provided by financing activities of $10.5 million was related to cash received from stock option exercises.

On December 20, 2021, the Company completed a purchase of 13 acres of land in the Verona Technology Park in Verona, Wisconsin, which is planned to be the site of an approximately 160,000 square foot drug manufacturing facility and an approximately 140,000 square foot laboratory and office facility to support process development and analytical activities. Arrowhead intends to invest between $200 million and $250 million into the buildout of the facilities. As part of this acquisition, the Company also entered into a development agreement with the City of Verona to construct certain infrastructure improvements within the TIF district, and will be reimbursed by the City of Verona by future tax increment revenue generated from the developed property. The total amount of funding that City of Verona will pay as reimbursements under the TIF program for these improvements is not guaranteed and will depend on future tax revenues generated from the developed property.

***Capital Resources and Material Cash Requirements***

A summary of our capital resources and material cash requirements is presented in Item 7 of our Annual Report on Form 10-K for our fiscal year ended September 30, 2021. Other than as described above, there were no material changes to our capital resources and material cash requirements during the three months ended June 30, 2022.

## 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, 2021.

## 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 Securities and Exchange Commission 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 Rules 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. Litigation can be expensive and disruptive to normal business operations. Moreover, the results of legal proceedings, particularly complex legal proceedings, cannot be predicted with any certainty. There have been no material developments in the legal proceedings that we disclosed in Part I, Item 3 of our Annual Report on Form 10-K for the year ended September 30, 2021.

### 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, 2021 as updated by our Quarterly Report on Form 10-Q for the period ended March 31, 2022. 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, 2021 and in Part II, “Item 1A. Risk Factors” in our Quarterly Report on Form 10-Q for the period ended March 31, 2022, which could materially affect our business, financial condition or future results. The risks described in our Annual Report on Form 10-K and our Quarterly Report on Form 10-Q, 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

None.

### 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 |
|---|---|
| 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.INS* | Inline XBRL Instance Document |
| 101.SCH* | Inline XBRL Taxonomy Extension Schema Document |
| 101.CAL* | Inline XBRL Taxonomy Extension Calculation Linkbase Document |
| 101.LAB* | Inline XBRL Taxonomy Extension Label Linkbase Document |
| 101.PRE* | Inline XBRL Taxonomy Extension Presentation Linkbase Document |
| 101.DEF* | Inline XBRL Taxonomy Extension Definition Linkbase Document |
| 104* | The cover page from this Quarterly Report on Form 10-Q, formatted in Inline XBRL (included as Exhibit 101) |

* 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 4, 2022

ARROWHEAD PHARMACEUTICALS, INC.

By: /s/ Kenneth A. Myszkowski

Kenneth A. Myszkowski
Chief Financial Officer
(Principal Financial Officer and Duly Authorized Officer)

**Exhibit 31.1**

**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 4, 2022

/s/ CHRISTOPHER ANZALONE

**Christopher Anzalone**
**Chief Executive Officer**

**Exhibit 31.2**

**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 4, 2022

/s/ Kenneth A. Myszkowski

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

**Exhibit 32.1**

**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, 2022, 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 4, 2022

/s/ CHRISTOPHER ANZALONE

**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.

**Exhibit 32.2**

**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, 2022, 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 4, 2022

/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.